

**Sunday 4:00 PM - 8:00 PM****Placement of Posters for Sessions 1 - 6.**

Great River Ballroom, Garden Courts East & West

**Monday 8:00 AM - 9:10 AM****Plenary**

Minnesota Ballroom

*Pratim Biswas, Chair*

8:00 **WELCOME**,  
David Y. H. Pui and Gilmore Sem,  
Conference CoChairs  
Prof. Chiu-sen Wang, President, International  
Aerosol Research Assembly

8:10 **PLENARY 1. ASSEMBLING MATERIALS  
AND DEVICES FROM NANOSCALE  
BUILDING BLOCKS**, Richard W. Siegel,  
Robert W. Hunt Professor of Materials  
Science and Engineering, Rensselaer  
Polytechnic Institute, Troy, NY, USA (p.1)

**Monday 9:00 AM - 8:00 PM****Exhibits Open**

Great River Ballroom

**Monday 9:10 AM - 9:40 AM****Coffee Break**

Great River Ballroom, Garden Courts East & West

**Monday 9:40 AM - 11:00 AM****Session 1****1A PM-10 & PM-2.5 Characterization-I  
(Platform)**

Minnesota Ballroom

*Wolfgang Rogge, Chair*

1A1 **THE SOLOMON METHOD OF ORGANIC  
ARTIFACT ESTIMATION: A QUANTITATIVE  
ASSESSMENT OF ASSUMPTIONS AND  
METHOD PERFORMANCE**, FRANCESCO  
MAIMONE, Barbara Turpin, Environmental  
Sciences, Rutgers University, New  
Brunswick, NJ; Allen Robinson, Mechanical  
Engineering, Carnegie Mellon University,  
Pittsburgh, PA (p.1112)

1A2  
10:00

**APPLYING TWO-DIMENSIONAL GAS  
CHROMATOGRAPHY TO HIGHLY TIME  
RESOLVED ORGANIC PM2.5 COLLECTED  
AT THE BALTIMORE SUPERSITE,**

THOMAS GRÖGER, Martin Sklorz, Ralf  
Zimmermann, GSF – National Research  
Centre for Environment and Health,  
Neuherberg, Germany, Wolfgang F. Rogge,  
Florida International University, Miami, FL ,  
Jürgen Schnelle-Kreis, Bavarian Institute of  
Applied Environmental Research and  
Technology - BfA GmbH, Augsburg,  
Germany, Leslie Vogt, University of  
Augsburg, Augsburg, Germany, John M.  
Ondov, University of Maryland, College Park,  
MD, (p.1114)

1A3  
10:20

**DICARBOXYLIC ACID CONCENTRATION  
TRENDS AND SAMPLING ARTIFACTS,**

STEPHEN R. MCDOW, Human Exposure  
and Atmospheric Sciences Division, US EPA,  
Research Triangle Park, NC; Joshua Ray,  
New Jersey Department of Environmental  
Quality, Trenton, NJ (p.1116)

1A4  
10:40

**CONTRIBUTION OF SOA AND BIOMASS  
BURNING TO AMBIENT PM2.5 ORGANIC  
CARBON CONCENTRATIONS IN**

**RESEARCH TRIANGLE PARK, NC**, Edward  
Edney, Michael Lewandowski, John  
Offenberg, TADEUSZ KLEINDIENST,  
National Exposure Research Laboratory, U.S.  
EPA, Research Triangle Park, NC;  
Mohammed Jaoui, Alion Science and  
Technology, Research Triangle Park, NC  
(p.1117)

**1B Organic Aerosol Speciation (Platform)**

Capitol Ballroom

*Manish Shrivastava, Chair*

1B1  
9:40

**SPECIATED ORGANIC AEROSOL  
COMPOSITION AT RIVERSIDE, CA  
DURING SOAR 2005 USING THERMAL  
DESORPTION AEROSOL GC-MS-FID  
(TAG),**

BRENT WILLIAMS, Allen Goldstein,  
University of California, Berkeley, CA; Nathan  
Kreisberg, Susanne Hering, Aerosol  
Dynamics Inc., Berkeley, CA (p.1473)

1B2  
10:00 **CHARACTERIZATION OF THE WATER-SOLUBLE ORGANIC AEROSOL IN THE CONTINENTAL BOUNDARY LAYER AND IN THE FREE TROPOSPHERE BY NUCLEAR MAGNETIC RESONANCE (NMR) SPECTROSCOPIC TECHNIQUES**, STEFANO DECESARI, Maria Cristina Facchini, Sandro Fuzzi, Lorenza Emblico, Valeriana Mancinelli, Matteo Rinaldi, Mihaiela Mircea, Paolo Bonasoni, Paolo Cristofanelli, Italian National Council of Research, Bologna, Italy; Fabrizia Cavalli, Joint Research Centre, Ispra, Italy; Fabio Moretti, Emilio Tagliavini, University of Bologna, Bologna, Italy; Ari Laaksonen, University of Kuopio, Kuopio, Finland (p.1474)

1B3  
10:20 **ANALYSIS OF SOUTHERN CALIFORNIA ORGANIC AEROSOLS DURING THE 2005 STUDY OF ORGANIC AEROSOLS IN RIVERSIDE (SOAR) CAMPAIGN**, KENNETH S. DOCHERTY, Jose L. Jimenez, Joel R. Kimmel, Michael J. Cubison, Edward J. Dunlea, Qi Zhang, Peter DeCarlo, J. Alex Huffman, Allison C. Aiken, Ingrid Ulbrich, Cooperative Institute for Research in Environmental Sciences and Department of Chemistry and Biochemistry, University of Colorado, Boulder; David Snyder, James J. Schauer, Department of Civil and Environmental Engineering, University of Wisconsin, Madison; Richard E. Peltier, Rodney J. Weber, School of Earth and Atmospheric Sciences, Georgia Institute of Technology; Brett Grover, Delbert J. Eatough, Department of Chemistry and Biochemistry, Brigham Young University; Paul J. Ziemann, Air Pollution Research Center, Department of Environmental Sciences, and Department of Chemistry, University of California, Riverside (p.1475)

1B4  
10:40 **EVALUATING EFFECTS OF PARTITIONING OF PRIMARY ORGANIC EMISSIONS ON THE ORGANIC AEROSOL BUDGET USING THE 3-D CHEMICAL TRANSPORT MODEL PMCAMX**, MANISH K. SHRIVASTAVA, Allen L. Robinson, Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA, USA; Tim Lane, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, USA; Spyros N. Pandis, Department of Chemical Engineering, University of Patras, 26500, Patra, Greece (p.1477)

### 1C Spray Pyrolysis (Platform)

Governors 1 & 5

*Junhong Chen, Mark Swihart, Chairs*

1C1  
9:40 **LIQUID FLAME SPRAY MADE SILVER, TITANIA AND TITANIA-SILVER NANOPARTICLE DEPOSITS**, HELMI KESKINEN, Jyrki M. Mäkelä, Mikko Aromaa, Jorma Keskinen, Aerosol Physics Laboratory, Tampere University of Technology, Tampere, Finland. Erkki Levänen and Tapio Mäntylä, Institute of Material Sciences, Tampere University of Technology, Tampere, Finland. (p.2)

1C2  
10:00 **SYNTHESIS OF TELLURIUM DIOXIDE NANOPARTICLES BY SPRAY PYROLYSIS**, Hongwang Zhang and MARK T. SWIHART, Department of Chemical and Biological Engineering, The University at Buffalo (SUNY), Buffalo, NY (p.3)

1C3  
10:20 **SYNTHESIS OF NANOPARTICLES WITH TIGHT CONTROL ON SIZE AND OTHER PROPERTIES IN FLAME AEROSOL REACTORS (FAR) WITH A MULTI-STAGE DMA SYSTEM**, JINGKUN JIANG, Da-Ren Chen, Pratim Biswas, Washington University, Saint Louis, MO (p.5)

1C4  
10:40 **CONTROLLED SYNTHESIS OF SILICA NANOPARTICLES USING TWO-FLUID NOZZLE SPRAY IN FLAME PYROLYSIS**, HANKWON CHANG, Hee Dong Jang, Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea; Tae-Oh Kim, Kumoh National Institute of Technology, Gumi, Korea; Kikuo Okuyama, Hiroshima University, Higashi-Hiroshima, Japan (p.7)

#### 1D Marine Boundary Layer Aerosols (Platform)

Governors 2 - 4

*Markku Kulmala, Ernest Weingartner, Chairs*

1D1  
9:40 **MODELLING IODINE PARTICLE FORMATION AND GROWTH FROM SEAWEED IN A CHAMBER**, LIISA PIRJOLA, University of Helsinki, Helsinki, FI and Helsinki Polytechnic, Helsinki, FI; Colin D. O'Dowd, National University of Ireland, Galway, IE; Young J. Yoon, Korea Polar Research Institute, Seoul, KR; Karine Sellegri, Université Blaise Pascal, FR (p.1262)

1D2  
10:00 **MARINE SECONDARY ORGANIC CONTRIBUTION TO COASTAL NUCLEATION EVENTS**, PETRI VAATTOVAARA, Piia Huttunen, Jorma Joutsensaari, Ari Laaksonen, University of Kuopio, Finland ; Kari Lehtinen, University of Kuopio and Finnish Meteorological Institute, Finland; Young J. Yoon, Korea Polar Research Institute, Republic of Korea; Colin O'Dowd, Department of Experimental Physics and Environmental Change Institute, Ireland (p.1264)

1D3  
10:20 **MARINE AEROSOL PRODUCED FROM RED TIDE AT THE GULF COAST**, YUNG SUNG CHENG, Yue Zhou, Lovelace Respiratory Research Institute, Albuquerque, NM; Richard Pierce, Mote Marine Laboratory, Sarasota, FL; Dan Baden, University of North Carolina at Wilmington, NC (p.1265)

1D4  
10:40 **IONIC COMPOSITION OF SEA FOAM DROPLETS GENERATED FROM NATURAL AND ARTIFICIAL SEAWATERS**, COREY A. TYREE, Jonathan O. Allen, Arizona State University, Tempe, AZ (p.1267)

#### 1E Nucleation Theory (Platform)

Wabasha Suite

*Kimberly Prather, Sergey Nizkorodov, Chairs*

1E1  
9:40 **REFINING PREDICTIONS OF THE CLASSICAL NUCLEATION THEORY**, TOMAS NEMEC, Petr Krejci, Frantisek Marsik, Institute of Thermomechanics, Prague, Czech Republic (p.1599)

1E2  
10:00 **BINARY NUCLEATION THEORY WITHOUT MAXWELL DEMONS**, RICHARD FLAGAN, California Institute of Technology, Pasadena, CA (p.1601)

1E3  
10:20 **A KINETIC DESCRIPTION OF MOLECULAR CLUSTER EVAPORATION**, IAN FORD, Sukina Natarajan, Jayesh Bhatt, Hoi Yu Tang, University College London, London, U.K. (p.1602)

1E4  
10:40 **TEMPERATURE CONTROL OF SMALL CLUSTERS IN MOLECULAR DYNAMIC SIMULATIONS**, MARTTA SALONEN, Ismo Napari, Hanna Vehkamäki, Department of Physical Science, University of Helsinki, Finland (p.1604)

#### 1F Aerosols in the Workplace (Platform)

Kellogg Suite

*Andrea Ferro, Warren Finlay, Chairs*

1F1  
9:40 **SIZE-FRACTIONATED CHEMICAL CHARACTERISTICS OF AEROSOLS IN PHOSPHATE FERTILIZER MANUFACTURING FACILITIES IN FLORIDA**, YU-MEI HSU, Chang-Yu Wu, Dale A. Lundgren, Department of Environmental Engineering Sciences, University of Florida, Gainesville, FL; Brian K. Birky, Florida Institute of Phosphate Research, Bartow, FL (p.829)

- 1F2  
10:00 **OCCUPATIONAL EXPOSURES TO AIR-BORNE PARTICULATE-METALS IN THE NYC SUBWAY: ASSESSING THE POTENTIAL FOR HEALTH IMPACTS**, DAVID S. GRASS, Steven N. Chillrud, James M. Ross, Farnosh Family, Jon Barbour, H. James Simpson, Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY; Drissa Coulibaly, Vesna Slavkovich, Jennifer Hernandez, Yingdi Chen, Regina Santella, Paul Brandt-Rauf, Joseph A. Mailman School of Public Health at Columbia University, New York, NY (p.831)
- 1F3  
10:20 **STUDY OF AIRBORNE PARTICLES GENERATED BY FREE FALLING POWDERS**, MARJORIE JACQUELIN, François Gensdarmes, Institut de Radioprotection et de Sûreté Nucléaire, Gif-sur-Yvette, France; Evelyne Géhin, Centre d'Etudes et de Recherches en Thermique, Environnement et Système, Université Paris XII, Créteil, France (p.832)
- 1F4  
10:40 **STUDY OF AEROSOL PRODUCTION BY NORMAL IMPACTION OF MILLIMETRIC DROPLETS ONTO A LIQUID FILM**, CHARLES MOTZKUS, François Gensdarmes, Institut de Radioprotection et de Sûreté Nucléaire, Gif-sur-Yvette, France; Evelyne Gehin, Université Paris XII, Créteil, France. (p.834)
- 1G Aerosol Physics-I (Poster)**  
Garden Court East  
*Alexey Nadykto, Sarah Dunnett, Chairs*
- 1G1  
9:40 **A STUDY OF AEROSOL SAMPLERS OPERATING IN CALM AIR WHEN SAMPLING HORIZONTALLY**, SARAH DUNNETT, Loughborough University, Loughborough, U.K., Xianyun Wen, Leeds University, Leeds, U.K. (p.580)
- 1G2  
9:40 **TRANSMISSION EFFICIENCY OF AN AERODYNAMIC PARTICLE FOCUSING LENS SYSTEM: COMPARISON OF MODEL AND MEASUREMENTS.**, Peter Liu, Meteorological Service of Canada, Toronto; Deng Rensheng, Kenneth A. Smith, MIT; JOHN T. JAYNE, Leah R. Williams, Manjula R. Canagaratna, Kori Moore and Douglas R. Worsnop, Aerodyne Research, Inc. (p.581)
- 1G3  
9:40 **EFFECT OF SCREEN MESHES ON SETTLING PLATE SAMPLINGS OF AIRBORNE FUNGI**, NAOMICHI YAMAMOTO, Hideaki Matsuki, Tokai University School of Health Sciences, Yukio Yanagisawa, University of Tokyo, Minoru Fujii, National Institute of Environmental Studies, Ibaraki, Japan (p.582)
- 1G4  
9:40 **A NUMERICAL STUDY OF THE THIN-WALLED AEROSOL SAMPLERS IN HIGH VELOCITY RATIOS**, Ahmad Falahatpisheh, Omid Abouali, Department of Mechanical Engineering, Shiraz University, Shiraz, Iran, GOODARZ AHMADI, Department of Mechanical Engineering, Clarkson University, Potsdam, NY, USA (p.583)
- 1G5  
9:40 **DROPLET EVAPORATION/ CONDENSATION WITH GAS ABSORPTION ACCOMPANIED BY AQUEOUS-PHASE EQUILIBRIUM DISSOCIATION REACTIONS**, Tov Elperin, Andrew Fominykh and Boris Krasovitev, Ben-Gurion University of the Negev, Israel (p.585)
- 1G6  
9:40 **THERMOPHORESIS OF A SPHERICAL AGGREGATE INDUCED BY THERMAL SLIP AND TRANSPIRATION FLOWS**, ALVARO PEREA, Pedro L. Garcia-Ybarra, Jose L. Castillo, UNED, Spain (p.587)
- 1G8  
9:40 **EFFECT OF AMMONIA ON STABILITY OF SULFURIC ACID-WATER COMPLEXES**, ALEXEY NADYKTO; Fangqun Yu, SUNY at Albany, ASRC, Albany, NY (p.590)

- 1G9  
9:40 **CHARACTERIZATION OF NEW PARTICLE FORMATION EVENTS IN HIGHLY POLLUTED AREA**, AMAR HAMED, Jorma Joutsensaari, Ari Laaksonen, University of Kuopio, Kuopio, Finland; Fabrizia Cavalli, Maria C. Facchini, Sandro Fuzzi, Istituto di Scienze dell'Atmosfera e del Clima – CNR, Bologna, Italy (p.591)
- 1G10  
9:40 **SENSITIVITY OF THE SULFATE SIZE DISTRIBUTION TO DYNAMICAL PROCESSES**, XIAOYAN MA, Knut von Salzen, Canadian Centre for CLimate Modelling and Analysis (CCCma), Environment Canada, University of Victoria, BC, Canada (p.593)
- 1G11  
9:40 **HOMOGENEOUS AND HETEROGENEOUS NUCLEATION IN THE MARTIAN ATMOSPHERE**, Anni Määttänen, HANNA VEHKAMÄKI, Antti Lauri, Ismo Napari, Janne Kauhanen, Hannu Savijärvi, Markku Kulmala, Division of atmospheric sciences, University of Helsinki, Helsinki, Finland; Sini Merikallio, Space Research, Finnish Meteorological Institute, Helsinki, Finland (p.595)
- 1G12  
9:40 **LABORATORY MEASUREMENT OF THE SCATTERING PROPERTIES OF ATMOSPHERIC MINERAL DUST COMPONENTS IN THE VISIBLE WAVELENGTH REGION**, DANIEL B. CURTIS, Murat Aycibin, Nathan L. Munsterman, Mark A. Young, Vicki H. Grassian, Paul Kleiber, University of Iowa, Iowa City, IA (p.597)
- 1G13  
9:40 **EFFECTS OF ATMOSPHERIC AEROSOLS ON LOW-ALTITUDE INFRARED TRANSMISSION**, Tero Mielonen, Timo Kaurila, ANTTI AROLA, Heikki Lihavainen, Kari E. J. Lehtinen (p.599)
- 1G14  
9:40 **MEASUREMENTS OF OPTICAL PROPERTIES OF ATMOSPHERIC AEROSOLS IN NORTHERN FINLAND**, VEIJO AALTONEN, Heikki Lihavainen, Veli-Matti Kerminen, Mika Komppula, Juha Hatakka, Yrjö Viisanen, Finnish Meteorological Institute, Helsinki, Finland; Kristina Eneroth, Stockholm University, Stockholm, Sweden; Markku Kulmala, University of Helsinki, Helsinki, Finland (p.600)
- 1G15  
9:40 **EXTINCTION MEASUREMENTS OF COMPONENTS OF MINERAL DUST AEROSOL: ENVIRONMENTAL AEROSOL CHAMBER STUDIES**, PRAVEEN K MOGILI, Department of Chemical and Biochemical Engineering, Vicki H Grassian, Mark A Young, Department of Chemistry; Paul D Kleiber, Department of Physics and Astronomy, University of Iowa, Iowa city, IA; , Kuo-Ho Yang, Department of Physics, St. Ambrose University, Davenport, IA. (p.602)
- 1G16  
9:40 **DETERMINATION IN THE VISIBLE AND NEAR-INFRARED WAVELENGTHS OF THE MASS SPECIFIC EXTINCTION COEFFICIENT AND OPTICAL INDEX OF SOOT PARTICLES PRODUCED BY TURBULENT DIFFUSION FLAMES.**, FRANCOIS-XAVIER OUF, Jacques Vendel, Institut de Radioprotection et de Sûreté Nucléaire, Laboratoire de Physique et Métrologie des Aérosols, Gif-sur-Yvette Cedex, France; Alexis Coppalle, Marc-Emmanuel Weill, Jérôme Yon, COmplexe de Recherche Interprofessionnelle en Aérothermochimie, UMR 6614, Saint-Etienne du Rouvray Cedex, France (p.604)
- 1G17  
9:40 **AEROSOL CHARACTERISTICS AT A HIGH ALTITUDE STATION, NAINI TAL IN INDIA**, U.C.Dumka, Aryabhatta Research Institute of Observational Sciences, Naini Tal-263 129, Uttaranchal, India, K.Krishna Moorthy, Space Physics Laboratory, Vikram Sarabhai Space Centre, Trivandrum-695 022, Kerala, India, (3) Ram Sagar, Aryabhatta Research Institute of Observational Sciences, Naini Tal-263 129, Uttaranchal, India (p.606)

- 1G21 9:40 **DESIGN OF AN OPTICAL ICE DETECTOR FOR THE ZURICH ICE NUCLEATION CHAMBER (ZINC)**, MATHIEU NICOLET, Olaf Stetzer, Ulrike Lohmann, ETH Zurich, Switzerland (*p.612*)
- 1G22 9:40 **EXPERIMENTAL STUDY OF NANOPARTICLE PENETRATION EFFICIENCY THROUGH COILS OF CIRCULAR CROSS-SECTIONS**, SE-JIN YOOK, David Y. H. Pui, University of Minnesota, Minneapolis, MN (*p.614*)
- 1G23 9:40 **DEPOSITION OF COMPOSITE AEROSOL PARTICLES ON DIFFERENT SURFACES NEAR A BUSY ROAD**, DMITRI K. GRAMOTNEV, Thor E. Bostrom, Galina Gramotnev, Steven J. Goodman, Applied Optics Program, School of Physical and Chemical Science, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia (*p.616*)
- 1G24 9:40 **PARTICLE DEPOSITION IN A CRITICAL ORIFICE**, CHUEN-JINN TSAI, Sheng-Chieh Chen, Chen-Han Wu, Institute of Environmental Engineering, National Chiao Tung University, Hsinchu, Taiwan. (*p.618*)
- 1G25 9:40 **TURBULENCE MODIFICATION BY PARTICLES IN A VERTICAL CHANNEL FLOW**, HOJAT NASR, Goodarz Ahmadi; Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY, USA (*p.620*)
- 1G26 9:40 **ON THE MOTION OF PARTICLES IN A LAMINAR FLOW BEND**, SANDY LAWSON, Mike Reeks, Ian Potts, University of Newcastle upon Tyne, UK, Yannis Drossinos, European Joint Research Centre, Italy (*p.622*)
- 1G27 9:40 **POWDER DISPERSION AND A SIMPLIFIED ENERGY RELATIONSHIP**, HEATHER M. GORENZ, John E. Brockmann, Daniel A. Lucero, Tracie L. Durbin; Plasma, Aerosol, and Noncontinuum Processes, Sandia National Laboratories, Albuquerque, NM (*p.623*)
- 1G28 9:40 **QUASI-GELATION OF SUBMICRON FRACTAL AGGLOMERATES BY SOUND WAVES**, Peter Vainshtein, Michael Shapiro, Faculty of Mechanical Engineering, Technion-Israel Institute of Technology (*p.624*)
- 1G29 9:40 **PARTICLE TRACKING IN A SYMMETRIC SHEAR FLOW**, YANNIS DROSSINOS, European Commission, Joint Research Centre, Ispra, Italy; Alberto Suarez, Universidad Autonoma de Madrid, Madrid, Spain (*p.626*)
- 1H Urban Aerosols-I (Poster)**  
Garden Court West  
*Yee-Lin Wu, Chair*
- 1H1 9:40 **ELEMENTAL ABUNDANCES IN ATMOSPHERIC AEROSOLS IN TRAFFIC AREAS OF SUVA, FIJI**, RAVIN NAVNEET DEO, Sitaram Garimella, School of Physics, Faculty of Science and Technology, University of the South Pacific. (*p.1645*)
- 1H2 9:40 **SCAVENGING AND COMPREHENSIVE CHARACTERIZATION OF AIRBORNE PARTICULATE MATTER IN AN INDUSTRIALIZED URBAN ATMOSPHERE AND ITS SURROUNDINGS**, Frédéric Ledoux, Dominique Courcot, Lucie Courcot, EMILE PUSKARIC, Université du Littoral Côte d'Opale, France (*p.1646*)
- 1H3 9:40 **INTRA-COMMUNITY SPATIAL VARIATION OF SIZE-FRACTIONATED PM MASS, OC, EC AND ELEMENTS IN LONG BEACH, CA**, MARGARET A. KRUDYSZ, John R. Froines, Department of Environmental Health Sciences, University of California - Los Angeles, Los Angeles, CA; Philip M. Fine, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA (*p.1647*)
- 1H4 9:40 **MOBILE MEASUREMENTS OF STREET DUST IN HELSINKI, FINLAND**, KAARLE KUPIAINEN, Nordic Envicon Oy, Helsinki, Finland; Liisa Pirjola, Helsinki Polytechnic Stadia, Helsinki, Finland; Heikki Tervahattu, Nordic Envicon Oy, Helsinki, Finland (*p.1649*)

- 1H5  
9:40 **AEROSOL COMPOSITION OF PM10 CONCENTRATIONS IN CHILLAN, CHILE, FROM 2001 TO 2002**, OMAR CARVACHO, Lowell L. Ashbaugh, Robert Flocchini, Crocker Nuclear Laboratory, University of California, Davis, CA, U.S.A; José Celis; Facultad de Medicina Veterinaria, Ciencias Ambientales, Universidad de Concepción, Campus Chillán, Chillán, Chile (*p.1651*)
- 1H6  
9:40 **FLUXES AND TRANSFORMATION OF CARBON IN THE BLACKENING OF HISTORICAL BUILDINGS**, PETER BRIMBLECOMBE, Carlota M. Grossi, School of Environmental Sciences, University of East Anglia, Norwich, United Kingdom; Alessandra Bonazza, Cristina Sabbioni Institute of Atmospheric Sciences and Climate, CNR-ISAC, Bologna, Italy (*p.1653*)
- 1H8  
9:40 **STUDY OF DIURNAL VARIABILITY OF AEROSOL OPTICAL DEPTH**, GAJANAN AHER, N. Shantikumar Singh, Sanjay More, V. V. Agashe, Department of Environmental Sciences, University of Pune. (*p.1655*)
- 1H9  
9:40 **MEASUREMENT AND CHARACTERISATION OF PM10, PM2.5 AND PM1 FRACTIONS OF ATMOSPHERIC AEROSOL IN KRUNG THEP, THAILAND**, Tosapol Prasserttachato, Sirikalaya Suvachittanont, Department of Chemical Engineering, Kasetsart University, Thailand; Masami Furuuchi, Graduate School of Natural Science and Technology, Kanazawa University, Japan; WLADYSLAW W. SZYMANSKI, Faculty of Physics, University of Vienna, Austria (*p.1656*)
- 1H10  
9:40 **SOURCE IDENTIFICATIONS AND SPATIAL DISTRIBUTIONS OF PM2.5 COLLECTED AT MULTIPLE SITES IN SEATTLE, WA**, EUGENE KIM, Philip K. Hopke, Clarkson University, Potsdam, NY; Timothy V. Larson, University of Washington, Seattle, WA (*p.1657*)
- 1H11  
9:40 **STATISTICAL ANALYSIS OF TOTAL SUSPENDED PARTICULATES (TSP), INHALABLE PARTICLES (PM10), FINE PARTICLES (PM2.5), OXIDES OF (NOX) AND BENZENE SOLUBLE ORGANIC FRACTION (BSOF) IN AN URBAN REGION OF KOLKATA, INDIA AND ESTIMATING HUMAN EXPOSURE**, SUBHANKAR NAG, A. K. Gupta, Department of Civil Engineering, Indian Institute of Technology, Kharagpur, India; U. K. Mukhopadhyay, West Bengal Pollution Control Board, Kolkata, India (*p.1659*)
- 1H12  
9:40 **ULTRAFINE PARTICLES MEASURED IN COMMERCIAL AIRCRAFT TAKE-OFF PLUMES**, YIFANG ZHU, Rong-Chun Yu and John R. Froines, Environmental Health Sciences Department, University of California Los Angeles, Los Angeles, CA (*p.1660*)
- 1H13  
9:40 **ORGANIC MOLECULAR MARKER ANALYSIS OF LOW VOLUME RESIDENTIAL SAMPLES FOR SOURCE APPORTIONMENT IN THE DETROIT EXPOSURE AND AEROSOL RESEARCH STUDY**, STEPHEN R. MCDOW, US EPA RTP, NC; John Turlington, Alion Technologies, RTP, NC; David Olson, US EPA, RTP, NC; Leonard Stockburger, US EPA, RTP, NC; Ronald Williams, US EPA, RTP, NC; Alan Vette, US EPA, RTP, NC (*p.1662*)
- 1H14  
9:40 **CHARACTERISTICS OF ATMOSPHERIC GASEOUS POLLUTANTS AND PARTICULATE WATER SOLUBLE IONS**, SHUI-JEN CHEN, Kuo-Lin Huang, Chih-Chung Lin, Ming-Tsan Hu, Department of Environmental Engineering and Science, National Pingtung University of Science and Technology, PingTung, Taiwan; Wen-Yinn Lin, Institute of Environmental Engineering and Management, National Taipei University of Technology, Taipei, Taiwan (*p.1663*)

- 1H15  
9:40 **MODEL FOR ESTIMATING IMPACT OF RECURRING AND NON-RECURRING CONGESTION ON AIR QUALITY ADJACENT TO FREEWAY**, SALIMOL THOMAS, Robert B. Jacko, Department of Civil Engineering, Purdue University, 550 Stadium Mall Drive, West Lafayette, IN (p.1665)
- 1H17  
9:40 **EVALUATION OF THE EFFECTIVENESS OF STREET SWEEPING USING REAL TIME MEASUREMENT OF SILT LOADING**, SEHYUN HAN, Young Min Son, Yongwon Jung, Inha University, Incheon, Korea; Daigun Kim, National Institute of Environmental Research, Korea (p.1668)
- 1H18  
9:40 **MOBILE MEASUREMENTS OF SPATIAL VARIABILITY OF TOXIC SPECIES AND AEROSOL IN URBAN AIR**, Yilin Ma, Nitin Goel, ANDREY KHLISTOV, Department of Civil and Environmental Engineering, Duke University, Durham, NC (p.1669)
- 1H19  
9:40 **AEROSOL MASS SPECTROMETRY OF ORGANIC AEROSOL IN HOUSTON, TEXAS**, MANJULA CANAGARATNA, Douglas Worsnop, Aerodyne Research, Inc., Billerica, MA; Qi Zhang, University of Albany, Albany, NY; Jose Jimenez, University of Colorado, Boulder, CO (p.1671)
- 1H21  
9:40 **NUMBER CONCENTRATION MEASUREMENTS USING A WATER-BASED CPC IN HONG KONG UNDER HEAVY TRAFFIC CONDITIONS**, HAMILTON C. TSANG, Antonio H. Miguel Nanochemistry Laboratory, Institute of the Environment, University of California, Los Angeles, CA, USA; Roger Ma, Department of Mathematics, Hong Kong University of Science and Technology, Clearwater Bay, Hong Kong, China (p.1672)
- 1H22  
9:40 **BEHAVIOUR OF THE AEROSOLS WITH THE DIAMETER LARGER THAN 10 µm IN URBAN ATMOSPHERE**, KIYOSHI MATSUMOTO, Sae Tominaga, Manabu Igawa, Department of Applied Chemistry, Kanagawa University, Kanagawa-ku, 221-8686, Yokohama, Japan (p.1674)
- 1H23  
9:40 **DETERMINATION OF MONOSACCHARIDE ANHYDRIDES AT SIX URBAN SITES IN EUROPE**, SANNA SAARIKOSKI, Markus Sillanpää, Anna Frey, Risto Hillamo, Finnish Meteorological Institute, Helsinki, Finland; Arto S. Pennanen, Raimo O. Salonen, National Public Health Institute, Kuopio, Finland (p.1675)
- 1H24  
9:40 **DETERMINATION OF EFFECTIVE PARTICLE DENSITY FOR DIFFERENT ATMOSPHERIC AEROSOL MODES**, JYRKI RISTIMÄKI, Annele Virtanen, Jonna Kannosto, Jorma Keskinen, Tampere University of Technology (p.1677)
- 1H26  
9:40 **POLYCYCLIC AROMATIC HYDROCARBONS IN SIZE-FRACTIONATED PARTICULATE MATTER OF SIX URBAN SITES IN EUROPE**, Karri Saarnio, MARKUS SILLANPÄÄ, Risto Hillamo, Finnish Meteorological Institute, Helsinki, Finland; Erik Sandell, Nab Labs Laboratories, Espoo, Finland; Arto Pennanen, Raimo O. Salonen, National Public Health Institute, Kuopio, Finland (p.1679)
- 1H27  
9:40 **SIZE-RESOLVED EMISSION FACTOR FOR PARTICLE GENERATION CAUSED BY STUDED TIRES – EXPERIMENTAL RESULTS**, ANDREAS DAHL, Anders Gudmundsson, Erik Swietlicki, Mats Bohgard, Lund University, Lund, Sweden; Göran Blomqvist, Mats Gustafsson, Swedish National Road and Transport Research Institute, Linköping, Sweden (p.1681)
- 1H28  
9:40 **NEW PARTICLE FORMATION IN THE URBAN ATMOSPHERE OF HELSINKI DURING 1997-2004**, Jyrki M. Martikainen, Tareq Hussein, Heikki Junninen, MIKKKA DAL MASO, Markku Kulmala, University of Helsinki, Helsinki, Finland (p.1682)



1H30  
9:40 **GASEOUS AND PARTICULATE MERCURY IN THE LOS ANGELES BASIN**, DAVID C. SNYDER, James J. Schauer, Department of Civil and Environmental Engineering, University of Wisconsin, Madison, WI; Xueying Qin, Kimberly A. Prather, Department of Chemistry and Biochemistry, University of California-San Diego, La Jolla, CA (p.1684)

1H31  
9:40 **CHARACTERISTICS OF AIR MASS PATHWAY AND ITS IMPACT ON CULTURAL PROPERTIES IN GYEONGJU, KOREA**, KYUNG W. KIM, Gyeongju University, Gyeongju, Korea; Jong H. Jung, Sorabol College, Gyeongju, Korea (p.1686)

### Monday 11:00 AM - 11:20 AM

#### Coffee Break

Great River Ballroom, Garden Courts East & West

### Monday 11:20 AM - 12:40 PM

#### Session 2

#### 2A PM-10 & PM-2.5 Characterization-II (Platform)

Minnesota Ballroom

*Barbara Turpin, Cort Anastasio, Chairs*

2A1  
11:20 **ANALYSIS OF THE GAS TO PARTICLE PARTITIONING OF REACTIVE MERCURY USING OFF-LINE THERMAL DESORPTION AND COLD VAPOR ATOMIC FLUORESCENCE SPECTROSCOPY (MTD-CVAFS)**, ANDREW P. RUTTER, Katy L. Hanford, Jaime, T. Zwiers, University of Wisconsin-Madison; James J. Schauer, University of Wisconsin-Madison and Wisconsin State Laboratory of Hygiene, Madison, WI. (p.1118)

2A2  
11:40 **MEASURING THE TRACE ELEMENTAL COMPOSITION OF SIZE-RESOLVED AIRBORNE PARTICLES**, JORN DINH HERNER, Peter Green, Michael Kleeman, Department of Civil and Environmental Engineering, University of California at Davis, Davis CA (p.1120)

2A3  
12:00 **ANALYSIS OF PYROTECHNIC SMOKE IN AMBIENT AEROSOLS WITH AEROSOL MASS SPECTROMETRY**, Eric Vawdrey, PHILIP J. SILVA, Utah State University, Logan, UT (p.1121)

2A4  
12:20 **CHEMICAL SPECIATION OF CHROMIUM IN AMBIENT PM2.5 BY MICRO-FOCUSED XANES (X-RAY ABSORPTION NEAR EDGE SPECTROSCOPY)**, CORT ANASTASIO, Michelle L. Werner, Department of Land, Air & Water Resources, University of California, Davis, CA; Peter S. Nico, Matthew A. Marcus, Earth Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA. (p.1122)

#### 2B Marine Boundary Layer Processing (Platform)

Capitol Ballroom

*Hannele Korhonen, Darius Ceburnis, Chairs*

2B1  
11:20 **GRADIENT FLUXES OF AEROSOL MASS, SEA SALT AND NSS SO4 IN THE NORTHEAST ATLANTIC AIR**, Darius Ceburnis, Colin D. O'Dowd, Stephen G. Jennings, National University of Ireland, Galway, Ireland, Maria C. Facchini, Lorenza Emblico, Stefano Decesari, ISAC - CNR, Bologna, Italy, Darius Ceburnis, Jonas Sakalys, Institute of Physics, Vilnius, Lithuania (p.1269)

2B2  
11:40 **PARTICLE EMISSIONS FROM SHIP ENGINES: EMISSION PROPERTIES AND TRANSFORMATION IN THE MARINE BOUNDARY LAYER**, ANDREAS PETZOLD, Bernadett Weinzierl, Markus Fiebig, Michael Lichtenstern, Deutsches Zentrum für Luft- und Raumfahrt, Wessling, Germany, Peter Lauer, MAN B&W Diesel AG, Augsburg, Germany, Christian Gurk, Max-Planck-Institute for Chemistry, Mainz, Germany, Klaus Franke, University of Bremen, Bremen, Germany, Ernest Weingartner, Paul Scherrer Institute, Villigen PSI, Switzerland (p.1271)

2B3  
12:00 **EVALUATING OUR UNDERSTANDING OF MBL AEROSOL USING OBSERVATIONS AND A GLOBAL MODEL OF AEROSOL MICROPHYSICS**, Dominick Spracklen, Kirsty Pringle, Kenneth Carslaw, Graham Mann, HANNELE KORHONEN, University of Leeds, Leeds, UK (p.1273)

2B4  
12:20 **OBSERVATION OF PERSISTENT LAYER OF ENHANCED ORGANIC AEROSOL CONCENTRATIONS ABOVE CLOUDTOPS OFF THE NORTHERN CALIFORNIA COAST**, M. Alexander and J. Hubbe, Pacific Northwest National Laboratory, Richland, WA, Y. Lee, P. Daum, G. Senum, J. Wang, Brookhaven National Laboratory, Upton, NY, S. Murphy, R. Flagan, V. Varunbangkul, S. Murphy, T. Rissman, A. Sorooshian, J. Seinfeld California Institute of Technology - Dept. of Chemical Engineering, Pasadena, CA, J. Hudson, Desert Research Institute- University of Nevada, NV, J. Jayne, Research Inc., Billerica, MA (p.1274)

## 2C Aerosol and Plasma Synthesis (Platform)

Governors 1 & 5

*Jyrki Mäkelä, Uwe Kortshagen, Chairs*

2C1  
11:20 **AEROSOL SYNTHESIS BY SIMULTANEOUS NUCLEATION, COAGULATION, SINTERING AND GROWTH: SIMULATION OF STRUCTURE AND PRODUCT PROPERTY FORMATION**, HANS-JOACHIM SCHMID, Univ. Erlangen-Nuremberg, Particle Technology Group, Erlangen, Germany. (p.9)

2C2  
11:40 **AEROSOL PROCESSING AND CHARACTERIZATION OF THE FUNCTIONALITY OF NOBLE-METAL COATED NANOPARTICLES**, AXEL BINDER, Andre Heel, Gerhard Kasper, Institut für Mechanische Verfahrenstechnik und Mechanik, Universität Karlsruhe (TH), Germany (p.11)

2C3  
12:00 **HIGH-YIELD PLASMA SYNTHESIS OF LUMINESCENT SILICON NANOCRYSTALS WITH QUANTUM YIELDS UP TO 67%**, Lorenzo Mangolini, UWE KORTSHAGEN, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN 55455, USA; David Jurbergs, Elena Rogjina, Innovalight, Inc., 1246 University Ave. W, Ste. 468, St. Paul, MN 55104, USA (p.13)

2C4  
12:20 **PLASMA SYNTHESIS OF SILICON NANOCUBES AND THEIR APPLICATION IN NANOPARTICLE-BASED TRANSISTORS**, AMEYA BAPAT, Uwe Kortshagen, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN 55455; Yongping Ding, Ying Dong, Stephen A. Campbell, Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN 55455 (p.15)

## 2D Impactors (Platform)

Governors 2 - 4

*Katharine Moore, Chair*

2D1  
11:20 **AEROSOL PENETRATION CHARACTERISTICS OF THE INTERAGENCY MONITORING OF PROTECTED VISUAL ENVIRONMENTS (IMPROVE) SAMPLER PM2.5 CYCLONE**, JAY TURNER, Washington University, St. Louis, MO; Nathan Kreisberg, Susanne Hering, Aerosol Dynamics, Inc., Berkeley, CA; Gary Walsh, Providence College, Providence, RI (p.418)

2D2  
11:40 **A 3-STAGE PERSONAL DUST SAMPLER FOR SAMPLING RESPIRABLE, THORACIC, AND INHALABLE PARTICULATE CONCENTRATIONS IN THE WORKPLACES**, Chen-Shen Chang, Chuen-Jinn Tsai, National Chiao Tung University, Hsinchu, Taiwan; Cheng-Hsiung Huang, Yuanpei University of Science and Technology, Hsinchu, Taiwan; Tung-shen Shih, Da-Toung Tang, Institute of Occupational Safety and Health, Council of Labor Affairs, Taipei, Taiwan (p.356)

2D3  
12:00 **USE OF SHEATH FLOW TO REDUCE WALL LOSSES IN RECTANGULAR SLOT VIRTUAL IMPACTORS,**

SATYANARAYANAN SESHADRI, Sridhar Hari, Andrew R. McFarland, Aerosol Technology Lab, Texas A&M University, College Station, TX (p.358)

2D4  
12:20 **DESIGN AND DEVELOPMENT OF WIDE-RANGE IMPACTOR PARTICLE SAMPLER (WRIPS),**

Sang-Rin Lee, Suresh Dhaniyala, Thomas M. Holsen, Clarkson University, Potsdam, NY (p.360)

## 2E Laboratory Study of Organic Reactions-I (Platform)

Wabasha Suite

*John Offenberg, Kara Huff-Hartz, Chairs*

2E1  
11:20 **A RELATIVE RATES APPROACH TO STUDYING RADICAL INITIATED HETEROGENEOUS REACTIONS,** JOHN HEARN and Geoffrey Smith, Department of Chemistry, University of Georgia, Athens, GA (p.1479)

2E2  
11:40 **ATMOSPHERIC PROCESSING OF ORGANIC MONOLAYERS BY NO<sub>3</sub> AND N<sub>2</sub>O<sub>5</sub>,** DANIEL A. KNOPF, Lori M. Anthony, Simone Gross, Jackson Mak, Allan K. Bertram, University of British Columbia, Vancouver, Canada (p.1481)

2E3  
12:00 **LABORATORY EVIDENCE FOR AEROSOL FORMATION VIA CLOUD-EVAPORATION PROCESSING OF PRODUCTS FROM THE PHOTOOXIDATION OF INDIVIDUAL PRECURSOR HYDROCARBONS,** JOHN H. OFFENBERG, Edward O. Edney, Tadeusz E. Kleindienst, Michael Lewandowski, National Exposure Research Laboratory, U.S. Environmental Protection Agency, RTP, NC 27711 USA; Mohammed Jaoui, Alion Science and Technology, RTP, NC 27709 USA (p.1483)

2E4  
12:20 **CORRELATION OF AEROSOL CCN ACTIVITY TO CHEMICAL COMPOSITION DURING THE INTENSE OZONOLYSIS OF OLEIC ACID,** JOHN E. SHILLING, Stephanie M. King, Michihiro Mochida, Scot T. Martin, Harvard University, Cambridge, MA; Douglas R. Worsnop, Aerodyne Research Inc., Billerica, MA (p.1484)

## 2F Nucleation in the Environment-I (Platform)

Kellogg Suite

*Kaarle Hämeri, Chair*

2F1  
11:20 **EFFECT OF NH<sub>3</sub> ON NANO-PARTICLE FORMATION FROM SO<sub>2</sub> IN HUMID AIR,** KENKICHI NAGATO, Tohru Kawabuchi, Kochi National College of Technology, Nankoku, Japan (p.1592)

2F2  
11:40 **FORMATION OF INDOOR AIR PARTICLES AS A RESULT OF D-LIMONENE OXIDATION,** EIJA VARTIAINEN, Kaarle Hämeri, University of Helsinki, Helsinki, Finnish Institute of Occupational Health, Helsinki, Markku Kulmala, Taina Ruuskanen, Risto Taipale, Hanna Vehkamäki, University of Helsinki, Helsinki (p.1594)

2F3  
12:00 **ROLE OF METAL OXIDE IN THE FORMATION OF NUCLEATION MODE PARTICLES IN ENGINE EXHAUST,** HUA DU and Fangqun Yu, Atmospheric Science Research Center, SUNY at albany, Albany, NY (p.1595)

2F4  
12:20 **SOLUBLE FRACTIONS OF NEWLY FORMED PARTICLES IN SOUTHERN FINLAND STUDIED WITH AN HTDMA,** MIKAEL EHN, Tuukka Petäjä, Kaarle Hämeri, Pasi P. Aalto, Markku Kulmala, University of Helsinki, Helsinki, Finland (p.1597)

**2G Combustion (Poster)**

Garden Court West

*Umit Koylu, Andrey Filippov, Chairs*

2G1  
11:20 **AN EXPERIMENTAL AND THEORETICAL APPROACH TO SOOT PARTICLE INCEPTION IN LAMINAR DIFFUSION FLAMES**, SCOTT SKEEN, Ben Kumfer, Richard L. Axelbaum, Washington University in St. Louis, St. Louis, MO (*p.172*)

2G3  
11:20 **PARTICLE GROWTH IN PULSED CORONA DISCHARGE PROCESS FOR DENOX AND DESOX**, DONG-JOO KIM, Jeong-Hoon Park, Jin-Hee Kang, Anna Nasonova and Kyo-Seon Kim, Department of Chemical Engineering, Kangwon National University, Chuncheon, Kangwon-Do, Korea (*p.176*)

2G4  
11:20 **MULTI-CHANNEL STATISTICAL ANALYSIS OF COMBUSTION AEROSOLS: CANONICAL CORRELATIONS AND SOURCES OF PARTICLE MODES**, GALINA GRAMOTNEV, Dmitri K. Gramotnev, Applied Optics Program, School of Physical and Chemical Science, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia (*p.177*)

2G5  
11:20 **EVALUATION OF DIESEL NANOPARTICLE FORMATION IN THE PRESENCE OF ULTRA-CLEAN DILUTION AIR**, JACOB SWANSON, David Kittelson, Winthrop Watts, University of Minnesota, Minneapolis, MN; Eivind Stenersen, Donaldson Company, Inc, Minneapolis, MN (*p.179*)

2G6  
11:20 **COMPUTATIONAL ANALYSIS OF NUCLEATION EXPERIMENTS IN A PERFORATED TUBE DILUTER**, JOUNI PYYKÖNEN, Jorma Jokiniemi, VTT Technical Research Centre of Finland, Fine particles, Espoo, Finland; Mirella Miettinen, Ari Leskinen, Jorma Jokiniemi, University of Kuopio, Fine Particle and Aerosol Technology Laboratory, Kuopio, Finland (*p.181*)

2G7  
11:20 **MODELING ON PARTICLE FORMATION AND GROWTH IN AUTOMOBILE EXHAUST: COMPARISON WITH THE EXPERIMENTS OF GASEOUS SULFURIC ACID AND NANOPARTICLE SIZE DISTRIBUTION**, LIISA PIRJOLA, Helsinki Polytechnic, Helsinki, FI and University of Helsinki, Helsinki, FI; Frank Arnold, Max Planck Institute for Nuclear Physics, Heidelberg, DE; Kaarle Hämeri, Finnish Institute of Occupational Health, Helsinki, FI and University of Helsinki, Helsinki, FI; Mikko Lemmetty, Topi Rönkkö and Jorma Keskinen, Tampere University of Technology, Tampere, Finland (*p.182*)

2G8  
11:20 **FIRST GASEOUS SULFURIC ACID DETECTION IN AUTOMOBILE EXHAUST: IMPLICATIONS FOR VOLATILE NANOPARTICLE FORMATION AND HEALTH RISK**, FRANK ARNOLD, Heinfried Aufmhoff, Tanja Schuck, Max Planck Institute for Nuclear Physics, Heidelberg, DE; Liisa Pirjola, Helsinki Polytechnic, Helsinki, FI and University of Helsinki, Helsinki, FI; Tero Lähde, Finnish Institute of Occupational Health, Helsinki, FI; Kaarle Hämeri, Finnish Institute of Occupational Health, Helsinki, FI and University of Helsinki, Helsinki, FI; (*p.184*)

2G9  
11:20 **ULTRAFINE PARTICLES PASSING THROUGH THE EXHAUST PIPE FOR SIMULATING AUTOMOTIVE EMISSION**, BYUNG UK LEE, Department of Mechanical Engineering, Konkuk University, Seoul, Korea; Gwi-Nam Bae, Du Sub Byun, Korea Institute of Science and Technology (KIST), Seoul, Korea; Jin Ha Lee, Gwon-Koo Yeo, Corporate Research & Development Division, Hyundai & Kia Motors, Yongin-Si, Gyunggi-Do, Korea (*p.186*)

2G10  
11:20 **THE INFLUENCE OF FUEL ETHANOL CONTENT ON SPARK IGNITION NANOPARTICULATE ENGINE EMISSIONS**, MARCUS DRAYTON, David Kittelson, University of Minnesota, Minneapolis, MN (*p.188*)

- 2G11 11:20 **THE EFFECTS OF ETHANOL AS AN OXYGENATE ADDITIVE ON NANO-PARTICULATE MATTER OXIDATION KINETICS**, HENRY AJO, Marcus Drayton, David Kittelson, Jeffrey Roberts, University of Minnesota, Minneapolis, MN (p.190)
- 2G12 11:20 **NANOPARTICLE EMISSIONS FROM A FORMULA SAE RACE CAR ENGINE**, ADAM C. RAGATZ, Marcus K. Drayton, David B. Kittelson, Winthrop F. Watts, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN (p.192)
- 2G13 11:20 **THE ROLE OF LUBRICATION OIL IN PARTICULATE MATTER EMISSIONS FROM A HYDROGEN ENGINE**, ARTHUR MILLER, Matthew Habjan, National Institute of Occupational Health, Spokane, WA; Christopher Stipe, Seattle University, WA; Gilbert Ahlstrand, University of Minnesota, MN (p.194)
- 2G15 11:20 **EFFECTS OF FUEL COMPOSITION ON THE PARTICLES EXHAUSTED FROM A 4-STROKE MOTORCYCLE ENGINE**, Hsiang-Hsi Hsu, Kai-Ming Huang, Mu-Rong Chang, WEN-YINN LIN, NATIONAL TAIPEI UNIVERSITY of TECHNOLOGY, TAIPEI, TAIWAN; Jiun-Horng Tsai, National Cheng-Kung University, Tainan, Taiwan; Fu-Tien Jeng, National Taiwan University, Taipei, Taiwan (p.197)
- 2G17 11:20 **EFFECTS OF REAL-WORLD DRIVING CONDITIONS ON GASEOUS AND PARTICULATE EMISSIONS FROM IN-USE HEAVY DUTY DIESEL TRUCKS**, AJAY KUMAR CHAUDHARY, Abhilash Nigam, Harshit Agrawal, George Scora, and David Cocker III, Bourns College of Engineering, Center for Environmental Research and Technology (CE-CERT), Department of Chemical and Environmental Engineering, University of California, Riverside, 92521, CA; Wayne Miller, Bourns College of Engineering, CE-CERT, University of California, Riverside, 92521, CA; Matthew Barth, Bourns College of Engineering, CE-CERT, Department of Electrical Engineering, University of California, Riverside, 92521, CA (p.200)
- 2G18 11:20 **CHARACTERIZATION OF PAH COMPOSITION PATTERNS IN DIESEL EMISSIONS**, TAEKO MINEGISHI, Bernard Crimmins, Joel Baker, Chesapeake Biological Laboratory, Solomons, MD (p.202)
- 2G19 11:20 **CHARACTERIZATION DIESEL ENGINE EXHAUST PARTICLES DURING CONVENTIONAL AND HIGH-EFFICIENCY CLEAN COMBUSTION MODES**, JOHN STOREY, Scott Sluder, Samuel Lewis, and Robert Wagner, Oak Ridge National Laboratory, Oak Ridge, TN (p.203)
- 2G20 11:20 **PHYSICO-CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS OF PARTICULATE MATTER (PM) EMITTED FROM LIGHT DUTY GASOLINE AND DIESEL PASSENGER VEHICLES**, MICHAEL D. GELLER and Constantinos Sioutas, University of Southern California, Los Angeles, CA; Leonidas Ntziachristos, Athanasios Mamakos, Zissis Samaras, Aristotle University, Thessaloniki, Greece; John R. Froines, University of California, Los Angeles, CA (p.205)
- 2G22 11:20 **PM EMISSIONS MEASUREMENTS FROM BACK UP GENERATORS: METHOD 5 VS. ISO 8178**, Abhilash Nigam, William Welch, J. Wayne Miller, Kathalena Cocker, DAVID R. COCKER III, Department of Chemical and Environmental Engineering and College of Engineering, Center for Environmental Research and Technology, UC Riverside, Riverside, CA (p.207)
- 2G23 11:20 **CHARACTERIZATION OF PARTICULATE MATTERS EXHAUSTED FROM A RAILROAD DIESEL LOCOMOTIVE ENGINE**, DUCKSHIN PARK, Youngmin Cho, Korea Railroad Research Institute, Uiwang, Kyonggi, Korea; Dongsool Kim, Kyunghee University, Yongin, Kyonggi, Korea (p.209)
- 2G24 11:20 **ANATASE NANOPARTICLE SYNTHESIS IN AN AEROSOL REACTOR**, Calvin Coffey, ANDREY FILIPPOV, Carlton Truesdale, Damon Osterhout, Martin Sala, Sullivan Park Research Center, Corning Inc., Corning, NY. (p.211)

2G25 **ON CONTROLLING THE COMPOSITION OF GAS-BORNE AU/IN ALLOY NANOPARTICLES**, Zsolt Geretovszky, University of Szeged, Hungary; Jan-Olle Malm, KNUT DEPPERT, Lund University, Sweden (p.212)

2G26 **A STUDY OF SUSPENDED PARTICULATE MATTER AND HEAVY METALS DUE TO COMBUSTION OF COOKING FUELS**, Sandeep Gupta, ARUN SRIVASTAVA and V. K. Jain, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India (p.214)

## 2H Instrumentation-I (Poster)

Garden Court East

*Anshuman Amit Lall, Arjan Wuijckuijse, Chairs*

2H1 **LABORATORY AND IN-FIELD CHARACTERIZATION OF THE TIME-OF-FLIGHT AEROSOL MASS SPECTROMETER (TOF-AMS)**, SILKE S. HINGS, Frank Drewnick, Max Planck Institute for Chemistry, Mainz, Germany; Stephan Borrmann, Institute for Physics of the Atmosphere, University of Mainz, Germany; Peter F. DeCarlo, Jose-Luis Jimenez, Department of Chemistry and Biochemistry, University of Colorado, Boulder, CO; Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA (p.361)

2H2 **SINGLE AEROSOL PARTICLE MEASUREMENTS WITH THE SPASS IN KRAKOW, POLAND, DURING A WINTER CAMPAIGN**, DANIEL MIRA-SALAMA, Carsten Gruening, Niels R. Jensen, Paolo Cavalli, Frank Raes, Joint Research Centre, Institute for Environment and Sustainability, Ispra (VA), Italy (p.363)

2H3 **APPLICATION OF A LASER-DESORPTION RESONANCE ENHANCED MULTI-PHOTON IONISATION (REMPI)-SINGLE PHOTON IONISATION (SPI) TIME-OF-FLIGHT MASS SPECTROMETER (TOFMS) ON URBAN AEROSOLS**, JOCHEN WEH, Thomas Ferge, Ralf Zimmermann, GSF - National Research Center for Environment and Health, Neuherberg, Germany (p.365)

2H4 **IMPACT OF VAPORIZER TEMPERATURE ON THE THERMAL DESORPTION AND MASS SPECTRA OF THE THERMAL DESORPTION AND MASS SPECTRA OF AMBIENT AND CHAMBER GENERATED SECONDARY ORGANIC AEROSOLS**, Kenneth S. Docherty, Jose L. Jimenez, Cooperative Institute for Research in Environmental Sciences and Department of Chemistry and Biochemistry, University of Colorado, Boulder; Paul J. Ziemann, Air Pollution Research Center, Department of Environmental Sciences, and Department of Chemistry, University of California, Riverside (p.366)

2H5 **EXTERNAL-TO-THE-TRAP VAPORIZATION AND IONIZATION FOR REAL-TIME PARTICLE ANALYSIS WITH AN ION TRAP MASS SPECTROMETER**, WILLIAM A. HARRIS, Peter T.A. Reilly, William B. Whitten, Oak Ridge National Lab, Oak Ridge, TN (p.367)

2H6 **ESTIMATION OF COMPOSITION OF GROWING AEROSOL PARTICLES USING A CONDENSATION PARTICLE COUNTER BATTERY**, Markku Kulmala, Genrik Mordas, Tuukka Petäjä, Tiia Grönholm, Pasi P. Aalto, Hanna Vehkamäki, Anca Gaman, Erik Herrmann, Mikko Sipilä, Ilona Riipinen, Kaarle Hämeri, Department of Physical Sciences, University of Helsinki, P.O.Box 64, FI-00014 Helsinki, Finland; Wolfram Birmili, University of Helsinki and Institute for Tropospheric Research, Permoserstr. 15, GER-04318 Leipzig, Germany; Paul E. Wagner, Institut für Experimentalphysik, Universität Wien, Boltzmanngasse 5, A-1090 Wien, Austria (p.369)

2H7 **PERFORMANCE CHARACTERIZATION OF A COMPACT WATER-BASED CONDENSATION PARTICLE COUNTER**, Wei Liu, BRIAN L. OSMONDSON, TSI Incorporated, Shoreview, MN; Frederick R. Quant, Derek R. Oberreit, Quant Technologies LLC, Blaine, MN (p.371)

- 2H8  
11:20 **FIELD EVALUATION OF A WATER-BASED ULTRAFINE CONDENSATION PARTICLE COUNTER**, Mark R. Stolzenburg, Kenjiro Iida, Peter H. McMurry, University of Minnesota, Minneapolis, MN, James N. Smith, National Center for Atmospheric Research, Boulder, CO, Patricia B. Keady, Quant Technologies, Blaine, MN and Susanne V. Hering, Aerosol Dynamics Inc., Berkeley, CA (p.372)
- 2H9  
11:20 **CHARACTERIZATION OF NEW GENERATION CONDENSATION PARTICLE COUNTERS (CPCS)**, MARKUS HERMANN, Birgit Wehner, Alfred Wiedensohler, Leibniz Institute for Tropospheric Research, Leipzig, Germany, Hee-Siew Han, Wei Liu, TSI Incorporated, Shoreview, MN, U.S.A., Oliver Bischof, Thomas Krinke, Axel Zerrath, TSI GmbH, Aachen, Germany (p.374)
- 2H10  
11:20 **CALIBRATION OF THE ULTRA-FINE WATER-BASED CONDENSATION PARTICLE COUNTER TSI3786**, Genrik Mordas, Markku Kulmala, Tuukka Petäjä, KAARLE HÄMERI, University of Helsinki, Finland (p.375)
- 2H11  
11:20 **SIZING AND COUNTING PERFORMANCE OF A BUTANOL CONDENSATION PARTICLE COUNTER**, MIHAI CHIRUTA, William D. Dick, Francisco J. Romay, K.-S. Woo, Benjamin Y. H. Liu, MSP Corporation, Shoreview, MN (p.377)
- 2H12  
11:20 **CHARACTERIZATION OF A NEW AEROSOL ELECTROMETER FOR PRIMARY AND ABSOLUTE CALIBRATION OF CONDENSATION PARTICLE COUNTERS**, HEE-SIEW HAN, Manpreet S. Phull, Wei Liu, James O. Evenstad, Robert Caldwell and Stanley L. Kaufman, TSI Incorporated, Shoreview, MN (p.379)
- 2H13  
11:20 **PARTICLE NUMBER CONCENTRATION AND SIZE DISTRIBUTION MEASUREMENTS OF AMBIENT AEROSOL IN MINNESOTA WITH TSI NEW CONDENSATION PARTICLE COUNTERS**, QIAN SHI, Hee-Siew Han, Steve W. Kerrigan, Melissa Fink, Rob Caldow, Wei Liu, TSI Incorporated, Shoreview, Minnesota 55126, USA (p.380)
- 2H14  
11:20 **DEVELOPMENT OF A MINI-DISK EAA FOR PERSONAL EXPOSURE MONITORING**, CHAOLONG QI, Da-Ren Chen, Washington University in St.Louis, St.Louis, MO; Paul Greenberg, NASA-Glenn Research Center, Cleveland, OH (p.381)
- 2H15  
11:20 **THE NUMERICAL AND EXPERIMENTAL TEST OF 1ST ORDER DIFFERENTIAL MOBILITY ANALYZER**, K.H. Ahn, Department of Mechanical Engineering, Hanyang University; J.H. Ahn, K.S. Jeon, Y.T. Kwon, R&D Center in Hyundai Calibration & Certification Technologies, Co. Ltd. (p.383)
- 2H16  
11:20 **MEASUREMENTS OF POLY(AMIDOAMINE) (PAMAM) DENDRIMERS BY DIFFERENTIAL MOBILITY**, MASASHI IMANAKA, Kazuo Takeuchi, RIKEN (The Institute of Chemical and Physical Research), Saitama, Japan; Yoshiki Okada, Kansai University, Osaka, Japan (p.385)
- 2H17  
11:20 **OBTAINING DISPERSION OF AN INTENSIVE PARTICLE PROPERTY FROM A TANDEM-SIZING EXPERIMENT**, MARK R. STOLZENBURG, Peter H. McMurry, Mark S. Emery, University of Minnesota, Minneapolis, MN; Bon Ki Ku, National Institute for Occupational Safety and Health, Cincinnati, OH; Andrew D. Maynard, Woodrow Wilson International Center for Scholars, Washington DC (p.387)
- 2H18  
11:20 **AN APPARATUS FOR STUDYING VAPOR ADSORPTION ON NANOPARTICLES**, LAURA J. HILTUNEN, Petri Vaattovaara, Jorma Joutsensaari, Ari Laaksonen, University of Kuopio, Kuopio, Finland (p.389)

2H19  
11:20 **USE OF UNIPOLAR CORONA CHARGERS TO ESTIMATE THE SIZE DISTRIBUTION OF SUBMICRON PARTICLES**, DONGHO PARK, Sung B. Kim, Minha An, Jungho Hwang, Yonsei University (p.391)

2H20  
11:20 **AMBIENT PRESSURE IMPACT ON PARTICLE SIZING WITH SMPS**, JUERG SCHLATTER; Swiss Federal Office of Metrology (METAS), Bern-Wabern, Switzerland (p.392)

2H21  
11:20 **POSSIBLE SAMPLING ARTIFACT FOR ON-ROAD NANO-PARTICLE MEASUREMENTS**, Xiaohong Yao, , N.T., Lau, P.S., Lauand Ming Fang, Institute for the Environment, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, Chak K. Chan Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong (p.394)

2H22  
11:20 **ACCURATE PARTICLE SIZE MEASUREMENTS FOR DEVELOPMENT OF PARTICLE SIZE STANDARDS IN THE RANGE OF 30 TO 100 NM**, KEIJI TAKAHATA, Kensei Ehara, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan (p.395)

2H23  
11:20 **NANOPARTICLE MANUFACTURE AMBIENT AIR CHEMICAL AND PHYSICAL SURVEY AS A TOOL FOR ACCIDENTAL AND CHRONIC RISK ASSESSMENT**, TANGUY AMODEO, Emeric Frejafon, Olivier Le Bihan, French institute for industrial and ambient risk assessment (INERIS),FR. ; Matthieu Baudelet, Jin Yu , Univerity of Lyon 1, LASIM, FR.; Michel Attoui, University of Paris 12, FR. (p.396)

2H24  
11:20 **DEVELOPMENT AND PERFORMANCE TEST OF IN-SITU PARTICLE MONITORING SYSTEM IN HIGH VACUUM ENVIRONMENTS**, K.H. Ahn, Department of Mechanical Engineering in Hanyang University; Y.M. Kim, J.U. Yoon, Y.T. Kwon, R&D Center in Hyundai Calibration & Certification Technologies, Co. Ltd. (p.398)

2H25  
11:20 **EXPERIMENTAL EVALUATION OF THE OPPOSED MIGRATION AEROSOL CLASSIFIER (OMAC) FOR MEASUREMENTS OF AEROSOL PARTICLE SIZE DISTRIBUTIONS**, ERIK O. NILSSON, Erik Swietlicki, Division of Nuclear Physics, Lund University, Lund, Sweden, Andreas Dahl, Anders Gudmundsson, Division of Ergonomics and Aerosol Technology, Lund University, Lund, Sweden, Richard Flagan, Division of Chemistry and Chemical Engineering, Caltech, Pasadena, CA (p.400)

2H26  
11:20 **3D MEASUREMENT OF NANOPARTICLES ON WAFER SURFACE USING PHASE SHIFTED LASER INTERFEROMETRY**, D. Oszetzky, Á. Kiss, A. CZITROVSZKY, A. Nagy, P. Gál, Research Institute for Solid State Physics and Optics, Department of Laser Application, Budapest, Hungary (p.401)

**Monday 12:40 PM - 2:00 PM  
Lunch (on your own)**

**Monday 2:00 PM - 3:40 PM  
Session 3**

**3A Urban Aerosol & Combustion  
(Platform)**

Minnesota Ballroom

*Allen Robinson, H. Phuleria, Chairs*

3A1  
2:00 **ROADSIDE MEASUREMENTS OF ORGANIC TRACERS NEAR A GASOLINE FREEWAY AND A DIESEL DOMINATED FREEWAY IN LOS ANGELES, CA**, HARISH C. PHULERIA, Philip M. Fine, Constantinos Sioutas, University of Southern California, Los Angeles, CA; James J. Schauer, University of Wisconsin-Madison, Madison, WI (p.1687)

3A2  
2:20 **CHARACTERISTICS OF PARTICLE-BOUND POLYCYCLIC AROMATIC HYDROCARBONS COLLECTED NEAR A HEAVILY-TRAFFICKED ROAD**, CHIH-CHUNG LIN, Shui-Jen Chen, Kuo-Lin Huang, National Pingtung University of Science and Technology; Wen-Jhy, Lee, National Cheng Kung University; Wen-Yinn Lin, National Taipei University of Technology (p.1689)



- 3A3  
2:40 **BLACK CARBON CONCENTRATIONS IN A PASSENGER CAR ON ROADS**, Seung-Bok Lee, GWI-NAM BAE, Korea Institute of Science and Technology, Seoul, Korea (p.1504)
- 3A4  
3:00 **INVERSE MODELING OF NON-EXHAUST PARTICLES PRODUCTION IN STREET CANYON WITH INTENSIVE TRAFFIC AND GRASSY STRIPES**, JIRI POSPISIL and Miroslav Jicha, Brno University of Technology, Faculty of Mechanical Engineering, Technicka 2, Brno, Czech Republic jicha@fme.vutbr.cz, pospisil.j@fme.vutbr.cz (p.1693)
- 3A5  
3:20 **SIZE DISTRIBUTION AND CHEMICAL COMPOSITION OF NANOPARTICLES IN ROADSIDE ATMOSPHERE**, SHUICHI HASEGAWA, Akihiro Fushimi, Shinji Kobayashi, Kiyoshi Tanabe, Yuji Fujitani, National Institute for Environmental Studies, Tsukuba, Japan (p.1695)
- 3B Radiative and Optical Effects (Platform)**  
Capitol Ballroom  
*Markus Fiebig, Helmuth Horvath, Chairs*
- 3B1  
2:00 **THE MIXING STATE OF BLACK CARBON AND NON-ABSORBING AEROSOL COMPONENT DERIVED FROM IN-SITU PARTICLE OPTICAL PROPERTIES AT XINKEN IN PEARL RIVER DELTA OF CHINA**, Ya-Fang Cheng (1), Heike Eichler (2), Alfred Wiedensohler (2), Jost Heintzenberg (2), Yuan-Hang Zhang (1), Min Hu (1), Hartmut Herrmann (2), Li-Min Zeng (1), Shang Liu (1), Thomas Gnauk (2), Ling-Yan He (1), Erika Brüggemann (2), (1) College of Environmental Sciences, Peking University, Beijing, China, (2) Leibniz-Institute for Tropospheric Research, Leipzig, Germany (p.610)
- 3B2  
2:20 **THE RADIATIVE IMPACT OF LONG RANGE TRANSPORTED DESERT PARTICLES.**, H. HORVATH, Institute for Experimental Physics of the University of Vienna, Vienna, Austria, M. Kasahara, S. Tohno, Graduate School of Energy Science, Kyoto University, Kyoto, Japan, M. Kocifaj, Astronomical Institute of the Slovak Academy of Sciences, Bratislava, Slovak Republic (p.1276)
- 3B3  
2:40 **INVERSE METHODS: A POWERFUL TOOL FOR EVALUATING AEROSOL DATA, EXEMPLIFIED ON CASES WITH RELEVANCE FOR THE ATMOSPHERE AND THE AEROSOL CLIMATE EFFECT**, MARKUS FIEBIG, Andreas Petzold, Institut für Physik der Atmosphäre, Deutsches Zentrum für Luft und Raumfahrt Oberpfaffenhofen, Germany; John A. Ogren, National Oceanic and Atmospheric Administration, Earth System Research Laboratory, Global Monitoring Division, Boulder, CO, USA (p.1277)
- 3B4  
3:00 **AEROSOL INDIRECT FORCING FROM THE NASA GLOBAL MODELING INITIATIVE: SENSITIVITY TO METEOROLOGY, EMISSION SCENARIOS AND AEROSOL MICROPHYSICS**, NICHOLAS MESKHIDZE, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Bryan N. Duncan, Jose M. Rodriguez, NASA Goddard Space Flight Center, Greenbelt, MD (p.1279)
- 3B5  
3:20 **GCM ASSESSMENT OF AEROSOL-CLOUD INTERACTIONS: THE ROLE OF SULFATE, SEASALT AND CARBONACEOUS AEROSOL**, ATHANASIOS NENES, Georgia Institute of Technology, GA; Peter J. Adams, Carnegie Mellon University, PA; John H. Seinfeld, California Institute of Technology, CA (p.1281)

**3C Symposium: Nanoparticle Industry Forum (Platform)**

Governors 1 &amp; 5

*Sheldon Davis, Chair*

- 3C1 **NEW PROCESS ROUTES FOR NANOMATERIAL PRODUCTION BASED ON AEROSOL TECHNOLOGY**, Prof. Dr. Bernd Sachweh, BASF Aktiengesellschaft  
2:00
- 3C2 **AEROSOL MATERIALS PRODUCTION AT CABOT: PAST, PRESENT, AND FUTURE**, Toivo Kodas, Cabot Corporation  
2:20
- 3C3 **PARTICLE TECHNOLOGIES IN CORNING**, ANDREY FILIPPOV (p.17)  
2:40
- 3C4 **NANOPARTICLE TECHNOLOGY IN INDUSTRY, PANEL DISCUSSION**,  
3:00

**3D Optical Aerosol Instrumentation (Platform)**

Governors 2 - 4

*Arthur Sedlacek, Royal Kopperud, Chairs*

- 3D1 **TIME-RESOLVED PARTICLE NUMBER DETERMINATION STARTING BELOW 10 NM AND HIGH-RESOLVED PARTICLE SIZE DETERMINATION STARTING FROM 0.3 μM IN ONLY ONE DEVICE**, SVEN SCHÜTZ, Martin Schmidt, Leander Mölter, Palas GmbH, Karlsruhe, Germany (p.403)  
2:00
- 3D2 **DETERMINATION OF THE SIZE AND COMPLEX REFRACTIVE INDEX OF SINGLE AEROSOL PARTICLES USING DUAL WAVELENGTH OPTICAL PARTICLE SPECTROMETER (DWOPS)**, Artur Golczewski, WLADYSLAW W. VLADEK SZYMANSKI, Institute of Experimental Physics, University of Vienna, Vienna, Austria; Attila Nagy, Peter Gal, Aladar Czitrovsky, Research Institute for Solid State Physics and Optics, Hungarian Academy of Science, Budapest, Hungary (p.404)  
2:20
- 3D3 **ENVIRONMENTAL DATA OBTAINED WITH A WIDE RANGE SPECTROMETER**, Thomas Rettenmoser, CHRISTIAN GERHART, Hans Grimm, Grimm Aerosol Technik GmbH, Ainring, Germany, Mathias Richter, GIP GmbH, Pouch, Germany (p.405)  
2:40

- 3D4 **AIRBORNE MULTI-ANGLE LIGHT SCATTERING SPECTROMETER**, WILLIAM D. DICK, Francisco J. Romay, Mihai Chiruta, Mark Battista, Aaron Collins, James J. Marti, MSP Corporation, Shoreview, MN (p.406)  
3:00

- 3D5 **LIDAR METHOD TO MEASURE SOOT EMISSION RATES FROM AIRCRAFT JET ENGINES**, WYNN L. EBERHARD, W. Alan Brewer, NOAA Earth System Research Laboratory, Boulder, CO; Roger L. Wayson, University of Central Florida, Orlando, FL; Richard D. Marchbanks, Brandi J. McCarty, Ann M. Weickmann, Cooperative Institute for Research in Environmental Science, Boulder, CO; Gregg G. Fleming, DOT Volpe National Transportation Systems Center, Cambridge, MA (p.407)  
3:20

**3E Chemistry of Inorganic Atmospheric Particles-I (Platform)**

Wabasha Suite

*James Schauer, Theo Kurten, Chairs*

- 3E1 **NEW INSIGHTS INTO MINERAL DUST AGING FROM ONLINE SINGLE-PARTICLE ANALYSIS**, RYAN SULLIVAN, Sergio Guazzotti, Kimberly Prather, University of California, San Diego, La Jolla, CA (p.997)  
2:00
- 3E2 **REACTION PROBABILITIES OF SULFATE AND NITRATE PRECURSORS ONTO EAST ASIAN DUST PARTICLES**, C. H. SONG, C. M. Kim, Y. J. Lee, Department of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea; R. J. Weber, School of the Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta; B. K. Lee, D. S. Lee, Department of Chemistry, Yonsei University, Seoul, Korea (p.998)  
2:20

3E3  
2:40 **ANALYSIS OF FIELD COLLECTED INDIVIDUAL ATMOSPHERIC PARTICLE USING MULTI-ANALYTICAL MICROPROBE METHODS**, REBECCA J. HOPKINS, Alexei V. Tivanski, Mary K. Gilles, Chemical Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA; Yury Desyaterik, Daniel J. Gaspar, Alexander Laskin, William R. Wiley Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland, WA (p.1000)

3E4  
3:00 **SPECIATION OF MANGANESE IN ATMOSPHERIC AEROSOLS USING SPECTROPHOTOMETRIC TECHNIQUES**, James J. Schauer, BRIAN J. MAJESTIC, Martin M. Shafer, Environmental Chemistry and Technology, University of Wisconsin - Madison, Madison, WI (p.1002)

3E5  
3:20 **LABORATORY INFRARED EXTINCTION MEASUREMENTS OF THE CARBONATE, SULFATE, OXIDE AND CLAY COMPONENTS OF MINERAL DUST AEROSOL**, PAULA HUDSON, Elizabeth Gibson, Mark Young, Paul Kleiber, Vicki Grassian, The University of Iowa, Iowa City, IA (p.1004)

### 3F Mass Spectrometry as a Tool for Characterizing Atmospheric Chemistry (Platform)

Kellogg Suite

*Michael Tolocka, Kimberly Prather, Chairs*

3F1  
2:00 **TANDEM MASS SPECTROMETRY AND ACCURATE MASS MEASUREMENT AS A TOOL FOR OLIGOMER CHARACTERIZATION IN SECONDARY ORGANIC AEROSOLS**, ALAIN REINHARDT, Renato Zenobi, Markus Kalberer, Department of Chemistry and Applied Biosciences, ETH Zürich, Zürich, Switzerland, Bertran Gerrits, Functional Genomics Center, Zürich, Switzerland, Jonathan Duplissy, Axel Metzger, Josef Dommen, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institut, Villigen, Switzerland (p.346)

3F2  
2:20 **AEROSOL MASS SPECTROMETRY: MORPHOLOGY AND CHEMISTRY OF PARTICLES IN THE LAB AND THE ATMOSPHERE**, DOUGLAS WORSNOP, John Jayne, Manjula Canagaratna, Timothy Onasch, Leah Williams, Aerodyne Research, Inc., Billerica, MA; Jay Slowik, Paul Davidovits, Boston College, Chestnut Hill, MA; Qi Zhang, University of Albany, Albany, NY; Peter DeCarlo, Jose Jimenez, University of Colorado, Boulder, CO (p.348)

3F3  
2:40 **A MINIMAL FRAGMENTATION APPROACH TO REAL TIME AEROSOL MASS SPECTROMETRY: A NEW TOOL FOR DETAILED LABORATORY STUDIES OF ORGANIC AEROSOL AGING**, PEDRO CAMPUZANO-JOST, Sarah Hanna, Emily Simpson, Damon Robb, Mike.W. Blades, John W. Hepburn and Allan K. Bertram, University of British Columbia, Vancouver, BC, Canada (p.349)

3F4  
3:00 **MEASURING THE DENSITY AND CHEMICAL COMPOSITION OF ELECTRICAL MOBILITY SIZE SELECTED PARTICLES**, MATT SPENCER, Laura Shields, Xueying Qin, Kimberly Prather, University of California San Diego, La Jolla, CA (p.351)

3F5  
3:20 **ELEMENTAL ANALYSIS OF ORGANIC AEROSOLS WITH A HIGH RESOLUTION TIME-OF-FLIGHT AEROSOL MASS SPECTROMETER**, ALLISON C. AIKEN, Peter F. DeCarlo, Jose L. Jimenez, University of Colorado at Boulder, Boulder, CO (p.353)

### 3G Aerosol Physics-II (Poster)

Garden Court East

*Manuel Alsonso, Jan Marijnissen, Chairs*

3G1  
2:00 **EFFECT OF VARIATION IN ELECTRODE DIAMETER AND FLOW RATE ON FORMATION OF PATTERN BY ELECTROHYDRODYNAMIC SPRAYING**, JAE-HUN YU, D.Y. Lee, J. Hwang, Yonsei University (p.627)

- 3G2  
2:00 **PLAIN-JET AIRBLAST ATOMIZING OF NON-CONDUCTING LIQUID WITH ELECTROSTATIC CHARGE INJECTION METHOD**, Sangsoo Kim, KAIST, deajeon, Korea, Mingyu Park, KAIST, deajeon, Korea, Youngjoo Choi, KAIST, deajeon, Korea, Jungbum Choo, KAIST, deajeon, Korea, Jaehee Jung, KAIST, deajeon, Korea, Kyoungtae Kim, KAIST, deajeon, Korea (p.629)
- 3G3  
2:00 **CHARGING OF AEROSOL IN ENGINE EXHAUST PARTICLE SIZER (EEPS)**, SANDER MIRME, Janek Uin, Eduard Tamm, Aadu Mirme, Institute of Environmental Physics, University of Tartu, Tartu, Estonia (p.630)
- 3G4  
2:00 **ELECTROSTATIC WIND ENERGY CONVERTER - EWICON**, A.N. Hubacz, D. Djairam, P.H.F. Morshuis, J.C.M. Marijnissen, J.J. Smit, P.J. Sonneveld (p.632)
- 3G5  
2:00 **NANO AEROSOL PARTICLE CHARGE NEUTRALIZATION BY A NOVEL BIPOLAR DIFFUSION CHARGER**, Jeong Hoon Byeon, Jae Hong Park, Ki Young Yoon, Jungho Hwang, Yonsei University (School of mechanical engineering) (p.634)
- 3G6  
2:00 **CONTROL OF NANOPARTICLE CHARGE VIA CONDENSATION, CORONA CHARGING AND DRYING**, D. S. Kim, D. S. Lee, C. Woo, M. CHOI, National CRI Center for Nano Particle Control, Seoul National University, Seoul, Korea (p.635)
- 3G7  
2:00 **COMPARISON OF THE SMAC WITH RADIATION-SOURCE NEUTRALIZERS IN AEROSOL CHARGE NEUTRALIZATION**, SOON-BARK KWON, Hiromu Sakurai, Takafumi Seto, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan; Mark R. Stolzenburg, Peter H. McMurry, University of Minnesota, Minneapolis, MN (p.636)
- 3G8  
2:00 **SINGLE EVENT ELECTROSPRAYING FOR MAKING MICRO AND NANO SIZED BIOSTRUCTURES**, URSZULA STACHEWICZ, Frits Dijkman, Philips Research Laboratories, Eindhoven, The Netherlands; URSZULA STACHEWICZ, Jan C.M. Marijnissen, Andre Bossche, Delft University of Technology, Delft, The Netherlands; (p.638)
- 3G9  
2:00 **DISCHARGE REGIMES AND CHARGING CONDITIONS IN THREE AEROSOL PLASMA CHARGERS**, NICOLAS JIDENKO, JP Borra Laboratoire de Physique des gaz et des plasmas France (p.640)
- 3G10  
2:00 **ELECTROSTATIC CHARGE EFFECTS IN THE AGGREGATION BEHAVIOR OF LASER ABLATION AEROSOLS**, MARCUS K. JACKSON, Mevlut Bulut, Renato P. Camata, University of Alabama at Birmingham, Birmingham, AL (p.642)
- 3G11  
2:00 **POLYTETRAFLUOROETHYLENE NANO AEROSOLS**, Anatoli Baklanov, Michael Anisimov, Olesya Krumkacheva, Institute of Chemical Kinetics and Combustion SB RAS, 630090, Novosibirsk, Russia; Vyacheslav Bouznik, Institute of Catalysis SB RAS, 630090, Novosibirsk, Russia, anisimovmp@mail.ru (p.643)
- 3G12  
2:00 **GENERATION OF MODEL DIESEL PARTICLES BY SPARK DISCHARGE AND CONDENSATION WITH DIESEL HYDROCARBONS: OZONE EFFECT ON MODEL DIESEL PARTICLES**, HAKJOON KIM, Yongjin Kim, Korea Institute of Machinery & Materials, Daejeon, Republic of Korea, Jinho Kim, Youngjoo Choi, Hyuncheol Oh, Jung bum Choo, Sangsoo Kim, Korea Advaced Institute of Science and Technology, Daejeon, Republic of Korea (p.645)
- 3G15  
2:00 **INFLUENCE OF CONTACT QUALITY BETWEEN PLATINUM AND CARBON NANOPARTICLES ON CATALYTIC ACTIVITY OF PLATINUM BASED ON CARBON OXIDATION**, PARISA DAVOODI, Gerhard Kasper, University of Karlsruhe, Germany; Alfred Weber, University of Clausthal-Zellerfeld, Germany (p.647)

- 3G16 2:00 **GENERATION OF SUB-100 NM OIL PARTICLES BY ELECTROSPRAY**, HIROMU SAKURAI, Akira Yabe, Kensei Ehara, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan (*p.649*)
- 3G17 2:00 **SIZE CONTROL OF NANOPARTICLES IN PULSED LASER DEPOSITION**, SHINICHI KAIHARA, Shigeki Tsukui, Takashi Oka, Motoaki Adachi, Osaka Prefecture University, Sakai, Osaka, Japan (*p.650*)
- 3G18 2:00 **EFFECT OF AIR FLOW RATE ON THE SILVER NANOPARTICLE GENERATION OF AN AEROSOL GENERATOR USING FLAT PLATE TYPE HEATER.**, HYUNG SOO NOH, Jun Ho Ji, Samsung Electronics, Suwon, Korea; Jae Hee Jung, Hyun Cheol Oh, Sang Soo Kim, Korea Advanced Institute of Science and Technology, Daejeon, Korea (*p.651*)
- 3G19 2:00 **POWDER DISPERSION SYSTEM FOR AEROSOL TRACER TESTING**, HEATHER M. GORENZ, John E. Brockmann, Daniel A. Lucero; Plasma, Aerosol, and Noncontinuum Processes, Sandia National Laboratories, Albuquerque, NM (*p.652*)
- 3G20 2:00 **GENERATION OF NANOPARTICLES FROM MICRON SIZED PARTICLES BY SPARK DISCHARGE**, Nooshin Salman Tabrizi, UGO LAFONT, Loic Simonin, Erik Kelder, Andreas Schmidt-Ott, Nanostructure Materials, DelftChemTech, TUDelft, The Netherlands (*p.653*)
- 3G21 2:00 **TRANSPORT OF RUTHENIUM IN DIVERSE OXIDISING CONDITIONS**, TEEMU KÄRKELÄ, Ulrika Backman, Ari Auvinen, Unto Tapper, Jorma Jokiniemi, VTT Technical Research Centre of Finland, Fine Particles, Espoo, Finland; Riitta Zilliacus, Maija Lipponen, Tommi Kekki, VTT Technical Research Centre of Finland, Accident Management, Espoo, Finland; Jorma Jokiniemi, University of Kuopio, Department of Environmental Sciences, Kuopio, Finland (*p.654*)
- 3G22 2:00 **MOMENT METHOD FOR ESTIMATING MICRO-GRAVITY SMOKE PARTICLE SIZE PARAMETERS**, THOMAS CLEARLY, National Institute of Standards and Technology, Gaithersburg, MD; Claudia Rexfort, Universitat, Duisburg-Essen, Duisburg, Germany; George Mulholland, University of Maryland, College Park, MD; David Urban, NASA Glenn Research Center, Cleveland, OH; Jiann Yang, National Institute of Standards and Technology, Gaithersburg, MD; Zen-guang Yuan, NASA Glenn Research Center, Cleveland, OH (*p.656*)
- 3G23 2:00 **CHANGES IN AEROSOL PROPERTIES DURING SPRING-SUMMER PERIOD IN THE ARCTIC TROPOSPHERE**, ANN-CHRISTINE ENGVALL, Radovan Krejci, Department of Meteorology University of Stockholm, Sweden; Renate Treffeisen, Alfred-Wegener-Institut für Polar- und Meeresforschung, Potsdam, Germany; Johan Ström, Department of Applied Environmental Science - Air pollution Laboratory, University of Stockholm, Stockholm, Sweden; Andreas Minikin, Deutsches Zentrum für Luft- und Raumfahrt, Institut für Physik der Atmosphäre, Wessling, Germany; Andreas Herber, Alfred-Wegener-Institut für Polar- und Meeresforschung, Bremerhaven, Germany (*p.657*)
- 3G24 2:00 **SIMULATION OF THE AGGLOMERATION AND BREAKUP OF AGGLOMERATES IN A RANDOM SYMMETRIC SHEAR FLOW**, YASMINE AMMAR (1,2), Mike Reeks (1), David Swailes (1), Abdel Dehbi (2), (1) School of Mechanical and Systems Engineering, University of Newcastle upon Tyne, UK, (2) Paul Scherrer Institute, Department of Nuclear Energy and Safety Research Department, Laboratory for Thermohydraulics, Villigen, Switzerland (*p.659*)

3G25  
2:00 **THE EFFECTS OF PRIMARY PARTICLE SIZE, INITIAL GEOMETRIC STANDARD DEVIATION, AND MORPHOLOGICAL SHAPES OF AGGLOMERATES ON BROWNIAN COAGULATION OF FRACTAL-LIKE AGGLOMERATES IN THE FREE MOLECULAR REGIME**, KI-JOON JEON and Chang-Yu Wu, University of Florida, Gainesville, FL (p.661)

3G26  
2:00 **COAGULATION BEHAVIOR OF ZINC OXIDE AEROSOLS GENERATED BY LASER ABLATION**, MASASHI MATSUMURA, Mevlut Bulut, Renato P. Camata, University of Alabama at Birmingham, Birmingham, AL (p.663)

3G27  
2:00 **AGGREGATION OF AEROSOLS IN A RARIFIED GAS MEDIUM**, FLINT PIERCE, Amit Chakrabarti, Chris Sorensen, Kansas State University, Manhattan, KS (p.665)

3G28  
2:00 **BACKWARD-IN-TIME INTEGRATION OF THE COAGULATION EQUATION**, MANUEL ALONSO, Francisco Jose Alguacil, National Center for Metallurgical Research (CSIC), Madrid, Spain; Patricio Navarro, University of Santiago, Santiago, Chile; Yoshiyuki Endo, Sumitomo Chemical Co., Ltd., Osaka, Japan (p.667)

3G29  
2:00 **ON ACOUSTIC ORTHOKINETIC COAGULATION OF MICRON-SIZED PARTICLES**, Peter Vainshtein, SAMUEL LEKHTMAKHER, Michael Shapiro, Technion-Israel Institute of Technology, Haifa, Israel (p.669)

3G30  
2:00 **AEROSOL RADIATIVE FORCING STUDIES AT DIFFERENT TYPES OF SITES**, T. ZIELINSKI, Institute of Oceanology, PAS, Poland, K. Markowicz, University of Warsaw, Poland, G. Chourdakis, Raymetrics S. A., Greece, N. Mihalopoulos, University of Crete, Greece, B. Pflug, DLR - German Aerospace Center, Germany, A. Rozwadowska, Institute of Oceanology, PAS, Poland (p.671)

### 3H Indoor Aerosols-I (Poster)

Garden Court West

*Jana Kesavan, Jacky Rosati, Chairs*

3H1  
2:00 **PASSING AIRBORNE SILVER NANOPARTICLES GENERATED FROM THE ELECTRIC FURNACE THROUGH THE FILTER SYSTEM AS AN ANTIMICROBIAL METHOD AGAINST S. EPIDERMIS BIOAEROSOLS**, BYUNG UK LEE, Department of Mechanical Engineering, Konkuk University, Seoul, Korea; Gwi-Nam Bae, Sun Hwa Yun, Korea Institute of Science and Technology (KIST), Seoul, Korea; Jun Ho Ji, Digital Appliance R&D Center, Samsung Electronics, Suwon, Korea (p.772)

3H2  
2:00 **SIMULTANEOUS REMOVAL OF BIOAEROSOLS AND MVOCS BY METAL PLATED ACTIVATED CARBON FIBER FILTER**, Ki Young Yoon, Jeong Hoon Byeon, Jae Hong Park, Byung Ju Ko, Chul Woo Park, Jungho Hwang, Yonsei University (School of Mechanical Engineering) ; Hee Seung Yoon, Seung Kon Ryu, Chungnam National University (School of Chemical Engineering) (p.773)

3H3  
2:00 **ANTIMICROBIAL EFFECT OF AIRBORNE SILVER NANOPARTICLES GENERATED BY THE ATOMIZER AGAINST B. SUBTILIS BIOAEROSOLS**, Ki Young Yoon, Jeong Hoon Byeon, Jae Hong Park, Jungho Hwang, Yonsei University (School of Mechanical Engineering); Gwi Nam Bae, Korea Institute of Science and Technology (Hazardous Substances Research Center); Byung Uk Lee, Konkuk University (Department of Mechanical Engineering); Jun Ho Ji, Samsung Electronics (Digital Appliance R&D Center) (p.774)

3H4  
2:00 **CFD APPLICATION IN BIOAEROSOL SAMPLING CYCLONE DESIGN**, SHISHAN HU and Andrew R. McFarland, Aerosol Technology Lab, Department of Mechanical Engineering, Texas A&M University, College Station, TX; John S. Haglund, Applied Research Laboratories, University of Texas, Austin, TX (p.775)

- 3H5  
2:00 **ULTRAFINE PARTICLE PENETRATION INTO 8 RESIDENCES NEAR A MAJOR DIESEL EMISSION SOURCE**, Xiaodong Zhou, Timothy R. McAuley, Peter A. Jaques, ANDREA R. FERRO, Clarkson University, Potsdam, NY (*p.777*)
- 3H7  
2:00 **PERSONAL, RESIDENTIAL AND CENTRAL SITE PM MASS CONCENTRATIONS ASSOCIATED WITH THE DETROIT EXPOSURE AND AEROSOL RESEARCH STUDY (DEARS)**, RONALD WILLIAMS, Alan Vette, Carry Croghan, Carvin Stevens, Paul Jones, US Environmental Protection Agency, Research Triangle Park, NC; Jonathan Thornburg, Charles Rodes, RTI International, Research Triangle Park, NC (*p.780*)
- 3H8  
2:00 **INDOOR AND OUTDOOR MEASUREMENTS OF THE SURFACE AREA OF PARTICLES DEPOSITED IN THE HUMAN LUNGS USING THE TSI MODEL 3550 NANOPARTICLE SURFACE AREA MONITOR**, Andrea Polidori, Mohammad Arhami, Constantinos Sioutas, University of Southern California, CA; Manisha Singh, TSI Incorporated, MN. (*p.781*)
- 3H9  
2:00 **THE EFFECTS OF RETROFITTING INSULATION ON DOMESTIC INDOOR AIR QUALITY IN NEW ZEALAND**, Guy Penny, GUY COULSON, National Institute of Water and Atmospheric Research, Auckland, New Zealand; Ian Colbeck, Zaheer Al Nasar, University of Essex, Colchester, UK (*p.783*)
- 3H11  
2:00 **PM2.5 EXPOSURES CHEMICALLY CHARACTERIZED BY FUNCTIONAL GROUP: RIOPA STUDY RESULTS**, ADAM REFF, Barbara Turpin, Department of Environmental Sciences, Rutgers University, New Brunswick, NJ; Clifford P. Weisel, Junfeng (Jim) Zhang, Environmental and Occupational Health Sciences Institute, Piscataway, NJ; Maria Morandi, Thomas Stock, School of Public Health, University of Texas, Houston, TX; Steven Colome, Integrated Environmental Sciences, Irvine, CA; Arthur Winer, Environmental Science Engineering, University of California, Los Angeles, CA; (*p.784*)
- 3H12  
2:00 **USE OF AN EXPANDED RECEPTOR MODEL FOR PERSONAL EXPOSURE ANALYSIS IN URBAN SCHOOLCHILDREN WITH ASTHMA**, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson University, PO Box 5708, Potsdam, NY 1369, USA, Erwin W. Gelfand, Nathan Rabinovitch, National Jewish Medical and Research Center, Denver, CO 80206, USA (*p.786*)
- 3H13  
2:00 **STUDY OF PERSONAL-INDOOR-AMBIENT FINE PARTICULATE RELATIONSHIPS AMONG SCHOOL COMMUNITY IN MIXED URBAN-INDUSTRIAL ENVIRONMENT IN INDIA**, Shamsh Pervez, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh, India, YASMEEN PERVEZ, Department of ENgineering Chemistry, Chhatrapati Shivaji Institute of Technology, Durg, Chhattisgarh, India, Nilima Gadkari, Government V.Y.T. Autonomous College, Durg, Chhattisgarh, India (*p.788*)
- 3H14  
2:00 **SECONDARY AEROSOL FORMATION INITIATED BY CHEMICAL REACTIONS IN INDOOR AIR - CHAMBER STUDIES WITH MIXTURES OF OZONE AND EMISSIONS FROM INDOOR TERPENE SOURCES**, ERIK NILSSON, Joakim Pagels, Lund University, Lund, Sweden; Linda Pommer, Umeå University, Umeå, Sweden (*p.789*)
- 3H15  
2:00 **A COMPARISON OF THE OXIDATION PRODUCTS AND SECONDARY ORGANIC AEROSOL FORMATION POTENTIAL OF D-LIMONENE AND AN OFF-THE-SHELF CLEANING PRODUCT CONTAINING D-LIMONENE**, SETH EBERSVILLER, Kenneth Sexton, Elizabeth Naess; University of North Carolina at Chapel Hill, Chapel Hill, NC, USA (*p.791*)

3H17  
2:00 **EFFECT OF METAL CONTENT ON EMISSIONS CHARACTERISTICS FROM BURNING INCENSE**, Chi-Ru Yang, Ta-Chang Lin, Department of Environmental Engineering National Cheng Kung University, Taiwan, Feng-Hsiang Chang Department of Information Management, Tzu Hui Institute of Technology, Taiwan (p.794)

3H18  
2:00 **DEVELOPMENT OF A POWER-FREE SMOKELESS ASHTRAY**, FENG-YU CHIANG AND Chih-Chieh Chen, National Taiwan University, Taipei, Taiwan; Sheng-Hsiu Huang, Institute of Occupational Safety and Health, Taipei, Taiwan; Yu-Mei Kuo, Chung Hwa College of Medical Technology, Tainan, Taiwan; Wen-Yinn Lin, National Taipei University of Technology, Taipei, Taiwan; Tzu-Ting Yang, Yuanpei Institute of Science and Technology, Hsin-Chu, Taiwan. (p.796)

3H19  
2:00 **CHARACTERIZATION OF ULTRAFINE PARTICLE EMISSIONS FROM HOT AIR BLOWERS**, Michel B. ATTOUI (p.798)

3H20  
2:00 **REAL-TIME NUMBER SIZE DISTRIBUTION MEASUREMENT, AND DENSITY ESTIMATION OF INDOOR AIR PARTICLES USING AN ELPI AND A CPC.**, HENNA TUOMENOJA, Erkki Lamminen, Elina Nieminen, Ari Ukkonen, Dekati Ltd., Tampere, Finland (p.800)

3H21  
2:00 **A TWO-STAGE CYCLONE USING MICROCENTRIFUGE TUBES FOR BIOAEROSOL SAMPLING**, WILLIAM LINDSLEY, Detlef Schmechel, Bean Chen, National Institute for Occupational Safety and Health, Morgantown, WV, USA (p.801)

3H22  
2:00 **PARTICLE DEPOSITION VELOCITY ALONG AN ISOTHERMAL HORIZONTAL PLATE**, C.B. Huang, C.S. Lin, S.C. WANG, C.H. Huang, Yuan Ze University, Taiwan, ROC. (p.803)

3H23  
2:00 **ESTIMATING INDOOR CONCENTRATIONS OF OUTDOOR PARTICULATE MATTER USING REGIONAL AIR QUALITY AND BUILDING LEAKAGE INFORMATION**, Susanne Hering, Aerosol Dynamics Inc., Berkeley, CA, USA, Melissa Lunden, Marc Fischer, Tom Kirchstetter, Tracy Thatcher, Nancy Brown, Lawrence Berkeley Laboratories, Berkeley, CA, USA (p.805)

3H24  
2:00 **A MODEL FOR PARTICLE RESUSPENSION DUE TO HUMAN WALKING**, XINYU ZHANG, Jing Qian, Goodarz Ahmadi, Andrea Ferro, Clarkson University, Potsdam, NY (p.807)

3H25  
2:00 **GENERATION AND CHARACTERIZATION OF ALLERGEN-LOADED MICROSPHERES**, Heather M. Martin, Patricia M. Fritz, Lupita D. Montoya, Civil and Environmental Engineering Department, Rensselaer Polytechnic Institute, Troy, NY, Daniel L. Hershey, Division of Air Resources, New York State Dept. of Environmental Conservation, Rensselaer NY, USA.

#### Monday 3:40 PM - 4:00 PM

##### Coffee Break

Great River Ballroom, Garden Courts East & West

#### Monday 4:00 PM - 5:20 PM

##### Session 4

#### 4A PM-10 & PM-2.5 Characterization-III (Platform)

Minnesota Ballroom

*George Allen, Paolo Prati, Chairs*

4A1  
4:00 **SOURCE PROFILES BY X-RAY FLUORESCENCE ANALYSIS AND POSITIVE MATRIX FACTORIZATION**, PAOLO PRATI, Federico Mazzei, University of Genova & INFN, Dept. of Physics, IT Silvia Nava, University of Firenze & INFN, Dept. of Physics, IT; Alessandra D'Alessandro, Gianluigi Valli, Roberta Vecchi, University of Milan and INFN, General and Applied Physics Institute, (p.1124)



- 4A2 **MORPHOLOGICAL CHARACTERIZATION OF PM10 FOR SOURCE APPORTIONMENT**, CARLO GRASSI, Leonardo Tognotti, Department of Chemical Engineering, University of Pisa, Pisa, Italy (p.1126)
- 4A3 **CAN CONTINUOUS TECHNIQUES CORRECT FOR FRM FILTER ERRORS AND PROVIDE HOURLY RECONSTRUCTED FINE MASS?**, ROGER L. TANNER, Solomon T. Bairai, Myra L. Valente, Environmental Technologies, Tennessee Valley Authority, Muscle Shoals, AL (p.1128)
- 4A4 **CHARACTERIZATION OF CARBONACEOUS AEROSOL IN PM2.5 IN THE EASTERN UNITED STATES**, MEI ZHENG, Meiyu Dong, Armistead G. Russell, Georgia Institute of Technology, Atlanta, GA; James J. Schauer, University of Wisconsin-Madison, Madison, WI; Eric S. Edgerton, Atmospheric Research & Analysis, Inc., Cary, NC (p.1129)

#### 4B Nucleation Field Studies (Platform)

Capitol Ballroom

*Kari Lehtenin, Chair*

- 4B1 **AEROSOL PARTICLE GROWTH EVENTS DURING ICARTT 2004 AT APPLIEDORE ISLAND**, LYNN RUSSELL, Amewu Mensah, Scripps Institution of Oceanography, La Jolla, CA; Roland von Glasow, Susanne Pechtl, University of Heidelberg, Heidelberg, Germany; Jochen Stutz, University of California, Los Angeles, Los Angeles, CA; William Keene, University of Virginia, Charlottesville, VA; Ruth Varner, Barkley Sive, Alex Pszenny, University of New Hampshire, Durham, NH (p.1605)

- 4B2 **THE ROLE OF SULPHURIC ACID IN NEW PARTICLE FORMATION AND GROWTH FROM 1 TO 3 NM: ANALYSIS OF CORRELATIONS AND POSSIBLE NUCLEATION MECHANISMS**, Sanna-Liisa Sihto, Markku Kulmala, University of Helsinki, Department of Physical Sciences, Helsinki, Finland; Veli-Matti Kerminen, Finnish Meteorological Institute, Climate and Global Change, Helsinki, Finland; Frank Arnold, Atmospheric Physics Division, Max-Planck Institute for Nuclear Physics (MPIK), Heidelberg, Germany; Ari Laaksonen, University of Kuopio, Department of Applied Physics, Kuopio, Finland; KARI E. J. LEHTINEN, University of Kuopio and Finnish Meteorological Institute, Kuopio Unit, Finland (p.1607)
- 4B3 **FORMATION AND GROWTH OF ULTRAFINE PARTICLES IN BEIJING, CHINA**, BIRGIT WEHNER, Stefan Bauer, Wolfram Birmili, Alfred Wiedensohler, Leibniz-Institute for Tropospheric Research, Leipzig, Germany; Zhijun Wu2, Min Hu2, 2Department State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences, Peking University, Beijing, P. R. China; Miikka Dal Maso, Tuukka Petäjä, Markku Kulmala, Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Finland (p.1609)

- 4B4 5:00 **FORMATION AND GROWTH OF ATMOSPHERIC AEROSOL PARTICLES**, Markku Kulmala, Hanna Vehkamäki<sup>1</sup>, Genrik Mordas, Tuukka Petäjä, Tiia Grönholm, Lauri Laakso<sup>1</sup>, Anne Hirsikko, Pasi P. Aalto, Anca Gaman, Ilona Riipinen, Kaarle Hämer, Department of Physical Sciences, University of Helsinki, Helsinki, Finland, Wolfram Birmili, Institute for Tropospheric Research, Leipzig, Germany, Veli-Matti Kerminen, Finnish Meteorological Institute, Helsinki, Finland, Kari E.J. Lehtinen, Finnish Meteorological Institute and University of Kuopio, Kuopio, Finland, Ari Laaksonen, University of Kuopio, Paul Winkler, and Paul E. Wagner, Institut für Experimentalphysik, Universität Wien, Wien, Austria (p.1611)
- 4C Complex Material Synthesis (Platform)**  
Governors 1 & 5  
*Sheldon Davis, Mansoo Choi, Chairs*
- 4C1 4:00 **SYNTHESIS OF COATED IRON OXIDE NANOPARTICLES USING FLAME METHOD AND PROTEIN ATTACHMENT**, KIMIN JUN, Sangsun Yang, Mansoo Choi, Seoul National University, Seoul, Korea (p.18)
- 4C2 4:20 **PREMIXED FLAME DEPOSITION OF NANOSTRUCTURED ANATASE-TIO<sub>2</sub> FILMS FOR PHOTOACTIVATED PROCESSES**, ELIJAH THIMSEN and Pratim Biswas, Washington University, Saint Louis, MO (p.19)
- 4C3 4:40 **TARGETED DEPOSITION OF AU AEROSOL NANOPARTICLES ON VERTICAL NANOWIRES FOR CREATION OF NANOTREES**, Kora Bayer, Kimberly A. Dick, KNUT DEPPERT, Solid State Physics, Lund University, Lund, Sweden; Thomas J. Krinke, TSI GmbH, Aachen, Germany (p.21)
- 4C4 5:00 **NANOPARTICLE GENERATION AND DEPOSITION SYSTEM FOR A LARGE SUBSTRATE AND ITS APPLICATION TO CARBON NANOTUBE GROWTH FOR FUTURE ELECTRONIC DEVICES**, SHINTARO SATO, Mizuhisa Nihei, Atsushi Mimura, Akio Kawabata, Daiyu Kondo, Yuji Awano, Fujitsu Limited, Atsugi, Japan (p.23)
- 4D Indoor Aerosols-II (Platform)**  
Governors 2 - 4  
*Mark Sippola, Jana Kesavan, Chairs*
- 4D1 4:00 **AIRBORNE OZONE FOR INACTIVATION OF VIRUS-CONTAINING AEROSOLS**, CHUN-CHIEH Tseng, Chih-Shan Li, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University, Taipei, Taiwan, R.O.C. (p.809)
- 4D2 4:20 **DESIGN AND DEVELOPMENT OF SMALL-SIZED NANOPARTICLE GENERATOR AS AN ANTIMICROBIAL DEVICE**, Jun-Ho Ji, Hyung-Su Noh, Digital Appliance R&D Center, Samsung Electronics, Suwon, Korea, Jae-Hee Jung, Hyun-Cheol Oh, Sang-Su Kim, Dept. of Mechanical Engineering, Korea Academy Institute of Science and Technology, Deajeon, Korea, Byung-Uk Lee, Gwi-Nam Bae, Research Center, Korea Institute of Science and Technology, Seoul, Korea, (p.810)
- 4D3 4:40 **REDUCTION OF AEROSOL EXPOSURE IN INDOOR ENVIRONMENTS: ROLE OF DIFFERENT MECHANISMS**, SERGEY A. GRINSHPUN, Atin Adhikari, Takeshi Honda, Taekhee Lee, Kiyoun Kim and Tiina Reponen, Center for Health-Related Aerosol Studies, University of Cincinnati, Cincinnati, Ohio, USA (p.811)
- 4D4 5:00 **THE BIOAEROSOLS ASSOCIATED WITH AIR-CONDITIONED BEDROOMS DURING SUMMER NIGHTS**, JESSICA Y. W. CHENG, Environmental Engineering Program, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, Frances K. M. Kwan and Arthur P. S. Lau, Institute for the Environment, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong (p.812)

**4E Laboratory Study of Organic Reactions-II (Platform)**

Wabasha Suite

*Sergey Nizkorodov, Eladio Knipping, Chairs*

- 4E1  
4:00 **LABORATORY STUDIES OF PHOTOCHEMICAL PROCESSING OF SECONDARY ORGANIC AEROSOL PARTICLES**, SERGEY A. NIZKORODOV, Jiho Park, Maggie L. Walser, Anthony L. Gomez, Joelle S. Underwood, Xiang Pan, Robert Benningsdorf, and Ashley R. Russell, University of California at Irvine, Irvine, CA (*p.1485*)
- 4E2  
4:20 **THE REACTIONS OF UNSATURATED FATTY ACIDS AEROSOL WITH OZONE: PRODUCTS FORMATION AND HYGROSCOPIC PROPERTIES OF THE PROCESSED AEROSOL**, OLGA VESNA, Staffan. Sjogren, Ernest Weingartner, Konrad Stemmler, Heinz W. Gäggeler, Markus Ammann, Paul Scherrer Institut, Switzerland; Markus Kalberer, Swiss Federal Institute of Technology Zurich, Switzerland (*p.1486*)
- 4E3  
4:40 **OZONOLYSIS OF UNSATURATED FATTY ACIDS: PRODUCT FORMATION AND CHANGES IN HYGROSCOPICITY**, ALEX KING YIN LEE, Chak K. Chan, Hong Kong University of Science and Technology, Hong Kong (*p.1488*)
- 4E4  
5:00 **AEROSOL FLOW TUBE/FT-IR (AFT-FT): A NEW METHOD TO STUDY THE HETEROGENEOUS CHEMISTRY OF AEROSOLS**, CINDY DEFOREST HAUSER, Shari Barnett, Jamie Ferguson, Catherine Williams and G. Steve Tolson, Davidson College, Davidson, NC (*p.1490*)

**4F Nucleation Experiments-I (Platform)**

Kellogg Suite

*Barbara Wyslouzil, Motoaki Adachi, Chairs*

- 4F1  
4:00 **TUNABLE DIODE LASER ABSORPTION SPECTROSCOPY STUDY OF CH<sub>3</sub>CH<sub>2</sub>OD/D<sub>2</sub>O BINARY NUCLEATION IN A SUPERSONIC LAVAL NOZZLE**, SHINOBU TANIMURA, Barbara E. Wyslouzil, The Ohio State University, Columbus, OH; Mark Zahniser, Joanne Shorter, David Nelson, Barry McManus, Aerodyne Research Inc., Billerica, MA (*p.1613*)
- 4F2  
4:20 **OBSERVATION OF NUCLEATION OF ORGANIC VAPOURS BY NANOPARTICLES ALREADY AT PARTICLE SIZES WELL BELOW THE KELVIN PREDICTION**, PAUL M. WINKLER, Gerhard Steiner, Georg P. Reischl, Aron Vrtala, Paul E. Wagner, University of Vienna, Vienna, Austria; Anca I. Gaman, Hanna Vehkamäki, Markku Kulmala, University of Helsinki, Helsinki, Finland (*p.1615*)
- 4F3  
4:40 **ION MOBILITY CHANGES IN DIFFERENTIAL MOBILITY ANALYZER AT VARIOUS HUMIDITY**, Natsuko Yokoyama, Motoaki Adachi, Osaka Prefecture University, Osaka, JAPAN (*p.1617*)
- 4F4  
5:00 **WATER DROPLET NUCLEATION AND GROWTH IN SUPERSONIC FLOWS**, BARBARA WYSLOUZIL, The Ohio State University, Columbus, OH; Gerald Wilemski University of Missouri – Rolla, Rolla MO; Reinhard Strey, Universität zu Köln, Köln, Germany (*p.1618*)

**4G Elemental and Organic Carbon Atmospheric Aerosols-I (Poster)**

Garden Court East

*Chartes Stainier, Liaquat Husain, Chairs*

- 4G1  
4:00 **INVESTIGATION OF CARBONACEOUS AEROSOL BEHAVIOR AT TWO LOCATIONS IN NEW YORK STATE**, RAMYA SUNDER RAMAN and Philip K. Hopke, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY (*p.1492*)

- 4G2  
4:00 **APPLICABILITY OF AN ELECTROSTATIC CARBON AEROSOL PARTICLE GENERATOR TO VOCS REMOVAL**, Jeong Hoon Byeon, Jae Hong Park, Ki Young Yoon, Byung Ju Ko, Jung-ho Hwang, Yonsei University (School of Mechanical Engineering); Jun Ho Ji, Samsung Electronics Co., Ltd. (Division of digital appliance network) (p.1494)
- 4G3  
4:00 **COMPARISON OF ELEMENTAL CARBON (EC) AND BLACK CARBON (BC) MEASUREMENTS DERIVED BY THERMO-OPTICAL AND FILTER-BASED LIGHT TRANSMISSION TECHNIQUES AT NORTH ATLANTIC**, FILIPE BARATA, Paulo Fialho, Departamento de Ciências Agrárias, Universidade dos Acores, Portugal; Casimiro Pio, Departamento de Ambiente e Ordenamento, Universidade de Aveiro, Portugal. (p.1496)
- 4G4  
4:00 **TEMPORAL-SPATIAL DISTRIBUTION OF PARTICULATE MATTER AND CARBONACEOUS MATERIAL IN A MEGACITY**, PASQUALE AVINO, Maurizio Manigrasso, ISPESL, Rome, Italy (p.1497)
- 4G6  
4:00 **CHEMICAL CHARACTERIZATION OF AMBIENT AEROSOL ORGANICS WITH HIGH TIME RESOLUTION USING THE PHOTOIONIZATION AEROSOL MASS SPECTROMETER (PIAMS)**, Matthew Dreyfus, Murray V. Johnston, University of Delaware, Newark, DE (p.1500)
- 4G7  
4:00 **QUANTITATIVE UNCERTAINTY IN THERMAL-OPTICAL ANALYSIS OF CARBONACEOUS PARTICLES**, POONAM BOPARAI, Tami Bond, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, IL (p.1502)
- 4G9  
4:00 **FIELD AND SMOG CHAMBER MEASUREMENTS OF ORGANIC AEROSOLS IN SWITZERLAND**, M. RAMI ALFARRA, Andre S.H. Prevot, Jisca Sandradewi, Jonathan Duplissy, Axel Metzger, Josef Dommen, Ernest Weingartner, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institut, Villigen, Switzerland (p.1505)
- 4G10  
4:00 **APPLICATION OF THE VOLATILITY-TDMA TECHNIQUE TO DETERMINE THE NUMBER SIZE DISTRIBUTION OF EXTERNALLY MIXED SOOT PARTICLES**, ANNA FREY, Finnish Meteorological Institute, Helsinki, Finland; Birgit Wehner, Diana Rose, Thomas Müller, Alfred Wiedensohler, Leibniz-Institute for Tropospheric Research, Leipzig, Germany (p.1507)
- 4G11  
4:00 **REFLECTANCE OF PM10 AND PM2.5 FILTERS AS AN INDICATOR OF COMBUSTION-RELATED PARTICLE EMISSIONS, IN CENTRAL ATHENS, GREECE.**, M. Constantopoulou, G. Grivas, V. Kanouta, A. Chaloulakou, School of Chemical Engineering, National Technical University of Athens, Greece; P. Kassomenos, Department of Astrogeophysics, Faculty of Physics, University of Ioannina, Greece. (p.1508)
- 4G12  
4:00 **COMPARISON BETWEEN TOT AND TGA/ FT-IR CARBON MEASUREMENTS**, Paola Fermo, Andrea Piazzalunga, Fabiola Martino, Department of Inorganic, Metallorganic and Analytical Chemistry, University of Milan; ROBERTA VECCHI, Gianluigi Valli, Alessandra D'Alessandro, Institute of Applied General Physics, University of Milan, (p.1510)
- 4G13  
4:00 **SECONDARY ORGANIC AEROSOL FORMATION IN METROPOLITAN ATLANTA GEORGIA**, RODNEY WEBER, Amy Sullivan, Rick Peltier, Chris Hennigan, A. (Ted) Russell, Bo Yan, Mei Zheng, Georgia Institute of Technology, Atlanta, GA; Joost de Gouw, Carsten Warneke, John Holloway, NOAA Earth System Research Laboratory, Boulder, CO; Elliot Atlas, University of Miami, Miami, FL; Eric Edgerton, Atmospheric Research and Analysis, Inc., Cary, NC (p.1512)
- 4G14  
4:00 **DISTRIBUTION OF DIFFERENT POLARITY SPECIES IN PARTICULATE MATTER FROM DIFFERENT SOURCES**, JOSEF BERANEK, Ty Lahren, Irina Smoliakova, Alena Kubatova, Department of Chemistry, University of North Dakota, Grand Forks, ND (p.1513)

- 4G15 4:00 **TOWARDS THE DEVELOPMENT OF A BLACK CARBON STANDARD FOR EVALUATING THERMAL-OPTICAL ANALYSIS METHODS AND OTHER INSTRUMENTS THAT MEASURE BLACK CARBON AND LIGHT ABSORPTION**, THOMAS W. KIRCHSTETTER, Lawrence Berkeley National Laboratory, Berkeley, CA (p.1515)
- 4G18 4:00 **TD-GCMS ANALYSIS OF ONE YEAR OF DAILY PM2.5 SAMPLES FROM THE ST. LOUIS – MIDWEST SUPERSITE**, REBECCA J. SHEESLEY, James J. Schauer, MinSuk Bae, Environmental Chemistry and Technology Program, University of Wisconsin, Madison, WI; Jeff DeMinter, Mark Mieritz, Wisconsin State Laboratory of Hygiene, University of Wisconsin, Madison, WI; Jay R. Turner, Department of Chemical Engineering, Washington University, St. Louis, MO (p.1519)
- 4G19 4:00 **CHEMICAL CHARACTERISTICS OF ORGANIC AEROSOLS DURING AN ACUTE WINTER INVERSION**, MARK ERUPE, Philip Silva, Utah State University, Logan, UT (p.1520)
- 4G20 4:00 **SIZE-RESOLVED EMISSIONS OF ORGANIC TRACERS FROM LIGHT- AND HEAVY-DUTY VEHICLES MEASURED IN A CALIFORNIA ROADWAY TUNNEL**, HARISH C. PHULERIA, Michael D. Geller, Philip M. Fine, Constantinos Sioutas, University of Southern California, Los Angeles, CA (p.1521)
- 4G22 4:00 **THE SIZE DISTRIBUTION OF PM EMISSION FROM POWER PLANTS IN BEIJING**, YIYUN BO, BEIJING MUNICIPAL INSTITUTE OF LABOR PROTECTION (p.1524)
- 4G23 4:00 **ENVIRONMENTAL IMPACTS OF PARTICULATES EMITTED FROM RUBBER-WOOD BURNING IN RUBBER SMOKED SHEET PRODUCTION IN THAILAND**, PERAPONG TEKASAKUL, Surajit Tekasakul, Thitiworn Choosong, Prince of Songkla University, Hat Yai, Songkhla, Thailand; Masami Furuuchi, Yoshio Otani, Shinji Tsukawaki, Tsuyoshi Jinno, Takahiro Murase, Kanazawa University, Kanazawa, Japan (p.1526)
- 4G24 4:00 **SIZE-RESOLVED QUANTIFICATION OF POLYCYCLIC AROMATIC HYDROCARBONS AND LUBRICATING OIL TRACERS FORM LIGHT-DUTY GASOLINE AND HEAVY-DUTY DIESEL VEHICLES**, SARAH RIDDLE, Michael Robert, Chris Jakober, and Michael Kleeman, University of California at Davis. Davis CA (p.1528)
- 4G25 4:00 **DIESEL VEHICLE EMISSIONS IN THAILAND: PM2.5 MASS, COMPOSITION, AND LIGHT ABSORPTION**, R SUBRAMANIAN, Tami C Bond, University of Illinois at Urbana-Champaign, USA; Worrarat Thiansathit, Nguyen Thi Kim Oanh, Asian Institute of Technology, Thailand; KG Duleep, EEA, Inc.; Ittipol Paw-armart, Pollution Control Department, Thailand; Ekbordin Winijkul, PADCO, Inc. (p.1529)
- 4G26 4:00 **EFFECT OF FUEL SULPHUR CONTENT AND CONTROL TECHNOLOGY ON PM EMISSIONS FROM SHIP'S AUXILIARY ENGINE**, ABHILASH NIGAM, William Welch, J.Wayne Miller, David R. Cocker III, Department of Chemical and Environmental Engineering and College of Engineering, Center for Environmental Research and Technology, UC Riverside, Riverside, CA (p.1531)
- 4G27 4:00 **DELIQUESCENCE AND CRYSTALLIZATION OF AQUEOUS ORGANIC-INORGANIC PARTICLES AND AQUEOUS INORGANIC PARTICLES CONTAINING SOOT INCLUSIONS**, Matthew Parsons, Atul Pant, Daniel Knopf and ALLAN BERTRAM, Department of Chemistry, University of British Columbia, Vancouver, BC (p.1532)

- 4G28 **PAHS CONCENTRATIONS ON THE**  
4:00 **ROADSIDE IN SEOUL**, Su-Mi Park, Hyun-Chul Jin, GWI-NAM BAE, Korea Institute of Science and Technology, Seoul, Korea (p.1533)
- 4G29 **IDENTIFICATION AND ESTIMATION OF**  
4:00 **ATMOSPHERIC AEROSOL MAIN COMPONENTS: HIT THE TARGET BY MEANS OF A SINGLE ANALYTICAL METHOD**, Paola Fermo, Andrea Piazzalunga, Fabiola Martino, Department of Inorganic, Metallorganic and Analytical Chemistry, University of Milan; ROBERTA VECCHI, Gianluigi Valli, Alessandra D'Alessandro, Institute of Applied General Physics, University of Milan (p.1534)
- 4G30 **REDUCTION OF PCDDF EMISSION BY**  
4:00 **THE ACTIVATED CARBON INJECTION IN ZINC OXIDE PLANT**, HSING-WANG LI, Wen-Jhy Lee, Department of Environmental Engineering, Sustainable Environment Research Center, National Cheng Kung University, Tainan, Taiwan; Guo-Ping Chang-Chien, Department of Chemical Engineering, Cheng-Shiu University, Kaohsiung, Taiwan; Kuen-Thyr Yang, Taiwan Steel Union CO LTD, Chang-Hua, Taiwan (p.1536)
- 4G31 **COMPOSITION EFFECTS ON SECONDARY**  
4:00 **ORGANIC AEROSOL (SOA) PARTITIONING: CMAQ MODULE DEVELOPMENT AND INITIAL EVALUATION**, Xinlian Chang, Vanderbilt University, Nashville, TN; FRANK M. BOWMAN, University of North Dakota, Grand Forks, ND (p.1538)
- 4G32 **VOC PRECURSORS AND SECONDARY**  
4:00 **AEROSOLS IN THE SOUTHEASTERN UNITED STATES**, G. M. HIDY, Envair/Aerochem., Placitas, NM; C. L. Blanchard, Envair, Albany, CA; E. Edgerton, ARA, Inc., Raleigh, NC; R. A. Rasmussen, Oregon Health & Science University, Beaverton, OR; A. Russell, Georgia Institute of Technology, Atlanta, GA (p.1539)
- 4G33 **A NEW AEROSOL MODEL FOR**  
4:00 **INVESTIGATING INTERACTIONS BETWEEN AEROSOL MIXING STATE, SEMIVOLATILE ORGANIC PARTITIONING, AND COAGULATION**, Jin Lu, Vanderbilt University, Nashville, TN; FRANK M. BOWMAN, University of North Dakota, Grand Forks, ND (p.1540)
- 4G34 **SECONDARY ORGANIC AEROSOL**  
4:00 **FORMATION FROM THE REACTION OF AMMONIA AND GAS-PHASE ORGANIC ACIDS PRODUCED FROM OZONOLYSIS**, KWANGSAM NA, Chen Song, Cameron Switzer, David R. Cocker III, Bourns College of Engineering - Center for Environmental Research and Technology (CE-CERT), University of California, Riverside, CA (p.1541)
- 4H Urban & Regional Air Quality (Poster)**  
Garden Court West  
*James Schauer, Masami Furuuchi, Chairs*
- 4H1 **SIZE DISTRIBUTION AND NUMBER**  
4:00 **CONCENTRATION OF AMBIENT NANOPARTICLE IN DIFFERENT AREA OF HSINCHU, TAIWAN**, TZU-MING CHEN, HungMin Chein, Hsin-Chen Yeh, Chun-Chao Huang, Jau-Yo Huang, Li-Yeh Hsu, Environmental Health Technology Division, Energy & Environment Research Laboratories, Industrial Technology Research Institute, TAIWAN (p.1697)
- 4H2 **EFFECTS OF PILE CONFIGURATIONS**  
4:00 **AND WIND CONDITIONS ON AEROSOL EMISSIONS FROM COAL STOCKPILES**, BADR THERESE, Jean-Luc Harion, Ecole des Mines de Douai, France (p.1699)
- 4H3 **TRANSFER OF POLYCHLORINATED**  
4:00 **DIBENZO-P-DIOXINS AND DIBENZOFURANS FROM AMBIENT AIR TO BANYAN LEAVES**, LONG-FULL LIN, Wen-Jhy Lee, Chia-Yang Hung, Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan; Guo-Ping Chang-Chien, Department of Chemical Engineering, Cheng-Shiu University, Kaohsiung, Taiwan (p.1701)

- 4H4  
4:00 **USE OF STATISTICAL TOOLS TO DESCRIBE THE INFLUENCE OF ANTHROPOGENIC SOURCES AND METEOROLOGICAL PARAMETERS ON THE TEMPORAL VARIATIONS OF PM<sub>10</sub> IN A MULTI-INFLUENCED COASTAL SITE**, Juliette Rimetz, Esperanza Perdrix, Sophie SOBANSKA, Claude Brémard (*p.1703*)
- 4H5  
4:00 **THE ROLE OF ISOPRENE IN SECONDARY ORGANIC AEROSOL FORMATION: A 1-YEAR 3-D REGIONAL MODEL SIMULATION AND EXAMINATION**, YANG ZHANG, Jian-Ping Huang, North Carolina State University, Raleigh, NC; Daven K. Henze and John H. Seinfeld, California Institute of Technology, Pasadena, CA (*p.1705*)
- 4H6  
4:00 **CHEMICAL AND BIOLOGICAL POLLUTION OF FRESH SNOW**, ALEXANDER S. SAFATOV, Galina A. Buryak, Irina S. Andreeva, Sergey E. Olkin, Irina K. Reznikova, Federal State Research Institution «State Research Center of Virology and Biotechnology «Vector», Koltsovo, Novosibirsk region, Russia; Marina P. Shinkorenko, Olga V. Shuvaeva and Boris S. Smolyakov, Institute of Inorganic Chemistry, SB RAS, Novosibirsk, Russia (*p.1707*)
- 4H7  
4:00 **INTERNAL MIXING OF POLLUTANTS WITH ASIAN MINERAL DUST PARTICLES OBSERVED IN JAPAN**, JUN MATSUMOTO, Masahiro Narukawa, Kenshi Takahashi, Yutaka Matsumi, STEL, Nagoya University, Toyokawa, Japan; Akihiro Yabushita, Horiba Ltd., Kyoto, Japan; Atsushi Shimizu, Ichiro Matsui, Nobuo Sugimoto, NIES, Tsukuba, Japan (*p.1709*)
- 4H8  
4:00 **REGIONAL AEROSOL OPTICAL DEPTH DISTRIBUTION DERIVED BY CMAQ MODEL SIMULATION UNDER SIBERIAN FOREST FIRE EMISSION**, HEE-JIN IN, Yong Pyo Kim, Ewha Womans Univerisy, Seoul, Korea (*p.1710*)
- 4H9  
4:00 **DAYTIME RESOLVED ANALYSIS OF POLYCYCLIC AROMATIC HYDROCARBONS IN URBAN AEROSOL SAMPLES – IMPACT OF SOURCES AND METEOROLOGICAL CONDITIONS**, MARTIN SKLORZ, Jürgen Schnelle-Kreis, Yongbo Liu, Jürgen Orasche, Ralf Zimmermann, GSF – National Research Centre for Environment and Health, and BlfA GmbH - Bavarian Institute of Applied Environmental Research and Technology, and University of Augsburg, Germany (*p.1712*)
- 4H10  
4:00 **SIZE DISTRIBUTIONS AND SIZE-RESOLVED CHEMICAL COMPOSITION OF PARTICLES OBSERVED DURING SUMMER AND WINTER IN A SMALL URBAN SETTING AND IN SUMMER AT A MOUNTAINTOP SITE**, DEREK MONTAGUE, Mariya Petrenko, Wiesje Mooiweer, Mark Weitz, Terry Deshler, University of Wyoming, Laramie, WY (*p.1714*)
- 4H11  
4:00 **CAMX SIMULATIONS OF WET AND DRY DEPOSITION OF PARTICULATE NITRATE, NITRIC ACID AND AMMONIA ALONG COLORADO'S FRONT RANGE**, MICHAEL BARNA, Kristi Gebhart, Bret Schichtel, National Park Service; Marco Rodriguez, Colorado State University (*p.1716*)
- 4H12  
4:00 **LONG-TERM SEMI-CONTINUOUS MEASUREMENT OF PM<sub>2.5</sub> MASS, SULFATE AND CARBON AT RURAL AND URBAN SITES IN NEW YORK STATE**, JAMES SCHWAB, Min-Suk Bae, Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; Oliver Rattigan, Henry D. Felton, New York State Department of Environmental Conservation, Albany, NY (*p.1717*)
- 4H13  
4:00 **PM<sub>10</sub> SPATIAL DISTRIBUTION ASSESSMENT AND MAPS RECONSTRUCTION OVER TUSCANY, ITALY**, CARLO GRASSI, Beatrice Barlettani, Leonardo Tognotti, Department of Chemical Engineering, University of Pisa, Pisa, IT (*p.1719*)

- 4H14  
4:00 **PMF ANALYSIS OF A LARGE DATASET OF ORGANIC MOLECULAR MARKERS IN PITTSBURGH, PA**, MANISH SHRIVASTAVA, Allen L. Robinson, Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, 15217, PA, USA; Wolfgang F. Rogge, Department of Civil and Environmental Engineering, Florida International University, Miami, FL, USA (*p.1721*)
- 4H15  
4:00 **CHARACTERISTICS OF AIR POLLUTANTS IN ANGKOR MONUMENTS AREA, CAMBODIA**, M. Furuuchi, T. Murase and M. Hata, Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa 920-1192, Japan; S. Tsukawaki, Institute of Nature and Environmental Technology, Kanazawa University, Kanazawa 920-1192, Japan; P. Hang, Department of Water and Forestry, APSARA, Siem Reap, Cambodia; S. Sieng, Department of Geology, Ministry of Industry, Mines and Energy, Phnom Penh, Cambodia (*p.1723*)
- 4H16  
4:00 **ANALYSIS OF A STRONG SAHARAN DUST EVENT IN THE CARIBBEAN FROM SUN AERONET PHOTOMETER, PM10 AND BACK-TRAJECTORIES DATA**, JACK MOLINIE, Sandra Jacoby-Koaly, Rose-Helen Petit, Tony Feuillard, Laboratoire de Physique de l'Atmosphere Tropicale, University Antilles -Guyane, Guadeloupe (*p.1725*)
- 4H17  
4:00 **MODEL FOR SIMULATING AEROSOL INTERACTIONS AND CHEMISTRY (MOAIC)**, RAHUL ZAVERI, Richard Easter, Jerome Fast, William Gustafson, Leonard Peters, Pacific Northwest National Laboratory, Richland, WA (*p.1727*)
- 4H18  
4:00 **MEASUREMENT OF PM2.5 AND ULTRAFINE PARTICLES AROUND ROADSIDE IN SUBURBAN AREA**, Kazuhiko Sekiguchi, Masahiro Yasuhara, Nobuyuki Ishikawa, Kazuhiko Sakamoto, Saitama University, Saitama, Japan; Norikazu Namiki, Yoshio Otani, Kanazawa University, Ishikawa, Japan (*p.1728*)
- 4H19  
4:00 **SIZE SEGREGATED CHEMICAL COMPOSITION OF PARTICLES EMITTED FROM COAL-FIRED POWER PLANT**, JANJA TURŠIČ, Irena Grgić, Boštjan Podkrajšek, Miroslav Kovačević, Laboratory for Analytical Chemistry, National Institute of Chemistry, Hajdrihova 19, SI-1000 Ljubljana, Slovenia; Axel Berner, Institute for Experimental Physics University of Vienna, Boltzmannngasse 5, A-1090, Vienna, Austria; Igor Čuhalev, Janez Jamšek, Electroinstitute Milan Vidmar, Hajdrihova 2, SI-1000 Ljubljana, Slovenia (*p.1730*)
- 4H20  
4:00 **CHARACTERIZATION OF AEROSOL IN THE PO VALLEY, ITALY, DURING THE ADRIEX CAMPAIGN.**, JONATHAN CROSIER, James D. Allan, Keith Bower, Hugh Coe, Paul I. Williams, School of Earth, Atmospheric and Environmental Science, University of Manchester, UK; Eleanor J. Highwood, Jolene Cook, Department of Meteorology, University of Reading, UK; James M. Haywood, Simon R. Osborne, Met Office, Exeter, UK; Douglas R. Worsnop, John T. Jayne, Aerodyne Research Inc, Billerica, MA; Jose L. Jimenez, University of Colorado, Boulder, CO (*p.1732*)
- 4H21  
4:00 **DEVELOPMENT OF METHODOLOGY FOR PM10 EMISSION FACTORS ON FIELD MEASUREMENTS AND PREDICTIONS FOR ALMOND INDUSTRY**, Teresa Cassel, KRYSZYNA TRZEPLA-NABAGLO, Paul Wakabayashi and Robert Flocchini, Crocker Nuclear Laboratory, University of California, Davis, CA (*p.1733*)
- 4H22  
4:00 **HIGH-RESOLUTION MODELLING OF ATMOSPHERIC POLLUTION BY AEROSOLS IN THE IBERIAN PENINSULA: ANNUAL CYCLE SIMULATIONS**, Pedro Jiménez, Oriol Jorba, Barcelona Supercomputing Center – Centro Nacional de Supercomputación (BSC-CNS) Earth Sciences Division, Barcelona, Spain, María Gonçalves and José M. Baldasano, Environmental Modelling Laboratory, Technical University of Catalonia (LMA-UPC), Barcelona, Spain (*p.1735*)



**Monday 5:30 PM - 7:00 PM**  
**AAAR General Business Meeting**  
**GAeF General Business Meeting**

Minnesota Ballroom

**Monday 7:00 PM - 8:00 PM**  
**Exhibitor Reception**

Great River Ballroom, Garden Courts East & West

**Tuesday 8:00 AM - 9:20 AM**  
**Plenary**

Minnesota Ballroom

*Gilmore Sem, Chair*

8:00 **PLENARY 2. INDOOR AEROSOLS: DO WE NEED MORE DATA OR MORE SCIENCE?**, Lidia Morawska, Professor, School of Physical and Chemical Sciences, Queensland University of Technology, Brisbane, Australia (p.771)

9:00 **MARIAN SMOLUCHOWSKI AWARD**, presented by Rheinhard Niessner

**KENNETH T. WHITBY AWARD**, presented by David Leith

**Tuesday 9:00 AM - 3:30 PM**  
**Exhibits Open**

Great River Ballroom

**Tuesday 9:20 AM - 11:00 AM**  
**Poster Viewing with Continental Breakfast for Sessions 1 - 6**

Great River Ballroom, Garden Courts East & West

**Tuesday 11:00 AM - 12:40 PM**  
**Session 5**

**5A Urban Aerosol Sources (Platform)**

Minnesota Ballroom

*Philip Hopke, Chair*

5A1 11:00 **AREA OF INFLUENCE ANALYSIS FOR PM<sub>2.5</sub> COMPONENTS**, SERGEY L. NAPELENOK, Yongtao Hu, Armistead G. Russell, Department of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA, USA, Florian Habermacher, L'Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, Farhan H. Akhtar, Department of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA, USA (p.1737)

5A2 11:20 **MODELING SOURCE CONTRIBUTIONS TO ULTRAFINE PARTICLE NUMBER CONCENTRATIONS MEASURED IN ROCHESTER, NY**, DAVID OGULEI, Philip Hopke, Clarkson University, Potsdam, NY; David Chalupa, Mark Utell, University of Rochester Medical Center, Rochester, NY. (p.1739)

5A3 11:40 **EFFECTS OF SOURCE PROXIMITY ON RESIDENTIAL OUTDOOR CONCENTRATIONS OF PM<sub>2.5</sub> AND ITS CARBONACEOUS COMPONENTS**, ANDREA POLIDORI, Barbara Turpin, Yelena Naumova, Steven Eisenreich, Qing Yu Meng, William Cui, Robert Giovanetti, Rutgers University, NJ; Jaymin Kwon, Clifford Weisel, Environmental and Occupational Health Sciences Institute, NJ (p.1741)

5A4 12:00 **POSITIVE MATRIX FACTORIZATION (PMF) ANALYSIS OF MOLECULAR MARKER MEASUREMENTS TO QUANTIFY THE SOURCES OF ORGANIC AEROSOLS**, JEFFREY JAECKELS, Min-Suk Bae, James Schauer, Environmental Chemistry and Technology, University of Wisconsin-Madison (p.1743)

**5B Organic Aerosol Characterization  
(Platform)**

Capitol Ballroom

*Mohammed Jaoui, M. Zheng, Chairs*

5B1  
11:00 **MEASUREMENTS OF GAS-PARTICLE PARTITIONING OF REAL AND MODEL COMBUSTION AEROSOLS AT NEAR-AMBIENT CONCENTRATIONS**, ANDREW GRIESHOP, Allen Robinson, Carnegie Mellon University, Pittsburgh, PA (p.1543)

5B2  
11:20 **SEASONAL ESTIMATION OF ORGANIC MASS TO ORGANIC CARBON FROM PM2.5 FILTER SAMPLES AT RURAL AND URBAN LOCATIONS IN NEW YORK STATE**, MIN-SUK BAE, Kenneth L. Demerjian, and James J. Schwab; Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, New York, USA (p.1547)

5B3  
11:40 **EVAPORATIVE LIGHT SCATTERING: A NOVEL QUANTIFICATION METHOD FOR HUMIC-LIKE SUBSTANCES (HULIS) IN ORGANIC AEROSOLS**, Christian Emmenegger, Alain Reinhardt, Renato Zenobi, MARKUS KALBERER, ETH Zurich, Zurich, Switzerland (p.1549)

5B4  
12:00 **FORMATION OF SECONDARY ORGANIC AEROSOL FROM IRRADIATED MIXTURES OF ISOPRENE, A-PINENE, AND TOLUENE WITH NOX AND SO2**, MOHAMMED JAOUI, Alion Science and Technology, Research Triangle Park, NC; Tadeusz E. Kleindienst, Michael Lewandowski, John H. Offenber, Edward O. Edney, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC; Jason D. Surratt, John H. Seinfeld, California Institute of Technology, Pasadena, CA (p.1551)

**5C Methods of Aerosol Synthesis  
(Platform)**

Governors 1 &amp; 5

*Michael Zachariah, Timothy Ward, Chairs*

5C1  
11:00 **FOCUSED PARALLEL PATTERNING OF CHARGED AEROSOLS**, H. Kim, J. Kim, H. Yang, J. Suh, T. Kim, B. Han, S. Kim, D. S. Kim, P.V. Pikhitsa and M. Choi, Seoul National University, Seoul, Korea (p.25)

5C2  
11:20 **OPTIMIZATION OF MULTIPLEXED MICROFABRICATED ELECTROSPRAY SOURCES TO INCREASE THE FLOW RATE OF MONODISPERSE DROPLETS**, Weiwei Deng (1), Christopher M. Waits (2), Nicholas R. Jankowski (2), Bruce R. Geil (2) and Alessandro Gomez (1) (1) Department of Mechanical Engineering, Yale University, 9 Hillhouse Ave., New Haven, CT 06520, USA (2) Army Research Laboratory, 2800 Powder Mill Rd., Adelphi, MD 20783, USA (p.26)

5C3  
11:40 **SIZE DISTRIBUTIONS OF IRON OXIDE NANOPARTICLES IN THE MICROWAVE PLASMA DISCHARGE PROCESS BY PARTICLE MASS SPECTROMETRY AND BY TRANSMISSION ELECTRON MICROSCOPY**, HANNS-R. PAUR, W. Baumann, B. Thekedar, H. Seifert; Forschungszentrum Karlsruhe, Institut für Technische Chemie, Karlsruhe, Germany (p.28)

5C4  
12:00 **NANOSTRUCTURED POROUS PARTICLES BY SELF ASSEMBLY AND PHASE SEPARATION IN AEROSOL DROPLETS**, Shailendra Rathod, TIMOTHY L. WARD, University of New Mexico, Albuquerque, NM (p.30)

5C5  
12:20 **SIMULATIONS OF NANOPARTICLE GROWTH AND TRANSPORT IN A PLASMA**, Sarah Warthesen, STEVEN GIRSHICK, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN (p.222)

**5D Indoor Aerosols-III (Platform)**

Govenors 2 - 4

*Andrea Ferro, Jacky Rosati, Chairs*

- 5D1 **INDOOR-OUTDOOR RELATIONSHIPS, TRENDS AND CARBONACEOUS CONTENT OF FINE PARTICULATE MATTER DURING THE CHAPS STUDY**, Mohammad Arhami, Andrea Polidori, Constantinos Sioutas, University of Southern California, CA; Ralph Delfino, University of California, Irvine, CA (*p.814*)
- 5D2 **ASSESSMENT OF PERSONAL EXPOSURE OF URBAN YOUTH IN CHICAGO TO METALS IN PM<sub>2.5</sub>**, DANIEL O'CONNELL, Peter Scheff, Serap Erdal, University of Illinois at Chicago, School of Public Health, Division of Environmental & Occupational Health Sciences, 212 West Taylor Street, Chicago, IL, USA (*p.816*)
- 5D3 **INDOOR-OUTDOOR AEROSOLS: EXPERIMENTS AND MODEL SIMULATIONS**, KAARLE HÄMERI, Eija Vartiainen, Finnish Institute of Occupational Health and University of Helsinki, Helsinki, Finland; Rauno Holopainen, Marko Björkroth, Juha Jokisalo, Jarek Kurnitski, Olli Seppänen, Helsinki University of Technology, Laboratory of Heating Ventilating and Air-Conditioning, Helsinki, Finland; Mika Vuolle, SIY; Sisäilmatiето Oy (FiSIAQ), Finland; Aimo Taipale, Ilpo Kulmala, Matti Lehtimäki, Technical Research Centre of Finland, Industrial Systems, Tampere, Finland; Merja Hautamäki, Arto Voutilainen, Pertti Pasanen, University of Kuopio, Kuopio, Finland (*p.817*)
- 5D4 **OZONE REMOVAL BY PARTICLES ON HVAC FILTERS**, Ping Zhao, JEFFREY SIEGEL, Richard Corsi, CAEE, University of Texas, Austin, TX (*p.818*)

**5E Secondary Organic Aerosol Formation-I (Platform)**

Wabasha Suite

*Spyros Pandis, Chair*

- 5E1 **SECONDARY ORGANIC AEROSOL FORMATION FROM LIMONENE OZONOLYSIS: NOX CONCENTRATION AND UV RADIATION EFFECT**, Jieyuan Zhang, Kara E. Huff-Hartz, Ravi K. Pathak, and NEIL M. DONAHUE, Center for Atmospheric Particle Studies, Carnegie Mellon University, Pittsburgh, PA, 15213, USA (*p.1553*)
- 5E2 **SECONDARY ORGANIC AEROSOL FORMATION AND CHEMICAL SPECIATION FOR THE CYCLOHEXENE/OZONE SYSTEM IN THE PRESENCE OF WATER VAPOR AND INORGANIC SALTS**, BETHANY WARREN, Quentin G.J. Malloy, Lindsay D. Yee, David R. Cocker III (*p.1554*)
- 5E3 **THE ROLE OF THE VOLATILE CARBONYL GLYOXAL IN THE FORMATION OF SECONDARY ORGANIC AEROSOL**, Rainer Volkamer, Kerri Denkenberger, Kim Prather, Mario Molina, University of California San Diego; Ken Docherty, Jose Jimenez, University of Colorado; Paul Ziemann, University of California Riverside (*p.1556*)
- 5E4 **OZONOLYSIS OF  $\beta$ -PINENE AND LIMONENE: ROLE OF INORGANIC SEEDS, OZONE AND TEMPERATURE ON SOA YIELDS**, RAVI KANT PATHAK, Kara E. H. Hartz, Neil M. Donahue, and Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA (*p.1557*)

**5F Nucleation Experiments-II (Platform)**

Kellogg Suite

*Markku Kulmala, Paul Wagner, Chairs*

- 5F1 **ARGON CONDENSATION IN A SUPERSONIC NOZZLE APPARATUS**, SOMNATH SINHA, Barbara E. Wyslouzil, Department of Chemical and Bio-molecular Engineering, The Ohio State University, Columbus, OH (*p.1620*)

- 5F2 11:20 **USING DISCRIMINANT ANALYSIS AS A NUCLEATION EVENT CLASSIFICATION METHOD**, SANTTU MIKKONEN, Amar Hamed, Ari Laaksonen, University of Kuopio, Kuopio, Finland; Kari E. J. Lehtinen, Finnish meteorological institute, Kuopio, Finland (p.1622)
- 5F3 11:40 **HOMOGENEOUS NUCLEATION KINETICS MEASUREMENTS IN SUPERSATURATED VAPORS OF N-BUTANOL, THE INFLUENCE OF TOTAL PRESSURE**, ANTTI-PEKKA HYVÄRINEN, Heikki Lihavainen, Finnish Meteorological Institute, Helsinki, Finland; David Brus, Vladimír Ždímal, Laboratory Aerosol Chemistry and Physics, Institute of Chemical Process Fundamentals, Academy of Sciences of the Czech Republic, Prague, Czech Republic (p.1624)
- 5F4 12:00 **ESTIMATION OF LINE TENSION AND CONTACT ANGLE FROM HETEROGENEOUS NUCLEATION EXPERIMENTAL DATA**, ANCA IOANA GAMAN, Hanna Vehkamäki, Ismo Napari and Markku Kulmala, University of Helsinki. Division of Atmospheric Sciences, Paul Winkler, Paul E. Wagner, Institute für Experimentalphysik, Universität Wien (p.1626)
- 5G Atmospheric Aerosols: Marine, Tropospheric & Global Effects (Poster)**  
Garden Court East  
*P. Griffin, Michael Alexander, Chairs*
- 5G2 11:00 **NORTH TAIWAN AEROSOL SUPERSITE**, CHUNG-TE LEE, Pang-Wei Chen, National Central University, Jhongli, TAIWAN; Charles C.-K. Chou, Wei-Nye Chen, Research Center for Climate Changes, Academia Sinica, Taipei, TAIWAN (p.1284)
- 5G3 11:00 **ESTIMATION OF SOURCE APPORTIONMENT AND POTENTIAL SOURCE LOCATION OF PM2.5 IN WESTERN US IMPROVE SITES**, INJO HWANG, Philip K. Hopke, Clarkson University, Potsdam, NY; Seung-Muk Yi, Seoul National University, Seoul, South Korea (p.1286)
- 5G4 11:00 **COMPARISON OF PARTICLE LIGHT SCATTERING AND PM2.5 MASS IN CENTRAL CALIFORNIA**, KIHONG PARK, Department of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea; Judith C. Chow, John G. Watson, Douglas H. Lowenthal, Norman F. Robinson, Division of Atmospheric Science, Desert Research Institute, Reno, NV; Karen A. Magliano, California Air Resources, Sacramento, CA (p.1288)
- 5G5 11:00 **RECEPTOR-MODEL BASED ANALYSIS OF HIGH PARTICULATE-MATTER DAYS IN SEVERAL URBAN AND RURAL SITES IN GEORGIA IN LIGHT OF THE US-EPA PROPOSED NEW DAILY AMBIENT AIR-QUALITY STANDARD**, AMIT MARMUR, Georgia Environmental Protection Division (p.1290)
- 5G6 11:00 **SIZE-RESOLVED INORGANIC CHEMICAL COMPOSITION OF PM10 IN AN URBAN AND INDUSTRIALISED COASTAL SITE**, Juliette Rimetz, Laure Lamaison, Laurent ALLEMAN, Esperanza Perdrix, Sophie Sobanska, Claude Brémard (p.1291)
- 5G7 11:00 **ASSESSMENT OF AIR QUALITY ON BASIS OF PARTICLE MATTER (PM) MEASUREMENT IN NORTH ATLANTIC**, FILIPE BARATA, Paulo Fialho, Grupo de Quimica-Fisica da Atmosfera, Dep. de Ciencias Agrarias, Universidade dos Acores, Portugal; Casimiro Pio, Dep. de Ambiente e Ordenamento, Universidade de Aveiro, Portugal. (p.1293)
- 5G8 11:00 **ESTIMATES OF SECONDARY ORGANIC CARBON IN PM2.5 FROM THE SOUTHEASTERN UNITED STATES**, RICK SAYLOR, Atmospheric Research & Analysis, Inc., Snellville, GA; Eric Edgerton, Atmospheric Research & Analysis, Inc., Cary, NC; Benjamin Hartsell, Atmospheric Research & Analysis, Inc., Plano, TX (p.1294)

- 5G9 11:00 **SOURCE TRACER IDENTIFICATION IN PM10 OF AN URBAN AND INDUSTRIALIZED COASTAL SITE, DUNKERQUE, NORTHERN FRANCE**, Laure Lamaison, LAURENT Y. ALLEMAN, Juliette Rimetz, Esperanza Perdrix, Jean-Claude Galloo, Ecole des Mines de Douai, Douai, France; Antoine Robache, Direction Régionale de l'Industrie, de la Recherche et de l'Environnement DRIRE Bourgogne, Dijon, France (p.1296)
- 5G10 11:00 **INVESTIGATING SPATIAL DISTRIBUTION OF ORIGINS FOR NITRATE AND SULPHATE IN MIDWESTERN AREAS VIA SQTBA AND RTWC**, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson University, PO Box 5708, Potsdam, NY 1369, USA (p.1298)
- 5G11 11:00 **UTILIZING BACKWARD TRAJECTORIES IN MULTILINEAR RECEPTOR MODEL**, EUGENE KIM, Philip K. Hopke, Clarkson University, Potsdam, NY; Delbert J. Eatough, Brigham Young University, Provo, UT; Donald V. Martello, National Energy Technology Laboratory, Pittsburgh, PA (p.1300)
- 5G12 11:00 **EVIDENCE OF SEED OILS IN FINE PARTICLES FROM THE NEW YORK METROPOLITAN AREA**, MONICA A. MAZUREK, Min Li, Claire Belisle, Department of Civil and Environmental Engineering, Rutgers University, Piscataway, NJ, USA; Steve McDow, Human Exposure and Atmospheric Sciences Division, National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, NC, USA (p.1302)
- 5G13 11:00 **STUDY OF POLYCYCLIC AROMATIC HYDROCARBON LEVELS TO IDENTIFY PARTICULATE MATTER SOURCES IN HANOI, VIETNAM**, LUDOVIC BERNAUDAT, Peter Nelson, Macquarie University, Sydney, Australia; Thao Pham, Dung Nghiem, Bach Khoa University of Technology, Hanoi, Vietnam (p.1303)
- 5G14 11:00 **CHARACTERIZATIONS OF WATER SOLUBLE IONS AND METALS IN THE ATMOSPHERIC COARSE AND FINE PARTICULATES COLLECTED NEAR A TRAFFIC SOURCE**, WEN-YINN LIN, Institute of Environmental Engineering and Management, National Taipei University of Technology, Taipei, Taiwan; Shui-Jen Chen, Kuo-Lin Huang, Chih-Chung Lin, Yi-Chu Huang, Department of Environmental Engineering and Science, National Pingtung University of Science and Technology, PingTung, Taiwan (p.1304)
- 5G15 11:00 **ATOMIC ABSORPTION MASS SPECTROSCOPY OF TOXIC TRACE METALS OF ATMOSPHERIC AEROSOLS IN RUSTENBURG, SOUTH AFRICA**, Nnenedi A. Kgabi, Department of Physics, North-West University, South Africa, Remofilwe T. Mosimaneeng, Department of Chemistry, North-West University, Mmabatho, South Africa, Jacobus J. Pienaar, School of Chemistry and Biochemistry, North-West University, Potchefstroom, South Africa, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Helsinki, Finland (p.1306)
- 5G16 11:00 **TRACE METAL CONCENTRATIONS IN FINE AEROSOL PARTICLES (PM2.5) OF VENICE**, LAURA MANODORI, Giuseppa Toscano, Ca' Foscari University, Venice, Italy; Andrea Gambaro, Warren R. L. Cairns, Gabriele Capodaglio, Paolo Cescon, Institute for the Dynamics of Environmental Processes - National Research Council, Venice, Italy (p.1308)
- 5G17 11:00 **PARTICLE SIZE DISTRIBUTION OF TRACE ELEMENTS AT A COASTAL SITE IN THE SOUTH OF ITALY**, Francesca Sprovieri, and Nicola Pirrone, CNR-Institute for Atmospheric Pollution, 87036 Rende, Italy (p.1310)

- 5G18 11:00 **MEASUREMENTS OF AEROSOL CHEMICAL COMPOSITION AND OPTICAL PROPERTIES IN THE POLLUTED SUMMER MARINE BOUNDARY LAYER**, Chelsea A. Corr, Laura D. Cottrell, Luke D. Ziemba, Pieter J. Beckman, Robert W. Talbot, ROBERT J. GRIFFIN, University of New Hampshire, Durham, NH (*p.1312*)
- 5G19 11:00 **PATOS: THE FIRST EXTENSIVE FIELD CAMPAIGN FOR THE AEROSOL CHARACTERISATION IN TUSCANY (ITALY)**, FRANCO LUCARELLI, Massimo Chiari, Silvia Nava, Leonardo Paperetti, Department of Physics and INFN, University of Florence, Italy; Silvia Becagli, Emiliano Castellano, Alessandra Cincinelli, Alessandra Mannini, Tania Martellini, Luciano Lepri, Roberto Udisti, Department of Chemistry, University of Florence, Italy. (*p.1314*)
- 5G20 11:00 **A PASSIVE SAMPLER TO MEASURE AMBIENT COARSE PARTICULATE MATTER, PM<sub>10-2.5</sub>**, DARRIN OTT, Thomas Peters, Dept. of Occupational and Environmental Health, University of Iowa, Iowa City, IA (*p.1316*)
- 5G21 11:00 **IDENTIFICATION OF THE IMPACT OF DUST STORM ON THE AMBIENT PM<sub>10</sub> CONCENTRATIONS IN SOUTHERN TAIWAN**, YEE-LIN WU, Jhih-Siang Jian, Jhong-You Kel, and Chen-Chieh Kuo, Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan (*p.1317*)
- 5G22 11:00 **COMPARISON OF PM<sub>2.5</sub> CHEMICAL SPECIATION RESULTS FOR TEXAS SITES**, Richard J. Tropp, Steven D. Kohl, Judith C. Chow, John G. Watson, Desert Research Institute, Reno, NV; JAMES B. FLANAGAN, R.K.M. Jayanty, RTI International, Research Triangle Park, NC (*p.1319*)
- 5G23 11:00 **FINE PARTICLES EMISSION PROFILE FOR A SECONDARY LEAD RECYCLING FACILITY IN TAMPA, FL BASED ON HIGHLY TIME-RESOLVED MULTI-ELEMENT TRACERS MEASUREMENTS**, Matthew Landis, US Environmental Protection Agency, Office of Research & Development, Research Triangle Park, NC; John Ondov, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD; Robert K Stevens, Florida Department of Environmental Protection, on assignment to US EPA, Research Triangle Park, NC (*p.1320*)
- 5G24 11:00 **SOURCES OF FINE PARTICULATE SPECIES IN AMBIENT AIR OVER LAKE CHAMPLAIN BASIN, VERMONT**, AMY E. GILDEMEISTER, Philip K. Hopke, Eugene Kim, Clarkson University, Potsdam, NY; Ning Gao, Kira Krumhansl, Katherine Lafferty, St. Lawrence University, Canton, NY; Richard L. Poirot, Department of Environmental Conservation, Vermont Agency of Natural Resources, Waterbury, VT (*p.1322*)
- 5G25 11:00 **PM<sub>2.5</sub> ORGANIC SPECIATION INTERCOMPARISON RESULTS**, Stephen R. McDow, Human Exposure and Atmospheric Sciences Division, EPA, Research Triangle Park, NC; Michele M. Schantz, Stephen A. Wise, National Institute of Standards and Technology, Gaithersburg, MD; Joellen Lewtas, Dept. of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA (*p.1324*)
- 5G26 11:00 **DIRECT THERMAL DESORPTION GC/MS METHOD FOR ANALYSIS OF MONOCARBOXYLIC ACIDS IN PM<sub>2.5</sub> AND PM<sub>10-2.5</sub> SAMPLES**, ARDHENDU S. SHANNIGRAHI, Mattias Hallquist, Dept. of Chemistry, Atmospheric Science, Göteborg University, Göteborg; Sarka Langer, SP Swedish National Testing & Research Institute, Boras; Magnus Hagström, Sara Janhäll, Dept. of Chemistry, Atmospheric Science, Göteborg University, Göteborg (*p.1325*)

- 5G27 11:00 **A NEW INSTRUMENT FOR SIZE-SEGREGATED, NEAR REAL-TIME VOLATILITY CHARACTERIZATION OF FINE AND COARSE PARTICLES**, KRISHANU BANERJEE, Sang-Rin Lee, Thomas Holsen, Suresh Dhaniyala, Clarkson University, NY (p.1327)
- 5G29 11:00 **SOURCE IDENTIFICATION AND HEALTH EFFECT OF PM2.5 IN SEOUL, KOREA**, JONGBAE HUH, HyunSun Kim, Seung-Hee Kim, Yong-Seok Seo, DoMyung Paek, Seung-Muk Yi, Seoul National University, Seoul, Korea; Philip K Hopke, Clarkson University, Potsdam, NY, USA (p.1330)
- 5G30 11:00 **CHARACTERIZATION OF MAJOR CHEMICAL CONSTITUENTS OF PM2.5 IN SEOUL, KOREA**, HYUNSUN KIM, Jong-Bae Huh, Seung-Hee Kim, Yong-Seok Seo, DoMyung Paek, and Seung-Muk Yi, Seoul National University, Seoul, Korea (p.1332)
- 5G31 11:00 **SAMPLING AND CHARACTERIZATION OF PM2.5 AND PM10 IN PUNE, INDIA**, Ajay Ojha, AQM Cell, Pune Municipal Corporation, Pune, India; Nitin Goyal, Rashmi S. Patil, VIRENDRA SETHI, CESE, Indian Institute of Technology – Bombay, India; Rakesh Kumar, NEERI, Mumbai Zonal Laboratory, India. (p.1334)
- 5G32 11:00 **SEASONAL VARIATION OF CHEMICAL COMPOSITION OF SIZE-SEGREGATED AEROSOLS ABOVE THE EASTERN MEDITERRANEAN**, E. Koulouri, P. Zarbas, N. Mihalopoulos, Department of Chemistry, Environmental Chemistry Processes laboratory, University of Crete, 71409, Heraklion, Greece , S. Saarikoski, T. Mäkelä2, R. Hillamo, Finnish Meteorological Institute, Air Quality Research, POB 503, FI-00101, Helsinki, Finland , Markku Kulmala, Department of Physical Sciences, University of Helsinki, POB 64, FI-00014, Helsinki, Finland (p.1336)
- 5G33 11:00 **MONITORING OF PARTICULATE MATTER PM10 AND PM2.5 IN URBAN AREAS IN MITROVICA**, Afrim Sylja, Agron Velju (p.1337)
- 5G34 11:00 **THE QUANTITATIVE RELATIONSHIP BETWEEN VISIBILITY AND MASS CONCENTRATION OF PM2.5 IN BEIJING**, Zhang Yuan-hang, Shao Min, State Joint Key Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences, Peking University; Liu Xu-lin, Beijing Meteorological Information and Network Center (p.1339)
- 5G35 11:00 **VERTICAL PROFILES OF AEROSOLS USING UNMANNED AERIAL VEHICLES**, CE Corrigan, V Ramanathan, MV Ramana, D Kim, and G Roberts, Scripps Institution of Oceanography
- 5H PM-10 & PM-2.5 Characterization-IV (Poster)**  
Great River Ballroom  
*P. Adams, Chair*
- 5H1 11:00 **BLACK CARBON (BC) AND DUST MASS CONCENTRATIONS MEASURES AT NORH ATLANTIC FREE TROPOSPHERE**, FILIPE BARATA, Paulo Fialho, Grupo de Química Física da Atmosfera, Departamento de Ciências Agrárias, Universidade dos Açores, Portugal (p.1131)
- 5H2 11:00 **MODELING PARTICLE DRY DEPOSITION TO A FOREST CANOPY USING THE STEADY STATE DIFFUSION EQUATION**, FREDI BIRSAN, Sara Pryor (p.1132)
- 5H3 11:00 **AEROSOL NUCLEATION IN ATMOSPHERE OF BACKGROUND REGIONS OF SIBERIA**, VALERY ZAGAYNOV, Alex Lushnikov, Yury Biryukov, Karpov Institute of Physical Chemistry, Moscow RUSSIA, Tamara Khodzher, Vladimir Obolkin, Vladimir Potyemkin, Lyudmila Golobokova, Irina Marinayte, Limnological Institute SB RAS, Irkutsk, RUSSIA, Artash Aloyan, Institute of Numerical Mathematics RAS, Moscow, RUSSIA, Richard Aromoto, University of New Mexico, NM, USA, Julia Lyubovtseva, Geophysical Center, Moscow, RUSSIA (p.1134)

- 5H4  
11:00 **ALL YEAR-ROUND AEROSOL SAMPLING AT DOME C, CENTRAL EAST ANTARCTICA: FIRST RESULTS OF THE 2004-2005 CAMPAIGN AND SCIENTIFIC ACTIVITY CARRYING ON IN THE PRESENT 2005-06 CAMPAIGN**, Roberto Udisti, Silvia Becagli, Emiliano Castellano, Omar Cerri, Alessandra Mannini, Andrea Morganti, Emanuele Salvietti, Mirko Severi, Rita Traversi, Chemistry Department, University of Florence, Italy; Franco Lucarelli, Silvia Nava, Physics Department, and INFN, University of Florence, Italy; Federica Marino, DISAT, University of Milano-Bicocca, Italy (p.1136)
- 5H5  
11:00 **CHEMICAL AND PHYSICAL CHARACTERIZATION OF SIZE-SEGREGATED SUMMER AEROSOL IN COASTAL AND INNER AREAS OF ANTARCTICA AND ATMOSPHERE/SNOW TRANSFER STUDIES.**, Rita Traversi, Silvia Becagli, Emiliano Castellano, Omar Cerri, Alessandra Mannini, Andrea Morganti, Emanuele Salvietti, Mirko Severi, Roberto Udisti, Chemistry Dept. University of Florence, Italy; Franco Lucarelli, Silvia Nava, Physics Dept., University of Florence, INFN, Italy; Federica Marino, DISAT, University of Milano-Bicocca, Italy. (p.1138)
- 5H6  
11:00 **VOLCANIC AEROSOLS FROM THE 2006 MT. AUGUSTINE ERUPTION**, CATHERINE CAHILL, Jonathan Dehn, Geophysical Institute, University of Alaska Fairbanks, Fairbanks, AK; Thomas Cahill, David Barnes, DELTA Group, Department of Chemical Engineering and Material Science, University of California at Davis, Davis, CA, USA (p.1140)
- 5H7  
11:00 **EVALUATION OF TROPOSPHERIC AEROSOL MICROPHYSICS SIMULATIONS USING ASSIMILATED METEOROLOGY AND FIELD CAMPAIGN OBSERVATIONS**, WIN TRIVITAYANURAK, Peter J. Adams, Carnegie Mellon University, Pittsburgh, PA (p.1141)
- 5H8  
11:00 **COMPONENT ANALYSIS OF ORGANIC AEROSOLS IN URBAN, RURAL, AND REMOTE ATMOSPHERES BASED ON AEROSOL MASS SPECTROMETRY**, QI ZHANG, Atmospheric Science Research Center, State University of New York, Albany, NY, 12203, USA; Jose-Luis Jimenez, Katja Dzepina, Edward Dunlea, Kenneth Docherty, Dept. Chemistry and CIRES, University of Colorado-Boulder, CO, USA; James Allan, M. Rami Alfarra, Paul Williams, Hugh Coe, Keith Bower, School of Earth, Atmospheric and Environmental Science, University of Manchester, Manchester, UK; Manjula Canagaratna, Timothy Onasch, John Jayne, Douglas Worsnop, Aerodyne Research Inc, Billerica, MA, USA; Akinori Takami, Takao Miyoshi, Shiro Hatakeyama, National Institute for Environmental Studies, Tsukuba, Ibaraki, Japan; Akio Shimono, Sanyu Plant Service Co., LTD., Kanagawa, 229-1132 Japan; Silke Weimer, PSI, Switzerland; Ken Demerjian, Atmospheric Science Research Center, State University of New York, Albany, NY, USA; Frank Drewnick, Max Planck-Mainz, Germany; Nobu Takegawa, Yukata Kondo, University of Tokyo, Japan; Ann Middlebrook, NOAA Earth System Research Laboratory, Boulder, USA; and Roya Bahreini, NOAA ESRL/Chemical Sciences Division & CIRES USA (p.1143)
- 5H9  
11:00 **SIMULATING SECONDARY ORGANIC AEROSOL (SOA) FORMATION ASSOCIATED WITH BIOGENIC VOC EMISSIONS IN A GLOBAL ATMOSPHERIC GENERAL CIRCULATION MODEL**, ARI ASMI, Risto Makkonen, Markku Kulmala, University of Helsinki, Helsinki, Finland; Hannele Korhonen, Simo Järvenoja, Petri Räisänen, Veli-Matti Kerminen, Heikki Järvinen, Finnish Meteorological Institute, Helsinki, Finland; Harri Kokkola, Kari Lehtinen, University of Kuopio, Kuopio, Finland (p.1145)



- 5H11 11:00 **DEVELOPMENT OF THE COASTAL AEROSOL MODEL**, GENNADY KALOSHIN, Sergey Shishkin, Institute of Atmospheric Optics, Tomsk, Russia ; Jacques Piazzola, Institute of Engineering Sciences, Toulon, France; Sergey Serov, Tomsk University of Control Systems and Radio Electronics, Tomsk, Russia (p.1147)
- 5H12 11:00 **SEASONAL PATTERN OF ATMOSPHERIC LOAD AND CHEMICAL COMPOSITION OF SIZE SEGREGATED (PM10, PM2.5 AND PM1.0) AEROSOL SAMPLES COLLECTED ALL YEAR ROUND (JUNE 04-JUNE05) AT LAMPEDUSA ISLAND**, Silvia Becagli, Emiliano Castellano, Alessandra Mannini, Mirko Severi, Damiano M. Sferlazzo, Rita Traversi, Roberto Udisti, Dept of Chemistry, University of Florence, Italy; Carlo Bommarito, Francesco Monteleone, ENEA, Climate laboratory, Palermo, Italy; Franco Lucarelli, Silvia Nava, Department of Physics, University of Florence and INFN, Florence, Italy; Federica Marino, DISAT, University of Milano-Bicocca, Italy (p.1148)
- 5H13 11:00 **SPATIAL VARIABILITY OF LOAD AND CHEMICAL COMPOSITION OF SIZE-SEGREGATED AEROSOL COLLECTED IN THE WESTERN MEDITERRANEAN DURING 2004 AND 2005 MEDGOOS CRUISES**, Alessandra Mannini, Silvia Becagli, Emiliano Castellano, Mirko Severi, Rita Traversi, Roberto Udisti, Department of Chemistry, University of Florence; Franco Lucarelli, Silvia Nava, Department of Physics, University of Florence and INFN, Italy; Federica Marino, DISAT, University of Milano-Bicocca, Italy; Massimiliano Pasqui, LaMMA, CNR IBIMET, Sesto F.no (Florence), Italy (p.1150)
- 5H14 11:00 **SPRAY PRODUCTION OF SEA-SALT PARTICLES OVER THE OPEN OCEAN**, MARILE COLON-ROBLES, Robert Rauber, University of Illinois at Urbana-Champaign, Urbana, IL; Jorgen Jensen, David Rogers, Stuart Beaton, National Center for Atmospheric Research, Boulder, CO (p.1152)
- 5H15 11:00 **AEROSOL DATA AVAILABLE FROM THE ATMOSPHERIC SCIENCE DATA CENTER**, Linda A Hunt, Nancy A. Ritchey, Atmospheric Science Data Center, NASA Langley Research Center, Hampton, VA (p.1153)
- 5H16 11:00 **AIRBORNE MEASUREMENTS OF PARTICLES FROM BIOMASS BURNING IN NORTHERN TERRITORY, AUSTRALIA**, ZORAN RISTOVSKI, Arinto Wardoyo, Lidia Morawska, Milan Jamriska, Graham Johnson, International Laboratory for Air Quality and Health, Queensland University of Technology, Brisbane, Australia; Stephen Carr, Defence Science and Technology Organisation, Edinburgh, South Australia, Australia (p.1155)
- 5H17 11:00 **FORMATION OF AEROSOL PARTICLES IN THE BOREAL FOREST OF SIBERIA IN RUSSIA**, EIJA VARTIAINEN, Finnish Institute of Occupational Health, Helsinki, University of Helsinki, Helsinki, Markku Kulmala, Mikael Ehn, University of Helsinki, Sanna Kuokka, Risto Hillamo, Veli-Matti Kerminen, Markus Sillanpää, Finnish Meteorological Institute, Helsinki, Andrei I. Skorokhod, Igor B. Belikov, Andrei A. Ralko, Nikolai F. Elansky, Obukhov Institute of Atmospheric Physics, Moscow (p.1157)
- 5H18 11:00 **SUBMICRON AEROSOL SIZE DISTRIBUTIONS AND CLOUD CONDENSATION NUCLEI CONCENTRATIONS MEASURED IN JEJUDO, KOREA DURING THE ABC-EAREX 2005**, SEONG SOO YUM, Greg Roberts, Jong Hwan Kim, Keunyoung Song, Dohyeong Kim (p.1158)

- 5H19 11:00 **HYGROSCOPIC PROPERTIES OF THE FINE AND COARSE MEDITERRANEAN AEROSOL MEASURED ON CRETE IN SUMMER 2005**, MARIA STOCK, Andreas Massling, Birgit Wehner, Wolfram Birmili, Alfred Wiedensohler, Leibniz-Institute for Tropospheric Research, Department of Physics, Leipzig, Germany; Stephan Leinert, Environmental Protection Agency, Dublin, Ireland; Nikos Kalivitis, Nikos Mihalopoulos, Department of Chemistry, Environmental Chemistry Processes Laboratory, University of Crete, Heraklion, Greece (*p.1159*)
- 5H20 11:00 **SOME DETAILS OF ATMOSPHERIC NANOAEROSOL DYNAMICS IN THE SIBERIAN BOREAL AREA**, Anatoli Baklanov, Michael Anisimov, Institute of Chemical Kinetics and Combustion SB RAS, 630090, Novosibirsk, Russia, Ol'ga Khutorova, Department of Physics, Kazan State University, 420008 Kazan, Russia, Michael Arshinov, Boris Belan, Institute of Atmospheric Optics SB RAS, 634055, Tomsk, Russia, Markku Kulmala, Department of Physical Sciences, University of Helsinki, FIN-00014, Helsinki, Finland (*p.1161*)
- 5H21 11:00 **SIZE-SEGREGATED MULTICOMPONENT AEROSOL MODEL FOR CLIMATE AND AIR QUALITY STUDIES**, HANNELE KORHONEN, Veli-Matti Kerminen, Finnish Meteorological Institute, Helsinki, Finland; Harri Kokkola, Finnish Meteorological Institute, Kuopio, Finland; Kari E. J. Lehtinen, Finnish Meteorological Institute and University of Kuopio, Kuopio, Finland (*p.1163*)
- 5H22 11:00 **THE IMPACT OF SHORT-TERM CLIMATE VARIATIONS ON PREDICTED SURFACE OZONE CONCENTRATIONS IN THE EASTERN US 2020 AND BEYOND**, Shao-Hang Chu and W. M. Cox, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711 (*p.1164*)
- 5H23 11:00 **EFFECT OF CLIMATE ON REGIONAL AIR QUALITY IN CALIFORNIA**, MICHAEL J. KLEEMAN, University of California at Davis, Davis CA (*p.1165*)
- 5H24 11:00 **MEASUREMENT OF CARBONACEOUS AEROSOL PARTICLE ABSORPTIVITY USING LASER HEATING**, CARY PRESSER and Ashot Nazarian, National Institute of Standards and Technology, Gaithersburg, MD USA, Science Applications International Corporation, Vienna, VA USA (*p.1166*)
- 5H25 11:00 **ACTIVE AND PASSIVE REMOTE SENSING OF ATMOSPHERIC AEROSOL OVER GRANADA, SPAIN.**, LUCAS ALADOS ARBOLEDAS, Juan Luis. Guerrero-Rascado, Hassan Lyamani, Jaime Elías Gil, Borja Ruiz, Alberto Cazorla and Francisco José Olmo, Grupo de Física de la Atmósfera. Centro Andaluz de Medio Ambiente, Junta de Andalucía Universidad de Granada, Granada, E-18006, Granada, Spain. (*p.1167*)
- 5H26 11:00 **IN-SITU MEASUREMENT OF AEROSOL ABSORPTION COEFFICIENT**, A.W. Strawa, NASA-Ames Research Center, 95129, Moffett Field, CA, USA, T.W. Kirchstetter, Lawrence Berkeley National Laboratory, 95129, Berkeley, CA, USA, A.G. Hallar, National Research Council, 95129, Moffett Field, CA, USA, H.H. Jonsson, Naval Postgraduate School, 95129, Monterey, CA, USA (*p.1169*)
- 5H27 11:00 **DABEX-DODO: AN INTRODUCTION TO DUST AND BIOMASS BURNING AEROSOL OVER WEST AFRICA**, GERARD CAPES, James Allan, Keith Bower, Hugh Coe, Jonathon Crosier, Paul Williams, School Of Earth, Atmospheric and Environmental Sciences, University of Manchester, Manchester, UK; E. J. Highwood, C. McConnell, Department of Meteorology, University of Reading, Reading, UK; J. Haywood, Simon Osborne, M. Glew, Met Office, Exeter, Devon, UK (*p.1171*)
- 5H28 11:00 **PARAMETERIZATION OF CLOUD DROPLET FORMATION AND AUTOCONVERSION IN LARGE-SCALE MODELS**, WEI-CHUN HSIEH, Athanasios Nene, School of Earth and Atmospheric Science, Georgia Institute of Technology, Atlanta, GA (*p.1172*)

5H31 11:00 **IMPACTS OF AEROSOLS ON SURFACE LAND-ATMOSPHERE INTERACTIONS: SURFACE ENERGY BALANCE, CARBON CYCLE, CONVECTION AND PRECIPITATION**, HSIN-I CHANG, Department of Earth and Atmospheric Science, Purdue University; Dev Niyogi, Department of Agronomy, Purdue University; Lianhong Gu, Division of Environmental Sciences, Oak Ridge National Laboratory; Toshi Matsui, Department of Atmospheric Sciences, Colorado State University; Surabi Menon, Lawrence Berkeley National Laboratory; Roger A. Pielke Sr. University of Colorado, Boulder (p.1175)

5H32 11:00 **ORGANICS IN PARTICLES IN THE LOWER STRATOSPHERE AND TROPOPAUSE REGION**, DANIEL M. MURPHY, David S. Thomson (p.1176)

5H33 11:00 **VERTICAL AEROSOL TRANSPORT IN THE MIDDLE ATMOSPHERE: RADIOMETRIC PHOTOPHORESIS, ACCOMMODATION FORCES (GRAVITO-PHOTOPHORESIS) AND VERTICAL STRATOSPHERIC WIND**, SERGEY BERESNEV, Victor Gryazin, Louisa Kochneva, Ural State University, Ekaterinburg, Russia (p.1177)

**Tuesday 12:40 PM - 2:00 PM  
Lunch (on your own)**

**Tuesday 2:00 PM - 3:40 PM  
Session 6**

**6A Cloud & Fog Aerosol Interactions-I (Platform)**

Minnesota Ballroom

*Niku Kivekas, Harry ten Brink, Chairs*

6A1 2:00 **A CCN-CLOSURE-STUDY FOR HULIS AEROSOL**, Silvia Henning, Tabea Hennig, Alexei Kiselev, Andreas Massling, Frank Stratmann, HEIKE WEX, Alfred Wiedensohler, Leibniz Institute for Tropospheric Research, Leipzig, Germany; Imre Salma, Rita Ocskay, Eötvös University, Institute of Chemistry, Budapest, Hungary (p.1341)

6A2 2:20 **ON THE RATIO OF NITRATE TO SULPHATE IN CCN IN THE NETHERLANDS**, HARRY TEN BRINK, Rene Otjes, Piet Jongejan, Energy research Centre of the Netherlands (ECN), Petten, The Netherlands (p.1343)

6A3 2:40 **AEROSOL NUMBER TO VOLUME CONCENTRATION RATIO IN A CLEAN CONTINENTAL ATMOSPHERE - SEASONAL VARIATION DURING YEAR 2001 AND FACTORS BEHIND IT**, NIKU KIVEKÄS, Veli-Matti Kerminen, Heikki Lihavainen, Mika Komppula, Yrjö Viisanen, Finnish Meteorological Institute, Helsinki, Finland, Markku Kulmala, University of Helsinki, Helsinki, Finland (p.1345)

6A4 3:00 **HYGROSCOPIC PROPERTIES OF ATMOSPHERIC AND MODEL HUMIC LIKE SUBSTANCES (HULIS)**, Elad Dinar, Ilya Taraniuk, YINON RUDICH, Weizmann Institute, Rehovot, Israel, Ellen R. Graber, Volcani Center, Bet Dagan, Israel, Tatu Anttila, Thomas F. Mentel, Research Center Jülich, Jülich Germany (p.1347)

6A5 3:20 **UNCERTAINTY IN AEROSOL INDIRECT EFFECT FROM CCN PREDICTION ERRORS: A GLOBAL MODELING ASSESSMENT**, RAFAELLA – ELENI P. SOTIROPOULOU, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA; Athanasios Nenes, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, Georgia and School of Chemical and Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA (p.1348)

**6B Urban and Regional Aerosol-I  
(Platform)**

Capitol Ballroom

*Jennifer Richmond-Bryant, John Jayne, Chairs*

6B1 **CARBONACEOUS AEROSOL  
PROCESSING IN MEXICO CITY  
METROPOLITAN AREA**, TIMOHTY B.  
ONASCH, Scott Herndon, Manjula  
Canagaratna, John Jayne, Douglas R.  
Worsnop, Charles E. Kolb, Aerodyne  
Research, Inc, Billerica, MA, USA; Berk  
Knighton, Montana State University-  
Bozeman, Bozeman, MT, USA; Dara  
Salcedo, Universidad Autónoma del Estado  
de Morelos, Cuernavaca, Morelos, México;  
Katja Dzepina, Jose Jimenez, University of  
Colorado at Boulder, Boulder, CO, USA; Qi  
Zhang, University of Albany, Albany, NY, USA  
(p.1745)

6B2 **THERMAL DESORPTION-PYROLYSIS  
COUPLED WITH PHOTO IONIZATION  
TIME-OF-FLIGHT MASS SPECTROMETRY  
FOR THE ANALYSIS OF ORGANIC  
CONTENT IN URBAN PARTICULATE  
MATTER**, T. STREIBEL, J. Weh1, S.  
Mitschke, and R.Zimmermann, Analytical  
Chemistry, Institute of Physics, University of  
Augsburg, Augsburg, Germany, and Institute  
of Ecological Chemistry, GSF - National  
Research Centre for Environment and Health,  
Neuherberg, Germany (p.1746)

6B3 **SIMULTANEOUS MEASUREMENTS OF  
VERTICAL PROFILES FOR OZONE AND  
PARTICLE SIZE DISTRIBUTIONS WITHIN  
MIXING LAYER**, Yee-Lin Wu, Department of  
Environmental Engineering, National Cheng  
Kung University, Tainan, Taiwan; Ching-Ho  
Lin, and Chin-Hsing Lai, Departement of  
Environmental Engineering and Science,  
Fooyi University, Kaohsiung, Taiwan (p.1747)

6B4 **DAY-OF-THE-WEEK AND HOUR-OF-THE-  
DAY TRENDS IN THE MASS ABSORPTION  
EFFICIENCY OF ELEMENTAL CARBON IN  
THE URBAN ATMOSPHERE**, DAVID C.  
SNYDER, James J. Schauer, Department of  
Civil and Environmental Engineering,  
University of Wisconsin-Madison, Madison,  
WI; Matt Spencer, Kimberly A. Prather,  
Department of Chemistry and Biochemistry,  
University of California-San Diego, La Jolla,  
CA (p.1749)

6B5 **VOLUME SIZE DISTRIBUTIONS OF  
SOLUBLE PARTICLE MATTER OF THE  
AEROSOL IN BEIJING**, Andreas Massling,  
Maria Stock, Birgit Wehner, Thomas Tuch,  
Erika Brüggemann, Thomas Gnauk, Hartmut  
Herrmann, Alfred Wiedensohler, Leibniz-  
Institute for Tropospheric Research,  
Department of Physics, Leipzig, Germany;  
Zhijun Wu, Min Hu, Department State Key  
Joint Laboratory of Environmental Simulation  
and Pollution Control, College of  
Environmental Sciences, Peking University,  
Beijing, P. R. China (p.1751)

**6C Symposium: Aerosol Research &  
Education Software-I (Platform)**

Governors 1 &amp; 5

*C. Y. Wu, Kikuo Okuyama, Chairs*

6C1 **THE IMPORTANCE OF ASSESSING  
EDUCATIONAL MATERIALS  
DEVELOPMENT PROJECTS**, ANNE E.  
DONNELLY, Emilia Hodge, Chang-Yu Wu,  
University of Florida, Gainesville, FL;  
Pratim Biswas, Washington University in St.  
Louis, St. Louis, MO (p.551)

6C2 **THE AEROSOL INORGANICS MODEL  
(AIM) ON THE WORLD WIDE WEB: HTTP://  
WWW.UEA.AC.UK/~E770/AIM.HTML**,  
SIMON CLEGG, University of East Anglia,  
Norwich, U.K.; Anthony Wexler, University of  
California, Davis, CA (p.553)

6C3 **DESCRIPTION OF AN AEROSOL  
CALCULATOR**, PAUL A. BARON, National  
Institute for Occupational Safety and Health,  
Centers for Disease Control and Prevention,  
Cincinnati, OH (p.555)

6C4  
3:00 **VISUALIZATION TOOLS FOR RESEARCH AND EDUCATION IN AEROSOL DYNAMICS**, Kikuo Okuyama, Manabu Shimada, WULED LENGGORO, Takashi Ogi, Hiroshima University, Higashihiroshima, Japan (p.556)

6C5  
3:20 **BUILDING A NANOPARTICLE INFORMATION LIBRARY (NIL)**, ARTHUR L. MILLER, National Institute for Occupational Safety and Health, Spokane, WA; Mark D. Hoover, National Institute for Occupational Safety and Health, Morgantown WV (p.558)

#### 6D Indoor Aerosols-IV (Platform)

Govenors 2 - 4

*Tiina Reponen, Lupita Montoya, Chairs*

6D1  
2:00 **A CHAMBER STUDY TO ESTIMATE PARTICLE RESUSPENSION RATE FROM HUMAN ACTIVITY**, Jing Qian and Andrea R. Ferro, Clarkson Univeristy, Potsdam, NY (p.820)

6D2  
2:20 **LARGE EDDY SIMULATION OF HUMAN INDUCED CONTAMINANT TRANSPORT**, JUNG-IL CHOI, Jack R. Edwards, North Carolina State University, NC (p.821)

6D3  
2:40 **THE EFFECT OF LONG-RANGE TRANSPORTED PM<sub>2.5</sub> TRACE ELEMENTS ON PERSONAL EXPOSURE AND INDOOR LEVELS**, PETER MOLNÁR, Sandra Johannesson, Lars Barregård, Gerd Sällsten, Department of Occupational and Environmental Medicine, Sahlgrenska Academy, Göteborg University, Göteborg, Sweden; Johan Boman, Department of Chemistry, Atmospheric Science, Göteborg University, Göteborg, Sweden (p.822)

6D4  
3:00 **INDOOR AND OUTDOOR PARTICULATE MATTER AT AN ELEMENTARY SCHOOL: IMPLICATIONS FOR RECESS AND ASTHMA**, JOHN VERANTH, Karen Buchi, Nicole Frei, Encoch Eskelson, Rod Larsen, Daniel Nye, John Parker, Kevin Perry, Eric Wood, University of Utah, Salt Lake City, UT. Gregg Smith, Salt Lake School District, Salt Lake City, UT. Libby Chuy, Steve Packham, State of Utah, Salt Lake City, UT. (p.778)

6D5  
3:20 **INDOOR AIR QUALITY IN PAKISTAN**, Zaheer Ahmad Nasir, IAN COLBECK, University of Essex, UK; Shahida Hasnain, University of the Punjab, Pakistan (p.825)

#### 6E Chemistry of Inorganic Atmospheric Particles-II (Platform)

Wabasha Suite

*Cort Anastasio, Florent Louis, Chairs*

6E1  
2:00 **EFFECTS OF SOLUBLE ORGANIC COATINGS ON HYGROSCOPICITY OF AMMONIUM SULFATE PARTICLES: RESULTS OF TWO CYCLES OF DELIQUESCENCE AND CRYSTALLIZATION MEASUREMENTS**, Man N. Chan, Alex, K. Y. Lee, and CHAK K. CHAN, Department of Chemical Engineering, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong. (p.1005)

6E2  
2:20 **A KINETIC STUDY OF THE HETEROGENEOUS REACTION OF DELIQUESCED SODIUM CHLORIDE PARTICLES WITH HYDROXYL RADICALS**, ALEXANDER LASKIN, Pacific Northwest National Laboratory, Richland WA; Hai Wang, University of Southern California, Los Angeles, CA; William H. Robertson, University of California, Irvine, CA; James P. Cowin, Pacific Northwest National Laboratory, Richland WA; Michael J. Ezell and Barbara J. Finlayson-Pitts, University of California, Irvine, CA (p.1007)

6E3  
2:40 **LABORATORY MEASUREMENTS OF THE HYGROSCOPIC GROWTH, IR EXTINCTION, AND CCN ACTIVITY OF CHEMICALLY PROCESSED MINERAL DUST AEROSOL**, ELIZABETH GIBSON, Paula Hudson, Vicki Grassian, University of Iowa, Iowa City, IA. (p.1009)

6E4  
3:00 **ISORROPIA II: A COMPUTATIONALLY EFFICIENT THERMODYNAMIC EQUILIBRIUM MODEL FOR MULTIPHASE MULTICOMPONENT AEROSOLS**, CHRISTOS FOUNTOUKIS (1), Athanasios Nenes (1,2), (1) School of Chemical and Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA, USA., (2) School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA, USA. (p.1011)

6E5  
3:20 **REACTION BETWEEN SINGLE AQUEOUS DROPLET OF NA<sub>2</sub>CO<sub>3</sub> AND SO<sub>2</sub> IN AN ELECTRODYNAMIC BALANCE**, Azuchi Harano, Akira Akahoshi, Takayuki Takarada, Gunma University, Kiryu, Japan; E. James Davis, University of Washington, Seattle, WA (p.1013)

#### 6F Aerosol Coagulation (Platform)

Kellogg Suite

*Peter Vainhtein, Sean Garrick, Chairs*

6F1  
2:00 **NANOPARTICLE FORMATION AND GROWTH IN A TURBULENT REACTING JET – THE DYNAMICS OF CONDENSATION AND COAGULATION**, Guanghai Wang, University of Minnesota, Minneapolis, MN, SEAN C GARRICK, University of Minnesota, Minneapolis, MN (p.672)

6F2  
2:20 **CLUSTER MORPHOLOGY AND AGGREGATION KINETICS IN DENSE AEROSOLS**, RAJAN DHAUBHADEL, Amitabha Chakrabarti and Christopher M. Sorensen, Department of Physics, Kansas State University, Kansas, 66506, Manhattan, USA (p.674)

6F3  
2:40 **QUASI-GELATION OF SUBMICRON FRACTAL AGGLOMERATES BY SOUND WAVES**, Peter Vainshtein, Michael Shapiro, Faculty of Mechanical Engineering, Technion-Israel Institute of Technology, Haifa, Israel (p.676)

6F4  
3:00 **SCENARIOS OF GELATION IN COAGULATING AEROSOLS**, ALEX LUSHNIKOV, University of Helsinki (p.678)

6F5  
3:20 **ABOUT A NEW COAGULATION MEASUREMENT DEVICE (CMD)**, BERNHARD HEIDEN, University of Technology, Graz, A (p.679)

#### 6G Urban Aerosols-II (Poster)

Great River Ballroom

*Roger Tanner, Chair*

6G1  
2:00 **ANALYSIS OF FINE PARTICULATE NITRATE ON DIURNAL, WEEKLY AND SEASONAL TIME SCALES**, DEV MILLSTEIN, Rob Harley, University of California, Berkeley, CA; Susanne Hering, Aerosol Dynamics Inc., Berkeley, CA (p.1753)

6G3  
2:00 **COMPARISON OF APPORTIONMENT OF PM<sub>2.5</sub> AT TWO SITES IN DETROIT, MICHIGAN**, STEVE BROWN, Hilary Hafner, Theresa O'Brien, Paul Roberts, Sonoma Technology, Inc., Petaluma, CA; Birnur Buzco-Guven, Rice University, Houston, TX (p.1755)

6G4  
2:00 **SOURCE APPORTIONMENT OF NON-POLAR ORGANICS TO THE BALTIMORE, MD ATMOSPHERE USING MULTIVARIATE TECHNIQUES; POSITIVE MATRIX FACTORIZATION, PRINCIPAL COMPONENT ANALYSIS/MULTIPLE LINEAR REGRESSION, UNMIX**, BERNARD CRIMMINS, Joel Baker, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, Solomons, MD (p.1757)

- 6G5  
2:00 **AMBIENT AEROSOL MEASUREMENTS IN MEXICO CITY DURING THE MCMA-2003 AND MILAGRO FIELD CAMPAIGNS USING AEROSOL MASS SPECTROMETRY**, DARA SALCEDO, Centro de Investigaciones Químicas, Universidad Autónoma del Estado de Morelos; Cuernavaca, México; A. C. Aiken, K. Dzepina, J. A. Huffman, I. Ulbrich, K. Docherty, M. Cubison, P. F. DeCarlo, J. L. Jiménez, Department of Chemistry & Biochemistry and CIRES, University of Colorado, Boulder, CO; T. B. Onasch, D. Worsnop, M. R. Canagaratna, J. T. Jayne, P. Mortimer, C. E. Kolb, Aerodyne Research, Inc., Billerica, MA; Q. Zhang CIRES, University of Colorado, Boulder, CO, now at Atmospheric Science Research Center, SUNY, Albany, NY; R. Volkamer, M. J. Molina, Department of Earth, Atmospheric and Planetary Sciences and Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, now at Department of Chemistry and Biochemistry, University of California, San Diego, CA; L. T. Molina Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA and Molina Center on Energy and Environment, La Jolla, CA; W. Brune, R. Leshner, T. Shirley, Pennsylvania State University, University Park, PA (p.1758)
- 6G7  
2:00 **RESPONSE OF REGIONAL AIR QUALITY TO GLOBAL CLIMATE CHANGE USING A COUPLED MODEL**, JOHN DAWSON, Pavan Racherla, Barry Lynn, Peter Adams, Carnegie Mellon University, Pittsburgh, PA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA, and University of Patras, Patra, Greece (p.1760)
- 6G8  
2:00 **EFFECTS OF CLIMATE ON AIR POLLUTION: A SENSITIVITY STUDY**, JOHN DAWSON, Peter Adams, Carnegie Mellon University, Pittsburgh, PA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA, and University of Patras, Patra, Greece (p.1761)
- 6G9  
2:00 **MODELING AIR QUALITY DURING THE CALIFORNIA REGIONAL PARTICULATE AIR QUALITY STUDY (CRPAQS) USING THE CIT/UCD SOURCE-ORIENTED AIR QUALITY MODEL – PART II: BASE CASE MODEL RESULTS AND REGIONAL SOURCE APPORTIONMENT OF PM2.5**, QI YING, Ajith Kaduwela, California Air Resources Board, Sacramento, CA; Michael J. Kleeman, University of California at Davis, Davis CA. (p.1763)
- 6G10  
2:00 **INTERACTION OF PARTICLE MODES IN BACKGROUND URBAN AEROSOLS**, G. GRAMOTNEV, D. K. Gramotnev, Applied Optics Program, School of Physical and Chemical Sciences, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia, P. Madl, Division of Physics and Biophysics, University of Salzburg,-A -5020 Salzburg, Austria (p.1764)
- 6G11  
2:00 **DETECTION OF PARTICLE-PHASE POLYCYCLIC AROMATIC HYDROCARBONS IN MEXICO CITY USING AN AEROSOL MASS SPECTROMETER**, KATJA DZEPINA, Jose-Luis Jimenez, Dept. of Chemistry and CIRES, University of Colorado, Boulder, CO; Linsey C. Marr, Dept. of Civil and Environmental Engineering, Virginia Tech, Blacksburg, VA; Janet Arey, University of California at Riverside, Air Pollution Research Center, Riverside, CA; Douglas R. Worsnop, Center for Aerosol and Cloud Chemistry, Aerodyne Research, Inc., Billerica, MA; Dara Salcedo, Centro de Investigaciones Químicas, Universidad Autónoma del Estado de Morelos, Cuernavaca Morelos, Mexico; Qi Zhang, Atmospheric Science Research Center, University at Albany, SUNY, Albany, NY; Luisa T. Molina, Molina Center for Energy and the Environment, La Jolla, CA; Mario J. Molina, Dept. of Chemistry and Biochemistry, University of California at San Diego, La Jolla, CA (p.1766)

- 6G12 2:00 **SIZE, TIME AND COMPOSITION-RESOLVED AEROSOL MEASUREMENTS IN MEXICO CITY DURING THE MCMA-2003 FIELD CAMPAIGN: THE ORGANIC COMPONENT**, KATJA DZEPINA, Jose-Luis Jimenez, Dept. of Chemistry and CIRES, University of Colorado, Boulder, CO; Qi Zhang, Atmospheric Science Research Center, University at Albany, SUNY, Albany, NY; Dara Salcedo, Centro de Investigaciones Quimicas, Universidad Autónoma del Estado de Morelos, Cuernavaca Morelos, Mexico; Matthew J. Dunn, James Smith, National Center for Atmospheric Research, Atmospheric Chemistry Division, Boulder, CO; Jeffrey S. Gaffney, Nancy A. Marley, Argonne National Laboratory, Argonne, IL; Timothy B. Onasch, Manjula R. Canagaratna, Douglas R. Worsnop, Center for Aerosol and Cloud Chemistry, Aerodyne Research, Inc., Billerica, MA; Rainer Volkamer, Benjamin de Foy, Mario J. Molina, Dept. of Chemistry and Biochemistry, University of California at San Diego, La Jolla, CA; Luisa T. Molina, Molina Center for Energy and the Environment, La Jolla, CA (p.1768)
- 6G13 2:00 **A MULTIVARIATE APPROACH FOR SOURCE AND METEOROLOGICAL INFLUENCES ON SUMMERTIME AMBIENT ULTRAFINE PARTICLES**, LI-HAO YOUNG and Gerald J. Keeler, University of Michigan, Ann Arbor, MI (p.1770)
- 6G14 2:00 **SPATIAL AND TEMPORAL VARIABILITY OF AEROSOL CONCENTRATIONS IN URBAN ATMOSPHERES: RESULTS FROM THE MULTIPLE SITE EXPERIMENT PURAT -1**, Wolfram Birmili, Korinna König, André Sonntag, BIRGIT WEHNER, Institute for Tropospheric Research, Leipzig, Germany, Ulrich Franck, Thomas Tuch, Centre for Environmental Research, Leipzig, Germany (p.1771)
- 6G15 2:00 **DEVELOPMENT AND EVALUATION OF COMMUNITY MULTISCALE AIR QUALITY MODEL WITH UCD AEROSOL MODULE (CMAQ-UCD)**, K. MAX ZHANG, Anthony S. Wexler, University of California, Davis, CA; Christopher G. Nolte, Prakash V. Bhave, Robin L. Dennis, National Oceanic and Atmospheric Administration, RTP, NC; Jinyou Liang, Ajith Kaduwela, California Air Resources Board, Sacramento, CA (p.1773)
- 6G16 2:00 **IMPACT OF ROAD TRANSPORT ON AIR QUALITY IN KENYA: ROADSIDE SURVEY IN THE CITIES OF MOMBASA AND NAIROBI**, David M. Maina, MICHAEL J. GATARI, University of Nairobi, Nairobi, Kenya, P. Bundi, Meteorology Department, Nairobi, Kenya, H. Muturi, National Council for Science and Technology, Nairobi, Kenya (p.1775)
- 6G17 2:00 **COMPARISON OF SIZE-RESOLVED AEROSOL CONCENTRATIONS FROM MULTIPLE U.S CITIES**, Olanrewaju, KB; Stanier, CO, University of Iowa, Iowa, IA, McMurry, PH, University of Minnesota, Minneapolis, MN (p.1777)
- 6G19 2:00 **SOURCE APPORTIONMENT OF AEROSOL MASS SPECTROMETER DATA IN PITTSBURGH AND MEXICO CITY POSITIVE MATRIX FACTORIZATION AND OTHER TIME-SERIES ANALYSIS OTHER METHODS**, INGRID ULBRICH, Gregory Brinkman, Michael Hannigan, Jana Milford, Jose Jimenez, University of Colorado, Boulder, CO; Qi Zhang, State University of New York, Albany, NY (p.1779)
- 6G20 2:00 **SOURCE REGIONS FOR FINE PARTICULATE MATTER IN NEW JERSEY**, AMY E. GILDEMEISTER, Philip K. Hopke, Eugene Kim, Clarkson University, Potsdam, NY (p.1781)
- 6G21 2:00 **THE MORPHOLOGY OF ULTRAFINE ATMOSPHERIC AEROSOL COLLECTED AT LOS ANGELES INTERNATIONAL AIRPORT**, TERESA L. BARONE, Rong-Chung Yu, Yifang Zhu, Constantinos Sioutas and John R. Froines, Sheldon K. Friedlander (p.1782)



- 6G22 2:00 **APPLICATION OF DISPERSION MODEL FOR HEALTH BENEFIT ASSESSMENT OF PARTICULATE REDUCTION STRATEGIES FOR AN URBAN REGION**, Vasudev N. Athalye, RASHMI S. PATIL and Virendra Sethi, Indian Institute of Technology Bombay, Mumbai, India (*p.1784*)
- 6G23 2:00 **MODAL STRUCTURE OF THE FINE URBAN AEROSOL IN FOUR EUROPEAN CITIES**, K. ELEFThERIADIS S. Vratolis, C. Housiadass, Institute of Nuclear Technology & Radiation Protection, N.C.S.R. "Demokritos", 15310 Ag. Paraskevi, Attiki, Greece, J. Smolík, V. Ždímal, J. Schwarz, Z. Wagner, Institute of Chemical Process Fundamentals, Laboratory of Aerosol Chemistry and Physics, Prague, Czech Republic, M. Lazaridis, J. Ondracek, Department of Environmental Engineering, Technical University of Crete, Chania 73100, Greece, T. Hussein, University of Helsinki, Department of Physical Sciences, P.O. Box 64, FIN-00014 University of Helsinki, Finland, S. Kephelopoulou and Y. Drossinos, European Commission, Joint Research Centre, I-21020 Ispra (Va), Italy (*p.1786*)
- 6G24 2:00 **A FULLY-DYNAMIC APPROACH TO MODEL SECONDARY ORGANIC AEROSOL FORMATION**, SATISH VUTUKURU, Donald Dabdub, University of California, Irvine. Irvine, CA; Robert J. Griffin, University of New Hampshire. Durham, NH. (*p.1787*)
- 6G25 2:00 **TOTAL PARTICLE CONCENTRATION AND BLACK CARBON IN HELSINKI METROPOLITAN AREA**, Leena Järvi, Tuukka Petäjä, Jyrki Martikainen, Pasi Aalto, Petri Keronen, Erkki Siivola, Timo Vesala, Markku Kumala, Department of Physical Sciences, University of Helsinki, Helsinki; Timo Mäkelä, Jaakko Laakia, Markus Sillanpää, Veli-Matti Kerminen, Risto Hillamo, Finnish Meteorological Institute (*p.1789*)
- 6G26 2:00 **SEASONAL VARIATION OF PARTICLE SIZE DISTRIBUTIONS OF PAHS AT SEOUL, KOREA**, JiYi Lee, Yong Pyo Kim, Department of Environmental Science and Engineering, Ewha Womans University; Chang Hee Kang, Department of Chemistry, Cheju National University (*p.1791*)
- 6G27 2:00 **INFLUENCE OF HIGH WAY LJUBLJANA-GRIC; (SLOVENIA) ON POLLUTION WITH PARTICLES**, JANJA TURŠIČ, Irena Grgič, Laboratory for Analytical Chemistry, National Institute of Chemistry, Slovenia, Ljubljana. SI-1000, Slovenia, Tanja Bolte, Andrej Šegula, Environmental Agency of the Republic of Slovenia, Vojkova 1b Ljubljana, SI-1000, Slovenia (*p.1792*)
- 6G28 2:00 **PAHS, NITROPAHS AND OXIPAHs IN ATMOSPHERIC PARTICLE SAMPLES**, M. G. PERRONE, L. Ferrero, Z. Lazzati, C. LoPorto, S. Petraccone, G. Sangiorgi and E. Bolzacchini, Department of Environmental Science and Technology, University of Milano-Bicocca, Milan, ITALY (*p.1794*)
- 6G29 2:00 **VERTICAL DISTRIBUTION OF PARTICULATE MATTER IN THE URBAN ATMOSPHERE OF MILAN**, Luca Ferrero, Zeldi Lazzati, Claudia Loporto, MARIA GRAZIA PERRONE, Stefania Petraccone, Giorgia Sangiorgi, Ezio Bolzacchini; University of Milano-Bicocca, Milan, Italy (*p.1796*)
- 6G30 2:00 **COARSE, FINE, AND ULTRAFINE PARTICLES IN JAKARTA, INDONESIA**, DANE WESTERDAHL, University of California, Los Angeles, CA, USA; Scott Fruin, California Air Resources Board, Sacramento, CA, USA, Julian Marshall, University of British Columbia, Vancouver, BC, Canada; Philip M Fine, South Coast Air Quality Management District, Diamond Bar, CA, USA; Manisha Singh, TSI, Shoreview, MN, USA (*p.1798*)

- 6G31 **INFLUENCE OF RENOXIFICATION REACTIONS ON OZONE AND PARTICULATE MATTER LEVELS**, Angel Jimenez-Aranda, MARC CARRERAS-SOSPEDRA, Donald Dabdub. University of California, Irvine. Irvine, CA. (p.1800)
- 6G32 **MULTI-YEAR MEASUREMENTS OF BLACK CARBON AT TWO URBAN LOCATIONS IN NEW YORK:COMPARISON WITH ELEMENTAL CARBON**, OLIVER RATTIGAN, Dirk Felton, New York State Department of Environmental Conservation, Albany, NY;James Schwab, Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY (p.1801)
- 6G33 **A PHASE EQUILIBRIUM MODEL FOR ATMOSPHERIC AEROSOLS CONTAINING INORGANIC ELECTROLYTES AND DICARBOXYLIC ACIDS (UHAERO)**,□, N.R. Amundson, A. Caboussat, J.W. HE, A.V. Martynenko, and J. H. Seinfeld□
- 6H Instrumentation-II (Poster)**  
Garden Court East  
*James Flanagan, Peter Raynor, Chairs*
- 6H1 **EFFECTS OF SAMPLING ARTIFACTS AND OPERATING PARAMETERS ON THE PERFORMANCE OF A SEMI-CONTINUOUS PARTICULATE EC-OC MONITOR**, MOHAMMAD ARHAMI, Philip M. Fine, Ralph J. Delfino, and Constantinos Sioutas (p.409)
- 6H2 **EXPOSURE TO AEROSOLS IN BUSES AND TRAMS IN HELSINKI –SEASONAL DEPENDENCE**, KAARLE HÄMERI, Department of Physical Sciences, University of Helsinki, Finland; Eija Vartiainen, Finnish Institute of Occupational Health, Helsinki, Finland; Tarja Yli-Tuomi, Matti Jantunen, National Public Health Institute, Dept. of Environmental Health, Kuopio, Finland; Päivi Aarnio, Tarja Koskentalo, Anu Kousa, Helsinki Metropolitan Area Council, Environmental Office, Helsinki, Finland; Timo Mäkelä, Risto Hillamo, Finnish Meteorological Institute, Helsinki, Finland (p.411)
- 6H3 **DEVELOPMENT OF A CONTINUOUS AEROSOL SEPARATION SYSTEM BASED ON PHOTOPHORETIC PARTICLE PROPERTIES**, Carsten Kykal, Christoph Haisch, REINHARD NIESSNER, Institute of Hydrochemistry, Technical University of Munich, Munich, Germany (p.412)
- 6H4 **A METHOD TO MEASURE THE HYGROSCOPIC GROWTH IRREVERSIBILITY OF AEROSOL PARTICLES**, DWANE PAULSEN, George Biskos, Scot T. Martin, Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA (p.414)
- 6H5 **EVALUATION OF A URG AMBIENT ION MONITORING SYSTEM (AIM) FOR MEASURING WATER-SOLUBLE ION COMPONENTS OF AMBIENT PM2.5: INTERCOMPARISON WITH PILS-IC MONITOR**, Kwang-Joo Moon, Jin-Seok Han, Il-Rok Jung, National Institute of Environmental Research, Incheon, Republic of Korea, Yutaka Kondo, Yuzo Miyazaki, University of Tokyo (RCAST/UT), Tokyo, Japan (p.416)
- 6H8 **EFFECT OF DYNAMIC MECHANICAL PROPERTIES OF RUBBER ON PARTICLE BOUNCE-OFF**, S. -G. LEE, Manabu Nishimura, Yoshio Otani, Kanazawa University (p.422)
- 6H9 **DESIGN FOR A NEW VAPOR AEROSOL DICHOTOMOUS SAMPLER**, SEUNG WON KIM, Peter Raynor, University of Minnesota, Minneapolis, MN (p.423)
- 6H10 **DESIGN AND DEVELOPMENT OF A LARGE PARTICLE INLET**, Sang-Rin Lee, Suresh Dhaniyala, Thomas M. Holsen, Clarkson University, Potsdam, NY, USA (p.425)
- 6H11 **EFFECT OF MICRONIZATION METHOD OF ACTIVE INGREDIENT AND THIRD COMPONENT ON DEPOSITION PROFILES OF CEFOTAXIME SODIUM IN DRY POWDER FORMULATIONS.**, Abdolhosein Rouholamini Najafabadi, Ramin Asgharian, Hosnie Tajerzadeh, Kambiz Gilani, and Javad Shafiee. (p.426)

- 6H12 2:00 **SINGLE PARTICLE ANALYSIS USING MICROWAVE PLASMA TORCH ATOMIC EMISSION SPECTROSCOPY**, STEPHEN MANG, Jiho Park, Sergey Nizkorodov, University of California, Irvine, Irvine, CA (p.428)
- 6H13 2:00 **AUTOMATIC OPTICAL-ELECTRONIC SYSTEM FOR ENVIRONMENTAL AEROSOL MEASUREMENT**, R.S. Asatryan, H.S. Karayan, A.H. Makaryan, M.N. Misakyan, Department of Physics, Yerevan State University, Yerevan, Armenia, S.R. Asatryan, Department of Natural Science, Yerevan State University, Ijevan, Armenia (p.429)
- 6H14 2:00 **CHARACTERISTICS AND CALIBRATION OF A SPECTRAL ONLINE ABSORPTION PHOTOMETER**, THOMAS MUELLER, Eva Hallbauer, Johannes Pelzer, Leibniz Institute for Tropospheric Research, Leipzig (p.431)
- 6H15 2:00 **REALTIME MEASUREMENT OF AEROSOL ABSORPTION THROUGH PHOTOTHERMAL INTERFEROMETRY (PTI)**, ARTHUR J. SEDLACEK, Brookhaven National Laboratory, Upton, NY (p.432)
- 6H16 2:00 **EFFECT OF HUMIDITY ON FILTER-BASED MEASUREMENTS OF AEROSOL LIGHT ABSORPTION**, REMO NESSLER, Patrick J. Sheridan, John A. Ogren, National Atmospheric and Oceanic Administration, Boulder, CO; Ernest Weingartner, Anke Hannemann, Paul Scherrer Institut, Villigen, Switzerland (p.434)
- 6H17 2:00 **EFFECTS OF PARTICLE REFRACTIVE INDEX ON INDOOR MEASUREMENTS WITH A REAL-TIME LASER PARTICLE COUNTER**, ROYAL J. KOPPERUD, Lynn M. Hildemann (p.436)
- 6H18 2:00 **USE OF THE AERODYNAMIC PARTICLE SIZER TO MEASURE PM COARSE IN HUMID CONDITIONS**, ADAM RISS, Thomas Peters, University of Iowa, Iowa City, IA; Manisha Singh, Ricky Holm, TSI Incorporated, Shoreview, MN (p.437)
- 6H19 2:00 **ESTIMATION OF FLUE GAS AND AMBIENT AIR MIXING RATE WITH THE HELP OF IR-VISUALISATION**, Timo Turrek, Jorma Joutsensaari and Jorma Jokiniemi, Department of Environmental Sciences, University of Kuopio, Fine Particle and Aerosol Technology Laboratory, Kuopio, Finland, Jorma Jokiniemi, VTT Technical Research Centre of Finland, Espoo, Finland. (p.438)
- 6H20 2:00 **ISO-STANDARDIZATION OF AEROSOL CHARACTERIZATION METHODS AND INSTRUMENTATION**, MICHAEL STINTZ, TU Dresden, Institut für Verfahrenstechnik und Umwelttechnik, Arbeitsgruppe Mechanische Verfahrenstechnik, Germany (p.440)
- 6H21 2:00 **A DMA COVERING THE 1-100 NM SIZE RANGE WITH HIGH RESOLUTION DOWN TO 1 NM**, J. Fernández de la Mora, Yale University, Mechanical Engineering Department M. Attoui, Université Paris 12, Physics Department
- Tuesday 3:40 PM - 4:00 PM  
Coffee Break**
- Great River Ballroom, Garden Courts East & West
- Tuesday 3:40 PM - 4:30 PM  
Removal of Session 1 -6 Posters**
- Tuesday 4:30 PM - onward  
Placement of Session 7 - 14 Posters**
- Tuesday 4:00 PM - onward  
Tours  
Alumni Dinners**
- Wednesday 7:00 AM - 8:00 AM  
Placement of Session 7 - 14 Posters**
- Wednesday 8:00 AM - 9:20 AM  
Plenary**

Minnesota Ballroom

*David Pui, Chair*

8:00 **PLENARY 3. REINVENTING THE WHEEL: NEW VISTAS FOR AEROSOL MEASUREMENT**, Richard C. Flagan, Irma and Ross McCollum William H. Corcoran Professor of Chemical Engineering, California Institute of Technology, Pasadena, CA, USA (p.344)

9:00 **THOMAS MERCER AWARD**, presented by John Dennis and David Leith

**DAVID SINCLAIR AWARD**, presented by David Leith

**Wednesday 9:00 AM - 5:30 PM**  
**Exhibits Open**

Great River Ballroom

**Wednesday 9:20 AM - 9:40 AM**  
**Coffee Break**

Great River Ballroom, Garden Courts East &amp; West

**Wednesday 9:40 AM - 11:00 AM**  
**Session 7**

**7A Urban Aerosol-III (Platform)**

Minnesota Ballroom

*Eric Swietlicki, Jorma Keskinen, Chairs*

7A1 **SPATIAL VARIATIONS OF DICARBOXYLIC ACIDS IN 14 CITIES OF CHINA**, S. C. Lee, K. F. Ho, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hun Hom, Hong Kong; J. J. Cao, SKLLQG, Institute of Earth Environment, Chinese Academy of Sciences, China; K. Kawamura, Institute of Low Temperature Science, Hokkaido University, Sapporo, Japan (p.1803)

7A2 **DETERMINATION OF PARTICLE EFFECTIVE DENSITY IN URBAN ENVIRONMENTS WITH AN AEROSOL PARTICLE MASS ANALYZER AND SCANNING MOBILITY PARTICLE SIZER**, MICHAEL D. GELLER, Subhasis Biswas and Constantinos Sioutas, University of Southern California, Los Angeles, CA (p.1804)

7A3 **SEASONAL VARIATION OF COLUMN AEROSOLS AND ITS EFFECT ON TOTAL RADIATION FLUX OVER DELHI**, SACHCHIDANAND SINGH, Manoj K. Srivastava, Shambhu Nath, R. S. Tanwar and Risal Singh, National Physical Laboratory (p.1806)

7A4 **THE IMPACT OF BUILDING TOPOGRAPHY ON AEROSOL DISPERSION IN AN URBAN STREET CANYON**, JENNIFER RICHMOND-BRYANT, Environmental and Occupational Health Sciences, Hunter College, City University of New York, 425 East 25th Street, New York, NY 10010 USA; Laurie A. Brixey, Alion Science and Technology, 1000 Park Forty Suite 200, Research Triangle Park, NC 27713 USA; David K. Heist, Steven G. Perry, Atmospheric Sciences Modeling Division, Air Resources Laboratory/NOAA, MD-81, USEPA, RTP, NC 27711 USA; George E. Bowker, Russell W. Wiener, Atmospheric Modeling Division, NERL/EPA, MD-81, USEPA, RTP, NC 27711 USA (p.1808)

**7B Cloud & Fog Aerosol Interactions-II (Platform)**

Capitol Ballroom

*Athanasios Nenes, Paul Connolly, Chairs*

7B1 **THE FINCH (FRANKFURT ICE NUCLEI CHAMBER) COUNTER. NEW DEVELOPMENTS AND FIRST MEASUREMENTS.**, ULRICH BUNDKE, Heinz Bingemer, Thomas Wetter, University of Frankfurt, Frankfurt, Germany; Björn Nillius, Ruprecht Jaenicke, University of Mainz, Mainz, Germany (p.1350)

- 7B2 10:00 **PHYSICAL AND CHEMICAL PROPERTIES OF AEROSOL PARTICLES AND CLOUD DROPLETS DURING THE SECOND PALLAS CLOUD EXPERIMENT (SECOND PACE)**, MIKA KOMPPULA, Heikki Lihavainen, Antti-Pekka Hyvärinen, Veli-Matti Kerminen, Veijo Aaltonen, Christa Engler, Niku Kivekäs, Ari Leskinen, Risto Hillamo, Ulla Makkonen, Yrjö Viisanen, Finnish Meteorological Institute, Research and Development, Helsinki, Finland; Petri Vaattovaara, Jukka Rautiainen, Pasi Miettinen, Petri Tiitta, Riikka Sorjamaa, Ari Laaksonen, Department of Applied Physics, University of Kuopio, Kuopio, Finland (p.1352)
- 7B3 10:20 **MODELLING AND MEASUREMENTS OF INTERACTIONS BETWEEN AEROSOLS AND CLOUDS, IN AN INTENSE TROPICAL THUNDERSTORM DURING ACTIVE.**, P. J. Connolly, G. Vaughan, T. Choulaton, K. N. Bower, M. Gallagher, M. Flynn and the ACTIVE team. (p.1354)
- 7B4 10:40 **CHEMICAL COMPOSITION MEASUREMENTS OF ICE NUCLEI IN MIXED PHASE TROPOSPHERIC CLOUDS DURING THE CLOUD AND AEROSOL CHARACTERIZATION EXPERIMENTS CLACE**, JOHANNES SCHNEIDER, Saskia Walter, Joachim Curtius, Stephan Borrmann, Cloud Physics and Chemistry Department, Max Planck Institute for Chemistry, Mainz, Germany, Stephan Mertes, Leibniz-Institute for Tropospheric Research, Leipzig, Germany, Ernest Weingartner, Bart Verheggen, Julie Cozic, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institute, Villigen, Switzerland (p.1356)
- 7C **Symposium: Nanomaterials and Occupational Health-I (Platform)**  
Governors 1 & 5  
*M. Hoover, C. J. Tsai, Chairs*
- 7C1 9:40 **EXPOSURE TO AIRBORNE NANOPARTICLES IN THE NANOTECHNOLOGY WORKPLACE**, LINSEY C. MARR, Christy M. Kull, Harry C. Dorn, Virginia Polytechnic Institute and State University, Blacksburg, VA; Matthew S. Hull, Luna Innovations, Inc., Blacksburg, VA (p.119)
- 7C2 10:00 **IN VITRO TESTING OF THE SUBMICRON FRACTION OF FLY ASH FROM A MUNICIPAL WASTE INCINERATOR AT THE AIR – LIQUID INTERFACE**, SONJA MÜLHOPT, Hanns-Rudolf Paur, Institute for Technical Chemistry-Thermal Waste Treatment Division, Forschungszentrum Karlsruhe, Karlsruhe, Germany; Silvia Diabaté, Harald F. Krug, Institute for Toxicology and Genetics, Forschungszentrum Karlsruhe, Karlsruhe, Germany (p.121)
- 7C3 10:20 **DIFFUSION CHARGING: POSSIBLE INDICATOR FOR HEALTH EFFECTS RELATED TO ULTRAFINE PARTICLES AND PARTICLE SURFACE AREA**, WILLIAM WILSON, U. S. Environmental Protection Agency, Research Triangle Park, NC (p.123)
- 7C4 10:40 **OPTIMIZATION OF THE RESPONSE OF NSAM FOR OCCUPATIONAL HEALTH STUDIES**, HEINZ FISSAN, A. Trampe, S. Neumann, University of Duisburg-Essen, Duisburg, Germany; David Y.H. Pui, W.G. Shin, University of Minnesota, Minneapolis, MN (p.125)

**7D Condensation Particle Counters (Platform)**

Govenors 2 - 4

*Dave Rogers, Hans-Georg Horn, Chairs*

7D1 9:40 **A MICRO-ENVIRONMENTAL, WATER-BASED, CONDENSATION PARTICLE COUNTER**, SUSANNE V. HERING, Gregory S. Lewis, Aerosol Dynamics Inc., Berkeley, CA USA, Frederick R. Quant and Derek R. Oberreit, Quant Technologies LLC, Blaine, MN, USA (p.442)

7D2 10:00 **PARTICLE DETECTION EFFICIENCY OF TSI-3007 CPC AT DIFFERENT AMBIENT TEMPERATURES AND PRESSURES**, MIKKO SIPILÄ, Tiia Grönholm, Kaarle Hämeri, Pasi P. Aalto, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Finland (p.444)

7D3 10:20 **DESIGN AND CHARACTERIZATION OF THREE NEW BUTANOL-BASED CONDENSATION PARTICLE COUNTERS**, QIAN SHI, Hee-Siew Han, Melissa A. Fink, Steve W. Kerrigan, Steve J. Olson, Rob Caldwell, Ed M. Johnson, Mike A. Woessner, Wei Liu, TSI Incorporated, Shoreview, Minnesota 55126, USA (p.446)

7D4 10:40 **MINIATURIZING THE CONTINUOUS-FLOW STREAMWISE THERMAL-GRADIENT CCN CHAMBER**, GREG ROBERTS, Scripps Institution of Oceanography, La Jolla, CA; Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA (p.448)

**7E Secondary Organic Aerosol Formation-II (Platform)**

Wabasha Suite

*Michiro Mochida, Lara Gundel, Chairs*

7E1 9:40 **SECONDARY ORGANIC AEROSOL FORMATION THROUGH CLOUD PROCESSING: KINETICS AND PRODUCTS OF AQUEOUS-PHASE GLYOXAL/METHYLGLYOXAL AND HYDROXYL RADICAL REACTIONS**, Annmarie Carlton, Katy Altieri, Sybil Seitzinger, BARBARA TURPIN, Rutgers University, New Brunswick, NJ; Ho-Jin Lim, Kyungpook National University, Daegu, Korea (p.1559)

7E2 10:00 **REAL-TIME DETECTION OF OLIGOMERS IN SECONDARY ORGANIC AEROSOL WITH THE AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER**, DEBORAH GROSS, Carleton College, Northfield, MN; Markus Gälli, TSI, Inc., Shoreview, MN; Markus Kalberer, ETH Zurich, Switzerland; Andre Prevot, Josef Dommen, M. Rami Alfarra, Jonathan Duplissy, Astrid Gascho, Kathrin Gäggeler, Axel Metzger and Urs Baltensperger, Paul Scherrer Institut, Villigen, Switzerland (p.1561)

7E3 10:20 **SECONDARY ORGANIC AEROSOL FROM SPRUCE TREE EMISSIONS: A CASE STUDY**, ASTRID KIENDLER-SCHARR, Thomas Mentel, Ralf Tillmann, ICG-II: Troposphäre, Forschungszentrum Jülich, Germany; Einhard Kleist, Ricarda Uerlings, Juergen Wildt, ICG-III: Phytosphäre, Forschungszentrum Jülich, Germany; (p.1563)

7E4 10:40 **MODELING OF SOA FORMATION BY PARTITIONING AND HETEROGENEOUS REACTIONS IN THE PRESENCE OF INORGANIC SPECIES**, Myoseon Jang, Nadine Czoschke, Amanda Northcross, Gang Cao, The University of North Carolina at Chapel Hill, Chapel Hill, NC (p.1565)

**7F Aerosol Generation (Platform)**

Kellogg Suite

*Michael Heim, Andreas Schmidt-Ott, Chairs*

7F1 9:40 **NEW SOOT GENERATOR VSG-3000 FOR REAL COMBUSTION SOOT AEROSOL IN THE NANOMETER RANGE**, MARTIN SCHMIDT, Palas GmbH, Karlsruhe, Germany (p.646)

7F2 10:00 **AEROSOL FORMATION AND PARTICLE LOSSES IN MICRO-REACTORS**, MICHAEL HEIM, Robert Wengeler, Hermann Nirschl, Gerhard Kasper, Universität Karlsruhe (TH), Karlsruhe, Germany; Norbert Kockmann, Universität Freiburg, Freiburg, Germany (p.682)

- 7F3 10:20 **FLOW FOCUSING AND FLOW BLURRING: TWO GEOMETRICAL PARADIGMS FOR PNEUMATIC LIQUID ATOMIZATION**, ALFONSO GANAN-CALVO, Universidad de Sevilla, Sevilla, Spain; Joan Rosell, Universidad Rovira i Virgili, Tarragona, Spain (p.684)
- 7F4 10:40 **SMALL METAL CLUSTERS IN THE GLOWING WIRE GENERATOR**, CHRISTIAN PEINEKE, Valerie C.L. Butselaar-Orthlieb and Andreas Schmidt-Ott, Nanostructured Materials, Delft University of Technology, Delft, The Netherlands (p.686)
- 7G Symposium: Aerosol Research & Education Software-II (Poster)**  
Garden Court West  
*C. Y. Wu, Kikuo Okuyama, Chairs*
- 7G1 9:40 **DISCONTINUOUS GALERKIN TREATMENT OF THE PARTICLE POPULATION BALANCE EQUATIONS: APPLICATION TO DETAILED MOLECULAR MODELING OF FLAME CHEMISTRY WITH SOOT FORMATION**, HARRY MOFFAT, John Brockman, John Hewson, Sheldon Tieszen, Sandia National Laboratories, Albuquerque, NM (p.560)
- 7G2 9:40 **A SPREADSHEET-COMPATIBLE CASCADE IMPACTOR DATA INVERSION METHOD**, PATRICK O'SHAUGHNESSY, The University of Iowa, Iowa City, IA; Otto Raabe, University of California, Davis, CA (p.562)
- 7G3 9:40 **DEVELOPMENT OF POPULATION BALANCE BASED DESIGN PROBLEM FOR A PARTICLE SCIENCE AND TECHNOLOGY COURSE**, Sheryl Ehrman, PATRICIA CASTELLANOS, Vivek Dwivedi, University of Maryland, College Park, MD; R. Bertram Diemer, DuPont Company, Wilmington, DE (p.563)
- 7G4 9:40 **OBSERVATION OF PARTICLE BEHAVIOR IN A PECVD REACTOR USING AN IN SITU VISUALIZATION SYSTEM**, MANABU SHIMADA, Kikuo Okuyama, Yutaka Hayashi, Department of Chemical Engineering, Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan (p.564)
- 7G5 9:40 **THE U.S. ENVIRONMENTAL PROTECTION AGENCY VERSION OF POSITIVE MATRIX FACTORIZATION**, PHILIP K. HOPKE, Clarkson University, Potsdam, NY; Pentti Paatero, University of Helsinki, Helsinki, FI; Shelly Eberly, U.S. Environmental Protection Agency, Research Triangle Park, NC (p.566)
- 7G6 9:40 **A WEB-BASED INTERACTIVE AEROSOL PROGRAM FOR UNDERGRADUATE EDUCATION**, CHANG-YU WU, Heath Wintz, Ying Li, Anadi Misra, Randy Switt, Anne Donnelly, Emilia Hodge, Yanmei Zhang, Anne Allen, Priscilla Chapman, University of Florida, Gainesville, FL; Pratim Biswas, Prakash Kumar, Jingkun Jiang, Washington University in St. Louis, St. Louis, MO. (p.568)
- 7G7 9:40 **A DESIGN TOOL FOR AERODYNAMIC LENS SYSTEMS**, XIAOLIANG WANG, TSI Incorporated, St Paul, MN, USA, Peter H. McMurry, University of Minnesota, Minneapolis, MN, USA (p.570)
- 7G8 9:40 **A COMPLETE COMPUTER PROGRAM TO FIT THE DATA FROM AN IMPACTOR TO A SUM OF LOG-NORMALS**, JULIO M. FERNANDEZ-DIAZ, Maria A. Rodriguez-Braña, B. Arganza, University of Oviedo, SPAIN (p.572)
- 7G9 9:40 **DEVELOPING RURAL NANOTECHNOLOGY AND GAINING PUBLIC ACCEPTANCE**, KEVIN KLUNGTVEDT, RINTEK, Rushford Institute for Nanotechnology, Rushford, MN (p.574)
- 7G10 9:40 **A WEB-BASED COURSE FOR PARTICLE TRANSPORT, DEPOSITION AND REMOVAL**, GOODARZ AHMADI, Stephen Doheny-Farina, John McLaughlin, Kambiz Nazridoust, David J. Schmidt, Xinli Jia, Suresh Dhaniyala, Cetin Cetinkaya, Jeffrey Taylor, Fa-Gung Fan, and Xiangwei Liu, Clarkson University, Potsdam, NY, Xerox Corporation, Webster, NY (p.576)
- 7G11 9:40 **DISTFIT: PARTICLE SIZE DISTRIBUTION FITTING PROGRAM**, EVAN WHITBY (p.578)
- 7G12 9:40 **FINE PARTICLE MODEL FOR FLUENT**, EVAN WHITBY (p.579)

**7H Atmospheric Measurement Campaigns (Poster)**

Garden Court East

*Brent Williams, Jay Turner, Chairs*

7H1  
9:40 **IONIC COMPOSITION OF AEROSOLS IN ROCKY MOUNTAIN NATIONAL PARK: A PILOT STUDY**, Suresh Raja, Jeffrey Collett, Jr., Taehyoung Lee, Xiao-Ying Yu, Sonia Kreidenweis, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado; Jenny Hand, Derek Day, and William Malm, National Park Service/ CIRA, Colorado State University, Fort Collins, Colorado 80523 (p.1179)

7H2  
9:40 **CHARACTERIZATION, HYGROSCOPIC GROWTH, AND ACTIVATION OF LABORATORY-GENERATED AEROSOL PARTICLES MIMICKING BIOMASS-BURNING AEROSOLS: THE LEXNO-CAMPAIGN**, Alexei Kiselev, Tabea Hennig, Silvia Henning, Frank Stratmann, Christina Wennrich, HEIKE WEX, Leibniz Institute for Tropospheric Research, Leipzig, Germany; Merete Bilde, Adam Kristensson, University of Copenhagen, Copenhagen, Denmark; Ulrike Dusek, Göran Frank, Diana Rose, Johannes Schneider, Saskia Walter, Max Planck Institute for Chemistry, Mainz, Germany; Astrid Kiendler-Scharr, Thomas Mentel, Ralf Tillmann, Research Centre Juelich, Juelich, Germany; Jefferson Snider, University of Wyoming, Laramie, USA (p.1181)

7H3  
9:40 **SEASONAL VARIATION OF 2-METHYLTETROLS IN THE AMBIENT AIR SAMPLES**, XIAOYAN XIA, Philip K. Hopke, Ping Li, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY (p.1183)

7H5  
9:40 **ANALYSIS OF AMBIENT SEMI-CONTINUOUS DATA COLLECTED AT THE ST. LOUIS - MIDWEST SUPERSITE**, EUGENE KIM, Philip K. Hopke, Clarkson University, Potsdam, NY; Jay R. Turner, Washington University, St. Louis, MO (p.1187)

7H6  
9:40 **AEROSOL OPTICAL DEPTH AND AEROSOL CHARACTERIZATION IN 2006 AT UCCLE (BELGIUM)**, ANNE CHEYMOL, Hugo De Backer, Alexander Mangold, René Iemoiné, Andy Delcloo, Royal Meteorological Institute of Belgium, Brussels, Belgium, Jan Cafmeyer and Willy Maenhaut, University of Ghent, Ghent, Belgium (p.1189)

7H9  
9:40 **HYGROSCOPIC AND OPTICAL PROPERTIES OF SUBMICROMETER AEROSOLS OVER THE MEDITERRANEAN SEA: RESULTS FROM ARIADNE 2005 ON CRETE, GREECE**, BIRGIT WEHNER, Maria Stock, Andreas Nowak, Andreas Maßling, Thomas Müller, Alfred Wiedensohler, Wolfram Birmili, Leibniz-Institute for Tropospheric Research, Leipzig, Germany, Nikos Kalivitis, Nikos Mihalopoulos, Environmental Chemical Processes Laboratory, Department of Chemistry, University of Crete, Heraklion, Greece (p.1192)

7H10  
9:40 **FIRST RESULTS FROM AN INTEGRATED FINE PARTICULATE MATTER (PM1 AND PM2.5) STUDY IN THE GREATER AREA OF ATHENS, GREECE.**, G. Grivas, E. Diapoulis, V. Kanouta, A. Chaloulakou, N. Spyrellis, School of Chemical Engineering, National Technical University of Athens, Greece; G. BISKOS, Division of Engineering & Applied Science, Harvard University, Cambridge, MA; P. Koutrakis, Department of Environmental Health Exposure, Harvard School of Public Health, Boston, MA. (p.1193)

7H11  
9:40 **CONTAMINATION ISSUES IN PM2.5 CHEMICAL SPECIATION TRENDS NETWORK DATA**, W. Cary Eaton, JAMES B. FLANAGAN, Lisa C. Greene, William F. Gutknecht, Eva D. Hardison, R.K.M. Jayanty, Andrea C. McWilliams, James A. O'Rourke, and Max R. Peterson, RTI International, Research Triangle Park, NC (p.1195)

7H12  
9:40 **MEASUREMENT OF AEROSOL WATER CONTENT DURING THE MEXICO CITY METROPOLITAN AREA (MCMA) MARCH 2006 CAMPAIGN**, ALICIA KALAFUT, Charles Stanier, University of Iowa (p.1196)



- 7H13  
9:40 **COMPARISON OF FILTER AND CONTINUOUS METHODS FOR PM<sub>2.5</sub> AEROSOL CONSTITUENTS AT SOUTHEASTERN U.S. SAMPLING SITES**, ROGER L. TANNER, Solomon T. Bairai, Myra L. Valente, Kenneth J. Olszyna, Ralph J. Valente, Environmental Technologies, Tennessee Valley Authority, Muscle Shoals, AL; Jim Renfro, National Park Service, Gatlinburg, TN. (*p.1197*)
- 7H14  
9:40 **CHARACTERIZATION OF PHYSICAL, CHEMICAL AND OPTICAL PROPERTIES AS A FUNCTION OF RELATIVE HUMIDITY AT GOSAN, KOREA DURING ABC-EAREX2005**, Jin-Seok Han, Kwang-Joo Moon, Boo-Joo Kong, National Institute of Environmental Research, Incheon, Republic of Korea, Young-Sung Ghim, Korea Institute of Science and Technology, Seoul, Republic of Korea (*p.1198*)
- 7H15  
9:40 **ORGANIC AMBIENT AEROSOL ANALYSIS WITH THE AERODYNE HIGH RESOLUTION TIME-OF-FLIGHT AEROSOL MASS SPECTROMETER (HR-TOF-AMS) IN MEXICO CITY DURING MILAGRO / MCMA -2006**, ALLISON C. AIKEN, J. Alex Huffman, Michael Cubison, Ken Docherty, Ingrid Ulbrich, Jose L. Jimenez, University of Colorado at Boulder, Boulder, CO; Dara Salcedo, Universidad Autónoma del Estado de Morelos, Cuernavaca Morelos, Mexico; Douglas R. Worsnop, Aerodyne Research Inc., Billerica, MA (*p.1200*)
- 7H16  
9:40 **MEASUREMENT OF AROMATIC HYDROCARBONS AND POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) IN AMBIENT AIR AT GHAZIABAD AND MODINAGAR A NATIONAL CAPITAL REGION OF DELHI (NCR) DURING-2005**, RAVI KUMAR<sup>1</sup>, R.P.Tyagi<sup>1</sup>, Shashi Bala<sup>1</sup> and Nidhi Rani<sup>2</sup>, Department of chemistry, M.M. (Post Graduate) college, Modinagar, INDIA, Defence Institute of Physiology & allied sciences (DRDO), Delhi, INDIA (*p.1202*)

**Wednesday 11:00 AM - 11:20 AM**  
**Coffee Break**

Great River Ballroom, Garden Courts East & West

**Wednesday 11:20 AM - 12:40 PM**  
**Session 8**

**8A Urban Aerosol-IV (Platform)**  
Minnesota Ballroom  
*Michael Geller, Chair*

- 8A1  
11:20 **PARTICLE NUMBER SIZE DISTRIBUTIONS AT AN URBAN SITE IN SOUTHERN SWEDEN: ESTIMATES OF THE CONTRIBUTION OF URBAN PARTICLE SOURCES**, Erik SWIETLICKI, Andreas Massling, Jakob Löndahl, Ingela Dahlberg, Division of Nuclear Physics, Lund University, Lund, Sweden; Adam Kristensson, Department of Chemistry, Copenhagen University, Copenhagen, Denmark; Henric Nilsson, Susanna Gustafsson, Environment and Health Protection Board, City of Malmö, Malmö, Sweden; Matthias Ketzler, Department of Atmospheric Environment, National Environmental Research Institute, Roskilde, Denmark (*p.1810*)
- 8A2  
11:40 **DETERMINATION OF THE CHEMICAL CHARACTERISTICS OF PARTICLES FROM ROAD-SIDE MEASUREMENTS**, PETRI TIITTA, Pasi Miettinen, Petri Vaattovaara, Jorma Joutsensaari, Ari Laaksonen, Department of Applied Physics, University of Kuopio, Finland; Pasi Aalto, Markku Kulmala, University of Helsinki, Finland (*p.1812*)
- 8A3  
12:00 **ROADSIDE AEROSOL SIZE DISTRIBUTIONS AND PARTICLE DENSITIES DURING WINTER AND SUMMER**, Virtanen, A., Rönkkö, T., Kannosto, J., Mäkelä, J., Keskinen, J., Tampere University of Technology, Tampere, Finland; Pakkanen, T., Hillamo, R., Finnish Meteorological Institute, Helsinki, Finland; Pirjola, L., Helsinki Polytechnics, Helsinki, Finland; Hämeri, K., University of Helsinki, Helsinki, Finland (*p.1814*)

8A4  
12:20 **DETECTION OF SECONDARY ORGANIC AEROSOL TRACERS IN DETROIT, MI DURING THE SUMMER OF 2004**, TADEUSZ KLEINDIENST, Michael Lewandowski, John Offenberg, Edward Edney National Exposure Research Laboratory, U.S. EPA, RTP, NC; Mohammed Jaoui, Alion Science and Technology, RTP, NC (p.1816)

### 8B Aerosol Hygroscopicity (Platform)

Capitol Ballroom

*Tim Raymond, Lynn Russell, Chairs*

8B1  
11:20 **A COMPARISON OF DIFFERENT TECHNIQUES FOR OBTAINING HYGROSCOPIC CLOSURE AND SIMPLIFICATION OF THE ORGANIC FRACTION.**, BENJAMIN A. CORRIS, Gordon McFiggans, M. Rami Alfarra, James Allan, Keith Bower, Hugh Coe, David Topping, Paul Williams, School of Earth, Atmospheric, and Environmental Sciences (SEAES), University of Manchester, Manchester, England, Martin Gysel, Paul Scherrer Institute, Villigen, Switzerland, Mike Cubison, CIRES, University of Colorado, Boulder, CO, Stefano Decesari, Cristina Facchini and Sandro Fuzzi, Institute of Atmospheric Sciences and Climate (ISAC), National Research Council, Bologna, Italy. (p.1015)

8B2  
11:40 **INTERACTIONS OF CHEMICAL COMPONENTS IN COMPLEX AEROSOLS AND THE EFFECTS ON WATER UPTAKE**, TIMOTHY RAYMOND, Richard Moore, Bucknell University, Lewisburg, PA (p.1017)

8B3  
12:00 **HYGROSCOPIC PROPERTIES OF INORGANIC AEROSOL NANOPARTICLES**, GEORGE BISKOS, Dwane Paulsen, Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA; Lynn M. Russell, Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA; Peter R. Buseck, Department of Geological Sciences, Arizona State University, Tempe, AZ; Scot T Martin, Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA. (p.1018)

8B4  
12:20 **MEASUREMENTS OF THE DELIQUESCENCE AND EFFLORESCENCE OF SUCCINIC ACID PARTICLES WITH LACIS**, Silvia Henning, Alexei Kiselev, Frank Stratmann, HEIKE WEX, Markus Ziese, Institute for Tropospheric Research, Leipzig, Germany (p.1019)

### 8C Symposium: Nanomaterials and Occupational Health-II (Platform)

Governors 1 & 5

*M. Hoover, C.J. Tsai, Chairs*

8C1  
11:20 **MEASUREMENT OF AIRBORNE CARBON NANOFIBER STRUCTURE USING A TANDEM MOBILITY-MASS ANALYSIS**, BON KI KU, National Institute for Occupational Safety and Health, Cincinnati, OH; Mark S. Emery, Mark R. Stolzenburg, Peter H. McMurry, University of Minnesota, Minneapolis, MN; Andrew D. Maynard, Woodrow Wilson International Center for Scholars, Washington, DC (p.127)

8C2  
11:40 **CONCENTRATION MEASUREMENTS OF AEROSOLIZED SINGLE-WALLED CARBON NANOTUBES**, NANCY JENNERJOHN, Yifang Zhu, William C. Hinds, Environmental Health Sciences, University of California, Los Angeles, CA; Arantza Eiguren-Fernandez, Institute of the Environment, University of California, Los Angeles, CA (p.129)

8C3 12:00 **METHODOLOGY FOR HUMAN STUDIES ON RESPIRATORY AND CARDIOVASCULAR EFFECTS AT OCCUPATIONAL EXPOSURE TO AEROSOLS AT INDUSTRIAL NANOTECHNOLOGY APPLICATIONS**, MATS BOHGARD, Anders Gudmundsson, Joakim Pagels, Erik Nilsson, Ergonomics and Aerosol Technology, Lund University, Sweden; Jörn Nielsen, Håkan Tinnerberg, Occupational and Environmental Health, Lund University, Sweden; Inger Hagerman, Margareta Berglund, Cardiology, Karolinska University Hospital Huddinge, Sweden; Erik Swietlicki, Jakob Löndahl, Nuclear Physics, Lund University, Sweden; Knut Deppert, Solid State Physics, Lund University, Sweden (p.131)

8C4 12:20 **AN AXIAL FLOW CYCLONE TO REMOVE NANOPARTICLES AT LOW PRESSURE CONDITIONS**, SHENG-CHIEH CHEN, Chuen-Jinn Tsai, Institute of Environmental Engineering, National Chiao Tung University, Hsin Chu, Taiwan (p.133)

**8D Particle Mass Spectrometry (Platform)**  
Govenors 2 - 4  
*Pete DeCarlo, Jose-Luis Jimenez, Chairs*

8D1 11:20 **THE EUROPEAN AEROSOL RESEARCH LIDAR NETWORK: EARLINET**, ALDO AMODEO, Gelsomina Pappalardo, Istituto di Metodologie per l'Analisi Ambientale CNR-IMAA, Potenza, Italy; Jens Bösenberg, Max-Planck-Institut für Meteorologie, Hamburg, Germany; Albert Ansmann, Institut für Troposphärenforschung, Leipzig, Germany; Arnoud Apituley, Rijksinstituut voor Volksgezondheid en Milieu, Bilthoven, The Netherlands; Dimitris Balis, Aristoteleio Panepistimio, Thessalonikis, Greece; Christine Böckmann, Institut für Mathematik der Universität Potsdam, Germany; Anatoly Chaikovsky, Institute of Physics, National Academy of Sciences, Minsk, Bjelarus; Adolfo Comeron, Universitat Politècnica de Catalunya, Barcelona, Spain; Volker Freudenthaler, Matthias Wiegner; Ludwig-Maximilians-Universität, München, Germany; Georg Hansen, Norwegian Institute for Air Research at the Polar Environmental Centre, Tromsø, Norway; Valentin Mitev, Observatoire Cantonal de Neuchâtel, Switzerland; Alexandros Papayannis, National Technical University of Athens, Mathematics and Physical Sciences, Athens, Greece; Maria Rita Perrone, Università degli Studi di Lecce, Department of Physics, Lecce, Italy; Aleksander Pietruczuk, Institute of Geophysics, Polish Academy of Sciences, Warsaw, Poland; Manuel Pujadas, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Madrid, Spain; Francois Ravetta, CNRS- Institut

8D2  
11:40 **RESULTS FROM COMBINED EVALUATION OF AEROSOL PARTICLE SPECTRA DETECTED WITH TWO MASS SPECTROMETERS LAMPAS 2 AND SPASS DURING A FIELD CAMPAIGN**, KLAUS-PETER HINZ, Bernhard Spengler, University of Giessen, Giessen, Germany; Nicole Erdmann, University of Mainz, Mainz, Germany; Carsten Grüning, Joint Research Center Ispra, Ispra, Italy (p.450)

8D3  
12:00 **REAL-TIME ALKALI METAL DETECTION OF INDIVIDUAL AEROSOL PARTICLES BY SURFACE IONIZATION COMBINED WITH ORTHOGONAL ACCELERATION TIME-OF-FLIGHT MASS SPECTROMETRY**, TORBJÖRN L. GUSTAFSSON, Maria Svane, Patrik U. Andersson, Benny Lönn, Jan B.C. Pettersson, Göteborg University, Göteborg, Sweden (p.452)

8D4  
12:20 **DEVELOPMENT OF A HIGH MASS RESOLUTION TIME OF FLIGHT AEROSOL MASS SPECTROMETER**, PETER DECARLO, Joel Kimmel, Allison Aiken, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Achim Trimborn, John Jayne, Doug Worsnop, Aerodyne Research Inc. Billerica, MA; Marc Gonin, Katrin Furher, Thomas Horvath, Tofwerk, Thun, Switzerland (p.454)

### 8E Waste Incineration (Platform)

Wabasha Suite

*David Cocker, Jorma Jokiniemi, Chairs*

8E1  
11:20 **ELECTRON MICROSCOPY CHARACTERISATION OF FINE PARTICLE FORMATION IN A PILOT SCALE BOILER DURING WASTE INCINERATION**, UNTO TAPPER, Jouni Hokkinen, Jorma Jokiniemi, VTT Technical Research Center of Finland, Jorma Jokiniemi, University of Kuopio, Department of Environmental Sciences, Fine Particle and Aerosol Technology Laboratory (p.216)

8E2  
11:40 **FINE PM CONTROL IN ESP AND HYBRID FILTERS: ASSESSING THE PERFORMANCE BY MEASURING THE FRACTIONAL EFFICIENCY**, Estibaliz Garcia, Saioa Astarloa, AIRg, Portugaleta, Spain, Juan Andres Legarreta, Miren Larrion, Egoitz Pena, CRISTINA GUTIERREZ-CANAS, University of the Basque Country, Bilbao, Spain, Carlos Urcelay, Elena Guede, Cementos Lemona, Bilbao, Spain (p.218)

8E3  
12:00 **SIMULTANEOUS REMOVAL OF MERCURY, PARTICLES AND DIOXINS BY A WET SCRUBBER**, Jens Korell, HANNS-R. PAUR, Helmut Seifert; Forschungszentrum Karlsruhe, Institut für Technische Chemie, Karlsruhe, Germany (p.220)

8E4  
12:20 **NUMERICAL STUDY OF THE EFFECT OF PLEAT RATIO ON CLEANING EFFICIENCY IN A PULSEJET CLEANED DUST COLLECTOR**, LI-MING LO, David Y. H. Pui, University of Minnesota, Minneapolis, MN, Shih-Cheng Hu, National Taipei University of Technology, Taipei, Taiwan, Da-Ren Chen, Washington University, St. Louis, MO (p.340)

### 8F Aerosol Charging (Platform)

Kellogg Suite

*Mark Rusyniak, Gerhard Kasper, Chairs*

8F1  
11:20 **DETERMINATION OF THE CHARGE DISTRIBUTION OF HIGHLY CHARGED AEROSOLS**, LARS HILLEMANN, Michael Stintz, TU Dresden, Dresden; Christoph Helsper, Fachhochschule Aachen, Jülich, Germany (p.688)

8F2  
11:40 **NANOPARTICLE CAPTURE IN THE 6 -15NM SIZE RANGE UTILIZING DIRECT SOFT X-RAY PHOTOIONIZATION AND DIFFUSION CHARGING: THEORY AND EXPERIMENTS**, CHRISTOPHER J. HOGAN JR., Jingkun Jiang, and Pratim Biswas, Environmental Engineering Science Program, Washington University, Saint Louis, MO, 63130, USA (p.690)

- 8F3 12:00 **COMBINED FIELD AND DIFFUSION CHARGING IN THE TRANSITION REGIME AT HIGH ION CONCENTRATIONS: MEASUREMENTS AND MODELING**, ANDREAS MARQUARD, Joerg Meyer, Gerhard Kasper, University of Karlsruhe (TH), Germany (p.692)
- 8F4 12:20 **CHARGING OF NANOPARTICLES BY A UV PHOTOIONIZER AT HIGH FLOW RATES**, ESTHER HONTANON, Ciemat, Madrid, Spain, F. Einar Kruis, University of Duisburg-Essen, Duisburg, Germany (p.694)
- 8G Aerosol Chemistry-I (Poster)**  
Minnesota Ballroom  
*Daniel Knopf, Paula Hudson, Chairs*
- 8G1 11:20 **ENCHILADA: A DATA-MINING APPLICATION FOR THE ANALYSIS OF ATMOSPHERIC MASS SPECTROMETRY DATA**, DAVID MUSICANT, Anna Ritz, Thomas Smith, Deborah Gross, Carleton College, Northfield, MN; James Schauer, Lei Chen, Raghu Ramakrishnan, University of Wisconsin, Madison, WI (p.1020)
- 8G2 11:20 **DESIGN OF A NEW ION OPTICS FOR 100% DETECTION OF ENERGETIC IONS WITH 0 – 200 EV WITH SINGLE PARTICLE MASS SPECTROMETRY**, Sung-Woo Cho, DONGGEUN LEE, School of Mechanical Engineering, Pusan National University, Busan, Korea (p.1021)
- 8G3 11:20 **USING "WHITE" LIGHT MIE RESONANCE SPECTROSCOPY TO MEASURE THE VAPOR PRESSURE OF SINGLE, LEVITATED AEROSOL PARTICLES**, Alessandro Zardini and ULRICH K. KRIEGER, Institut für Atmosphäre und Klima, ETH Zürich, 8092 Zurich, Switzerland (p.1023)
- 8G4 11:20 **HIGH TIME RESOLUTION OF AEROSOL PARTICLES IN TORONTO USING A GAS-PARTICLE ION CHROMATOGRAPHY SYSTEM**, KRYSTAL GODRI, Greg J. Evans, University of Toronto, Toronto, ON, Canada (p.1025)
- 8G5 11:20 **20 NM SIZE PARTICES, - INORGANIC COMPOSITIONS** -, Katsumi Saitoh (1), Yuichi Komazaki (2), Koichiro Sera (3), Koichiro Hirano (4) and Tadashi Shirai (5), (1) Environmental Research and Information Center of Akita Prefecture, 3-1-1 Sanno, Akita 010-8572, Japan (2) Research Center for Advanced Science and Technology, University of Tokyo, Japan, (3) Cyclotron Research Center, Iwate Medical University, Takizawa, Japan (4) Yokohama City Research Institute of Environmental Science, , Yokohama, Japan (5) Tokyo Dylec Corp., Tokyo, Japan (p.1027)
- 8G6 11:20 **APPLICATION OF SYNCHROTRON RADIATION FOR MEASUREMENT OF CHANGES IN FE(II) AND FE(III) IN ATMOSPHERICALLY PROCESSED AEROSOLS**, James J. Schauer, BRIAN J. MAJESTIC, Martin M. Shafer, Environmental Chemistry and Technology, University of Wisconsin - Madison, Madison, WI (p.1028)
- 8G7 11:20 **APPLICATION OF MAX-DOAS TO CANADIAN URBAN AND RURAL SITES**, Ryan J. C. D'Souza, Greg J. Evans, Department of Chemical Engineering, University of Toronto, Toronto, Canada, Jeffrey R. Brook, Air Quality Research Division, Environment Canada, Toronto, Canada (p.1030)
- 8G8 11:20 **EVAPORATION OF BINARY DROPLETS CONTAINING HIGHLY VOLATILE AND NONVOLATILE COMPONENTS**, ZHIQIANG GAO and Asit K. Ray, Department of Chemical Engineering, University of Kentucky, Lexington, KY (p.1031)
- 8G9 11:20 **AEROSOL NUCLEATION RATES OF SULFURIC ACID AND WATER MEASURED UNDER ATMOSPHERIC CONDITIONS**, RHONDA S. HIRSCHL, Shan-Hu Lee, Department of Chemistry, Kent State University (p.1032)

- 8G10 11:20 **DEVELOPMENT OF A THERMAL DESORPTION/CHEMICAL IONIZATION AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER (CI-ATOFMS) FOR THE ON-LINE ANALYSIS OF NITROGEN-CONTAINING ORGANIC SPECIES IN THE AEROSOL PHASE**, HIROSHI FURUTANI, Joseph Mayer, University of California at San Diego, La Jolla, CA; Kimberly A. Prather, Scripps Institution of Oceanography and University of California at San Diego, La Jolla, CA (p.1033)
- 8G11 11:20 **SINGLE PARTICLE CHARACTERIZATION OF AMBIENT AIR AND EMISSION SOURCES IN WILMINGTON, DELAWARE USING RSMS-3**, MELISSA S. REINARD and Murray V. Johnston, University of Delaware, Newark, DE, USA (p.1034)
- 8G12 11:20 **CHARACTERIZATION OF THE AMBIENT SEMIVOLATILE AND NON-VOLATILE AEROSOL BY ATOFMS AT THE STUDY OF ORGANIC AEROSOLS IN RIVERSIDE (SOAR) I AND II**, KERRI A. DENKENBERGER, Kimberly A. Prather, University of California, San Diego, La Jolla, CA; J. Alex Huffman, Jose L. Jimenez, University of Colorado, Boulder, CO (p.1036)
- 8G14 11:20 **TROPOSPHERIC MULTIPHASE CHEMISTRY OF 2,5-DIMETHYLPHENOL AND 2,6-DIMETHYLPHENOLS**, Pascal Diévert, Université des Sciences et Technologies de Lille, France, Lyassine Allou, Université Louis Pasteur, Strasbourg, France; Stéphane Le Calvé, Université Louis Pasteur, Strasbourg, France; FLORENT LOUIS, Université des Sciences et Technologies de Lille, France (p.1038)
- 8G15 11:20 **EFFECT OF ATMOSPHERIC PROCESSING ON SECONDARY ORGANIC AEROSOL CLOUD ACTIVATION**, KARA HUFF HARTZ, Gabriella Engelhart, Shaun R. Ferchak, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA, USA; Thomas Rosenoern, Merete Bilde, University of Copenhagen, DK -2100, Copenhagen, Denmark; and Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA, 15237, USA and University of Patras, Patra, 26504, Greece (p.1039)
- 8G16 11:20 **HETEROGENEOUS HYDROLYSIS OF N<sub>2</sub>O<sub>5</sub> IN ORGANIC-COATED AQUEOUS AEROSOLS: THEORETICAL INTERPRETATION OF EXPERIMENTAL RESULTS**, TATU ANTTILA, Astrid Kiendler-Scharr, Ralf Tillmann and Thomas F. Mentel, ICG-II: Troposphäre, Forschungszentrum Jülich, 52425 Jülich, Germany (p.1041)
- 8G17 11:20 **DESORPTION OF ANIONIC AND NONIONIC SURFACTANT-FORMULATED HERBICIDES FROM SOILS TO THE AIR UNDER VARIOUS RELATIVE HUMIDITY CONDITIONS**, WENLI YANG, Britt Holmén, University of Connecticut, Storrs, CT (p.1043)
- 8G18 11:20 **A COMPUTATIONAL INVESTIGATION OF THE REACTION BETWEEN STABILIZED CRIEGEE BIRADICALS AND SULFURIC ACID**, Theo Kurtén, Boris Bonn, HANNA VEHKAMÄKI, Markku Kulmala, Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Helsinki, Finland. (p.1044)
- 8G19 11:20 **THE IMPACT OF AEROSOL COMPOSITION ON THE GAS TO PARTICLE PARTITIONING OF REACTIVE MERCURY**, ANDREW P. RUTTER, University of Wisconsin-Madison; James J. Schauer, University of Wisconsin-Madison and Wisconsin State Laboratory of Hygiene, Madison, WI (p.1046)
- 8G20 11:20 **HUMIDITY DEPENDENCE OF THE IV - III PHASE TRANSITION OF AMMONIUM NITRATE IN ATMOSPHERIC AEROSOLS**, HongBo Wu, CHAK K. CHAN, Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong (p.1048)
- 8G21 11:20 **MODELING THE PHYSICAL STATES OF MIXED ORGANIC / INORGANIC AEROSOLS**, ANDREAS ZUEND, Claudia Marcolli, Beiping Luo, Thomas Peter, Institute for Atmospheric and Climate Science, ETH Zurich, Zurich, Switzerland (p.1050)

**8H Health Effects & Bioaerosols (Poster)**

Garden Court West

*Leon Gradon, Jacob McDonald, Chairs*

8H1  
11:20 **DIMENSIONAL ANALYSIS OF HYGROSCOPIC GROWTH KINETICS OF INHALED AEROSOLS: THE "COUPLING NUMBER"**, Rawad Saleh, ALAN SHIHADDEH, Aerosol Research Lab, American University of Beirut, Beirut, Lebanon (p.836)

8H2  
11:20 **RAMAN CHEMICAL IMAGING FOR INGREDIENT-SPECIFIC PARTICLE SIZE CHARACTERIZATION OF AQUEOUS SUSPENSION NASAL SPRAY FORMULATIONS**, LINDA M. BATYKEFER, Matthew P. Nelson, Oksana Klueva, Patrick J. Treado, ChemImage Corporation, Pittsburgh, PA (p.838)

8H3  
11:20 **CASCADE IMPACTOR QUALIFICATION: UTILIZING FLOW RESISTANCE TO PREDICT CHANGES IN THE EFFECTIVE JET DIAMETER OF CASCADE IMPACTOR STAGES**, CHRISTIAN LAVARREDA, Daryl Roberts, Francisco Romay, MSP Corporation, Shoreview, MN (p.840)

8H4  
11:20 **PRODUCTION OF SHELL PARTICLES**, TOMASZ CIACH, Leon Gradon, Arkadiusz Moskal, Warsaw University of Technology, Warsaw, POLAND (p.841)

8H5  
11:20 **NEBULIZER PERFORMANCE INFLUENCED BY IMPACTOR FLOW RATE**, YUE ZHOU, Lovelace Respiratory Research Institute, Albuquerque, NM; Amitkumar Ahuja, City of Hope Comprehensive Cancer Center and Beckman Research Institute, Duarte, CA; Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM (p.843)

8H6  
11:20 **COMPARISON OF INHALER AEROSOL DEPOSITION IN THREE MOUTH-THROAT MODELS WITH IN VIVO DATA**, Yu Zhang and Warren H. Finlay, Department of Mechanical Engineering, University of Alberta, T6G 2G8, Edmonton, Alberta, Canada (p.844)

8H7  
11:20 **PARTICULATE MATTER CONCENTRATIONS MEASURED IN A RESIDENTIAL NEIGHBORHOOD IN BROOKLYN, NEW YORK CITY DURING THE TRAFFIC-RELATED EXPOSURE STUDY (T-REX)**, FU-LIN CHEN, Patricia Phousongphouang Rowley, Richard Baldauf, Russell Wiener, Fred Dimmick, US Environmental Protection Agency, RTP, NC; Michael Wheeler, Alion Science & Technology, NC (p.845)

8H8  
11:20 **DNA DAMAGE INITIATED BY NICKEL SUBSULFIDE AND OTHER NICKEL SPECIES**, NICHOLAS RALSTON, Kevin Galbreath, Energy & Environmental Research Center, Grand Forks, ND; Edward Zillioux, Florida Power and Light, Juno Beach, FL (p.846)

8H9  
11:20 **POTENTIAL HEALTH EFFECTS OF BIO-SOLUBLE FIBERGLASS AEROSOLS**, RÉKA SZÖKE, Ibolya Sziklai-Laszlo, MTA KFKI Atomic Energy Research Institute, Budapest, Hungary; Tibor Kerényi, 2nd Department of Pathology, Semmelweis University, Budapest, Hungary; Marta Jackel, Central Hospital of Defence Forces, Department of Pathology, Budapest, Hungary (p.848)

8H10  
11:20 **TO WHICH SHARE OF OUTDOOR SUB-MICROMETER PARTICLES HUMANS WILL BE REALLY EXPOSED INDOORS? ("THE 3 INDOOR LS")**, ULRICH FRANCK, Thomas Tuch, Maik Schilde, Maria Manjarrez, Olf Herbarth, UFZ - Centre for Environmental Research Leipzig - Halle, Leipzig, Alfred Wiedensohler, Institut for Tropospheric Research, Leipzig, Olf Herbarth, Department of Environmental Hygiene and Epidemiology, University of Leipzig, Leipzig (p.850)

8H11  
11:20 **ASSESSMENT OF GASOLINE COMPOSITIONS ON MUTAGENICITY CHARACTERISTICS OF MOTORCYCLE PARTICULATE EMISSIONS**, Chih-Shan Li, TZU-YI HUANG, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University, Taipei, Taiwan, R.O.C. (p.852)

- 8H12 11:20 **CHARACTERIZATION OF COARSE (PM10-PM2.5) AND FINE (PM2.5) RESUSPENDED ROADWAY DUST IN THE NORTHEAST, SOUTHEAST, SOUTHWEST AND WESTERN U.S.**, Jacob D. McDonald, JeanClare Seagrave, Ramesh Chand and Joe L. Mauderly (*p.853*)
- 8H13 11:20 **HEART RATE VARIABILITY (HRV) RESPONSES AND PARTICULATE EXPOSURES FOR INDIVIDUALS WHO LIVE NEAR A MAJOR UNITED STATES-CANADA TRADE BRIDGE IN BUFFALO, N. Y.**, PETER A JAUQUES, Timothy R. McAuley, Xing Sheng, Huang Zheng, Anirban Ghosh, Stephanie Schuckers, Andrea R. Ferro, Clarkson University, Potsdam, NY (*p.854*)
- 8H14 11:20 **DETERMINING CONSUMER YIELD-IN-USE BY ANALYSIS OF USED CIGARETTE FILTERS**, PAUL R. NELSON, Alma Campbell, Mitchell F. Stiles, John H. Robinson, R.J. Reynolds, Winston-Salem, NC (*p.856*)
- 8H15 11:20 **DEVELOPMENT OF A SMALL INHALATION SYSTEM FOR RODENT EXPOSURE TO FINE AND ULTRAFINE TITANIUM DIOXIDE AEROSOLS**, BEAN CHEN, David Frazer, Sam Stone, Diane Schwegler-Berry, Jared Cumpston, Walt McKinney, Bill Lindsley, Amy Frazer, Michelle Donlin, Kurt Vandestouwe, Vince Castranova, National Institute for Occupational Safety and Health, Morgantown, WV; Tim Nurkiewicz, West Virginia University, Morgantown, WV (*p.858*)
- 8H16 11:20 **SOURCE APPORTIONMENT OF FINE PARTICLES IN THE U.S. AND ASSOCIATIONS BETWEEN INFLAMMATORY MARKER IL-8**, RACHELLE M. DUVALL, Gary A. Norris, Janet M. Burke, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC; John K. McGee, M. Ian Gilmour, Robert B. Devlin, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC (*p.860*)
- 8H17 11:20 **ELECTROSTATIC PRECIPITATION AS AN ALTERNATIVE METHOD FOR IN VITRO EXPOSURES TO MIXTURES OF GASES AND PARTICLES**, KIM M. DE BRUIJNE, Sandra W. Lake, Kenneth G. Sexton, Melanie L. Doyle, Seth M. Ebersviller, Harvey E. Jeffries, David H. Leith Department of Science and Engineering, University of North Carolina, Chapel Hill, NC, USA; Ilona Jaspers CEMALB, Chapel Hill, NC, USA; (*p.861*)
- 8H18 11:20 **COMPARING SEVERAL PM2.5 SOURCE-APPORTIONMENT RESULTS FOR USE IN A HEALTH STUDY IN ATLANTA, GEORGIA**, AMIT MARMUR, James A. Mulholland, Armistead G. Russell, Georgia Institute of Technology, Atlanta, GA; Eugene Kim, Philip K. Hopke, Clarkson University, Potsdam, NY; Jeremy A. Sarnat, Mitchel Klein, Paige E. Tolbert, Emory University, Atlanta, GA (*p.863*)
- 8H19 11:20 **ULTRAFINE PARTICLE CONCENTRATIONS NEAR FREEWAYS AT NIGHT OR EARLY MORNING UNDER CALM WIND CONDITIONS**, SCOTT A. FRUIN, California Air Resources Board, Sacramento, CA; Vlad Isakov, National Oceanic and Atmospheric Administration, Research Triangle Park, NC (*p.865*)
- 8H20 11:20 **AEROSOLIZED DUST PARTICULATES AND BIOAEROSOLS OF A DAIRY ON THE SOUTHERN HIGH PLAINS OF NEW MEXICO**, CHARLES W. PURDY, R. Nolan Clark, USDA-ARS, Conservation and Production Research Laboratory, Bushland, TX; David C. Straus, Health Sciences Center, Texas Tech University, Lubbock, TX (*p.867*)
- 8H21 11:20 **BSA COATING GOLD NANOPARTICLES IN ELECTROSPRAY PROCESS**, FAN MEI, Da-Ren Chen, Environmental Engineering Science Program, Washington University in St. Louis, St. Louis, MO (*p.868*)



8H22 11:20 **THE BIOLOGICAL COMPONENT OF ATMOSPHERIC AEROSOL AND ITS POSSIBLE EFFECT ON HUMAN HEALTH**, ALEXANDER S. SAFATOV, Irina S. Andreeva, Galina A. Buryak, Viktor V. Marchenko, Yurii V. Marchenko, Sergei E. Olkin, Irina K. Reznikova, Vladimir E. Repin, Alexander N. Sergeev, Federal State Research Institution «State Research Center of Virology and Biotechnology «Vector», Novosibirsk region, Russia; Vladimir V. Penenko, Elena A. Tsvetova, Institute of Computation Mathematics and Mathematical Geophysics, SB RAS, Novosibirsk, Russia; Mikhail Yu. Arshinov, Boris D. Belan, Mikhail V. Panchenko, Gennadii N. Tolmachev, Institute of Atmospheric Optics, SB RAS, Tomsk, Russia; Anatolii M. Baklanov, Konstantin P. Koutsenogii, Valerii I. Makarov and Svetlana A. Popova, Institute of Chemical Kinetics and Combustion, SB RAS, Novosibirsk, Russia (p.870)

8H23 11:20 **USE OF GRAVITATIONAL SETTLING FOR QUANTITATIVE BIOAEROSOL MEASUREMENT**, GEDIMINAS MAINELIS and Jose Rivera, Department of Environmental Sciences, Rutgers University, NJ (p.872)

8H24 11:20 **EARTH BOUNDARY SUBLAYER OF BIOAEROSOLS AND FINE PARTICULATE MATTER**, DAVID S. ALBURTY, Andrew E. Page, Carol A. Pranulis, O.D., Deborah A. Larson, Alburtylab, Inc. Drexel, Missouri, USA. (p.873)

8H25 11:20 **BACKGROUND AIRBORNE BACTERIA AND VIRUS POPULATIONS IN AND NEAR BUILDINGS USING VENTILATION FILTERS AS LONG-TERM BIOAEROSOL COLLECTION DEVICES**, THOMAS KUEHN, Nicholas Stanley, Seung Won Kim, M.A. Ramakrishnan, Senthilvelan Anantharaman, Peter Raynor, Sagar Goyal, University of Minnesota, Minneapolis, MN (p.874)

8H26 11:20 **DEVELOPMENT AND CALIBRATION OF WHOLE-CELL REAL-TIME PCR FOR QUANTIFICATION OF TOTAL BACTERIAL NUMBER IN AIR SAMPLES**, HEY REOUN AN, Gediminas Mainelis, and Lori A. White, Rutgers, The State University of New Jersey, New Brunswick, NJ (p.875)

8H29 11:20 **DEMONSTRATION OF AN APPROACH TO DETERMINE THE NUMBER OF CULTURABLE BACTERIAL SPORES CONTAINED IN INDIVIDUAL BIOAEROSOL PARTICLES**, RYAN C. STOKES, Matthew J. Shaw, Battelle Memorial Institute, Columbus, OH (p.876)

8H31 11:20 **DEPOSITION OF BIOAEROSOL PARTICLES IN VENTILATION SYSTEM.**, PIOTR GRZYBOWSKI, Faculty of Chemical and Process Engineering, Warsaw University of Technology, Warsaw, Poland (p.880)

8H32 11:20 **DEVELOPMENT OF SIMULATED DOWNWIND COAL COMBUSTION EMISSIONS EXPOSURE ATMOSPHERES FOR INHALATION TOXICOLOGY STUDIES**, Chandan Misra\*, Rich K. White, Mark Gauna, and Jacob D. McDonald Lovelace Respiratory Research Institute, 2425 Ridgecrest Dr SE, Albuquerque, NM 87108 (p.882)

**Wednesday 12:40 PM - 2:00 PM  
Lunch (on your own)**

**Wednesday 2:00 PM - 3:40 PM  
Session 9**

**9A Ice Nucleation (Platform)**

Minnesota Ballroom

*William Malm, Olaf Stetzer, Chairs*

9A1 2:00 **THE ZURICH ICE NUCLEATION CHAMBER (ZINC): FIRST RESULTS FROM LABORATORY AND FIELD MEASUREMENTS**, OLAF STETZER, Stefan Gedamke, Mathieu Nicolet, Peter Amsler, and Ulrike Lohmann, Institute for Atmospheric and Climate Science, ETH Zurich, 8092 Zurich, Switzerland (p.1358)

- 9A2 2:20 **A CLIMATOLOGY OF ICE IN ARCTIC, MIDLATITUDE AND TROPICAL CIRRUS: IMPLICATIONS FOR SUPERSATURATIONS AND NITRIC ACID PARTITIONING**, M. KRÄMER, C. Schiller, A. Afchine, I. Gensch, N. Spelten, S. Schlicht, FZ Jülich, ICG-I, Germany, N. Sitnikov, CAO, Region Moscow, Russia, Ch. Voigt and H. Schlager, DLR Oberpfaffenhofen, IPA (*p.1359*)
- 9A3 2:40 **MODELLING OF UT\_LS AEROSOLS UNDER VARYING THERMODYNAMIC BOUNDARY CONDITIONS**, HELMUT BUNZ, Stefan Benz, Ottmar Möhler, Institut für Meteorologie und Klimaforschung, IMK-AAF, Forschungszentrum Karlsruhe, 76021 Karlsruhe, Germany, Martina Krämer, Iulia Gensch, Institut für Chemie und Dynamik der Geosphäre, Forschungszentrum Jülich, 52425 Jülich, Germany (*p.1360*)
- 9A4 3:00 **EFFICIENCY OF THE DEPOSITION MODE ICE NUCLEATION ON MINERAL DUST PARTICLES**, OTTMAR MOEHLER, Institute for Meteorology and Climate Research, Forschungszentrum Karlsruhe, Germany; Paul Field, National Center for Atmospheric Research, Boulder, CO (*p.1362*)
- 9A5 3:20 **COUNTERFLOW VIRTUAL IMPACTOR BASED COLLECTION OF SMALL ICE PARTICLES IN MIXED-PHASE CLOUDS FOR THE PHYSICO-CHEMICAL CHARACTERISATION OF TROPOSPHERIC ICE NUCLEI**, Keith Bower, Paul Connolly, University of Manchester, Manchester, United Kingdom; Julie Cozic, Bart Verheggen, Ernest Weingartner, Paul Scherrer Institute, Villigen, Switzerland; Martin Ebert, Annette Worringer, Institute for Applied Geosciences, Darmstadt, Germany; STEPHAN MERTES, Leibniz institute for Tropospheric Research, Leipzig, Germany; Johannes Schneider, Saskia Walter, Max Planck Institute for Chemistry, Mainz, Germany (*p.1363*)
- 9B **Elemental and Organic Carbon Atmospheric Aerosols-II (Platform)**  
Capitol Ballroom  
*Susanne Hering, Ann Dillner, Chairs*
- 9B1 2:00 **RADIOCARBON MEASUREMENTS IN ORGANIC CARBON (OC) AND ELEMENTAL CARBON (EC) REVEAL UNEXPECTEDLY HIGH CONTRIBUTIONS FROM RESIDENTIAL WOOD BURNING IN SWITZERLAND**, SOENKE SZIDAT, Theo M. Jenk, Bern University, Bern, Switzerland; Hans-Arno Synal, PSI c/o ETH Hoenggerberg, Zurich, Switzerland; Lukas Wacker, Markus Kalberer, ETH Hoenggerberg, Zurich, Switzerland; Andre S. H. Prevot, Urs Baltensperger, Paul Scherrer Institut (PSI), Villigen, Switzerland (*p.1567*)
- 9B2 2:20 **ANALYSIS OF AMBIENT AEROSOLS USING FTIR: SOURCE INFLUENCES AT AN IMPROVE SITE IN ARIZONA**, CHARITY COURRY, Department of Chemical and Materials Engineering, Arizona State University, Tempe, AZ; Ann Dillner, Crocker Nuclear Laboratory, University of California, Davis, CA (*p.1569*)
- 9B3 2:40 **SEASONAL VARIATION IN AEROSOL SOURCES AND COMPOSITION IN RIVERSIDE, CA DURING THE SUMMER AND FALL DURING SOAR I AND II**, KIMBERLY A. PRATHER, Xueying Qin, Laura Shields, Thomas Rebotier, and Kerri Denkenberger, Stephen Toner (*p.1778*)
- 9B4 3:00 **ANALYSIS OF CONTINUOUS CARBONACEOUS AEROSOL DATA IN PHOENIX, ARIZONA**, STEVE BROWN, David Vaughn, Theresa O'Brien, Sean Raffuse, Hilary Hafner, Paul Roberts, Sonoma Technology, Inc., Petaluma, CA; Michael Sundblom, Brant Englund, Arizona Department of Environmental Quality, Phoenix, AZ (*p.1573*)

9B5  
3:20 **A METHOD FOR ONLINE OC DETECTION: THE PILS-WSOC TRANSFORMED TO PILS-OC**, RICHARD E. PELTIER, Amy P. Sullivan, Rodney J. Weber, School of Earth and Atmospheric Science, Georgia Tech, Atlanta, GA, James J. Schauer, David Snyder, Water Science and Engineering Laboratory, University of Wisconsin-Madison, Madison, Wisconsin, USA (p.1575)

### 9C Nanoparticle Measurement and Characterization (Platform)

Governors 1 & 5

*Francisco Romay, Taesung Kim, Chairs*

9C1  
2:00 **MECHANICAL STABILITY OF METAL NANOPARTICLE AGGLOMERATES**, MARTIN SEIPENBUSCH, Alfred P. Weber, Institut für Mechanische Verfahrenstechnik und Mechanik, Universität Karlsruhe, Karlsruhe (Germany), Petya Toneva, Wolfgang Peukert, Lehrstuhl für Feststoff- und Grenzflächenverfahrenstechnik, Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany) (p.76)

9C2  
2:20 **EXPERIMENTAL STUDY OF AERODYNAMIC FOCUSING OF NANOPARTICLES**, XIAOLIANG WANG, TSI Incorporated, St Paul, MN, USA, Peter H. McMurry, University of Minnesota, Minneapolis, MN, USA (p.78)

9C3  
2:40 **A NANO-PARTICLE SAMPLER USING A DIFFERENTIAL MOBILITY ANALYZER AND ITS APPLICATION**, TOSHIHIKO MYOJO, Mariko Ono-Ogasawara, National Institute of Industrial Health, Kawasaki, Japan; Shinji Kobayashi, National Institute for Environmental Studies, Tsukuba, Japan (p.80)

9C4  
3:00 **COMPARISON OF CHARGING EFFICIENCY OF A UNIPOLAR CORONA CHARGER AND A BIPOLAR NEUTRALIZER CONTAINING A RADIOACTIVE SOURCE**, Christian Laschober, WLADYSLAW W. VLADEK SZYMANSKI, Institute of Experimental Physics, University of Vienna, Vienna, Austria; Stanley L. Kaufman, TSI, Inc., St. Paul, MN, USA; Guenter Allmaier, Institute of Chemical Technologies and Analytics, Vienna University of Technology, Vienna, Austria (p.82)

9C5  
3:20 **DESIGN AND DEVELOPMENT OF THE NANOPARTICLE CROSSFLOW DIFFERENTIAL MOBILITY ANALYZER (NCDMA)**, DONG-KEUN SONG, Suresh Dhaniyala, Clarkson University, Potsdam, NY (p.83)

### 9D Respiratory Deposition (Platform)

Governors 2 - 4

*Imre Balashazy, Gedi Mainelis, Chairs*

9D1  
2:00 **EFFECTS OF BRONCHOCONSTRICTION ON PARTICLE DEPOSITION IN BRANCHING PEDIATRIC AIRWAY MODELS**, P. WORTH LONGEST and Samir Vinchurkar, Virginia Commonwealth University, Richmond, VA (p.883)

9D2  
2:20 **SIZE-RESOLVED RESPIRATORY TRACT DEPOSITION OF ULTRAFINE HYDROPHOBIC AND HYGROSCOPIC PARTICLES DURING REST AND EXERCISE MEASURED ON 30 HUMAN SUBJECTS**, JAKOB LÖNDAHL, Andreas Massling, Joakim Pagels, Erik Swietlicki, Lund University, Lund, Sweden, Elvira Vaclavik, Peter Vinzents and Steffen Loft, Institute of Public Health, Copenhagen, Denmark (p.885)

9D3  
2:40 **NUMERICAL STUDIES OF MOUTH-THROAT AEROSOL DEPOSITION USING LARGE EDDY SIMULATION**, Michael Breuer, Institute of Fluid Mechanics, Erlangen, Bavaria, Germany; Edgar Matida, Carleton University, Ottawa, ON, Canada; WARREN FINLAY, University of Alberta, Edmonton, AB, Canada (p.887)

9D4  
3:00 **INFLUENCE OF FLOW VARIATIONS ON DISPERSION OF PHARMACEUTICAL PARTICLES AND THEIR DEPOSITION IN THE STANDARD THROAT MODEL (STM)**, TOMASZ R. SOSNOWSKI, Arkadiusz Moskal, Leon Gradoń, Warsaw University of Technology, Warsaw, POLAND (p.926)

9D5  
3:20 **FIBER DEPOSITION IN THE HUMAN UPPER AIRWAYS**, WEI-CHUNG SU, Yung Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM (p.890)

### 9E Aircraft and Power Plant Emissions (Platform)

Wabasha Suite

*Harry ten Brink, Costas Sioutas, Chairs*

9E1  
2:00 **PHYSICO-CHEMICAL CHARACTERIZATION OF SOOT EMITTED BY A CFM56 AIRCRAFT ENGINE**, DAVID DELHAYE, Eliane Ruiz, ONERA, Châtillon, France; Sébastien Guedon, Olivier Penanhoat, SNECMA Villaroche Center, Moissy-Cramayel, France; Daniel Ferry, Benjamin Demirdjian, Jean Suzanne, CRMCN-CNRS, Marseille, France (p.224)

9E2  
2:20 **AMBIENT PARTICULATE MATTER, BLACK CARBON AND AIR TOXICS EMITTED BY AIRCRAFT**, RONG CHUN YU, Bill Grant, John Froines, University of California at Los Angeles, Constantinos Sioutas, University of Southern California (p.225)

9E3  
2:40 **CASE STUDY OF PARTICULATE EMISSIONS FROM IN-SERVICE C-130 MILITARY AIRCRAFT**, ALEXANDER LASKIN, Pacific Northwest National Laboratory, Richland, WA; Kenneth A. Cowen, Battelle Science and Technology International, Columbus OH; Michael L. Alexander, Yuri Desyaterik, James P. Cowin, Pacific Northwest National Laboratory, Richland, WA; Darrell W. Joseph, C. W. Spicer, Battelle Science and Technology International, Columbus OH (p.227)

9E4  
3:00 **FIELD OBSERVATIONS OF PRIMARY SULFATE AND PRIMARY PARTICULATE CARBON IN COAL-FIRED POWER PLANT PLUMES**, ERIC EDGERTON, Atmospheric Research & Analysis, Inc, 410 Midenhall Way, Cary, NC, 27513, USA; Benjamin Hartsell, Atmospheric Research & Analysis, Inc, 730 Avenue F, Suite 220, Plano, TX, 75074, USA; John Jansen, Southern Company, 600 N. 18th Street, Birmingham, AL, 35291, USA (p.229)

9E5  
3:20 **SEM AND TEM STUDIES OF CFM56 AIRCRAFT ENGINE SOOT : SIZE, STRUCTURE, AND MORPHOLOGY**, DAVID DELHAYE, Eliane Ruiz, ONERA, Châtillon, France; Sébastien Guedon, Olivier Penanhoat, SNECMA Villaroche Center, Moissy-Cramayel, France; Daniel Ferry, Benjamin Demirdjian, Jean Suzanne, CRMCN-CNRS, Marseille, France (p.231)

### 9F Optical Properties of Aerosols (Platform)

Kellogg Suite

*Weiling Li, F. Wagner, Chairs*

9F1  
2:00 **DETERMINING FUNDAMENTAL OPTICAL PROPERTIES OF AMBIENT CARBONACEOUS AEROSOL PARTICLES**, Duncan T. L. Alexander, Peter A. Crozier, JAMES ANDERSON, Arizona State University, Tempe, AZ (p.695)

9F2  
2:20 **CLOSURE STUDY OF IN-SITU AND REMOTE SENSING OBSERVATIONS OF AEROSOL OPTICAL PROPERTIES AT XINKEN IN PEARL RIVER DELTA OF CHINA**, Heike Eichler(1), Ya-Fang Cheng(2), Alfred Wiedensohler(1), Jost Heintzenberg(1), Yuan-Hang Zhang(2), Min Hu(2), Hartmut Herrmann(1), Li-Min Zeng(2), Erika Brüggemann(1), Shang Liu(2), Thomas Gnauk(1), Ling-Yan He(2), (1) Leibniz-Institute for Tropospheric Research, 04318, Leipzig, Germany, (2) College of Environmental Sciences, Peking University, Beijing, China (p.609)

- 9F3 2:40 **PROPERTIES OF ANGSTROM EXPONENT FREQUENCY DISTRIBUTIONS**, FRANK WAGNER, Centro de Geofísica, Évora, PT (p.699)
- 9F4 3:00 **EVALUATION OF AN ITERATIVE METHOD FOR CALCULATING THE EFFECTIVE REAL REFRACTIVE INDEX OF ANTARCTIC BOUNDARY LAYER AEROSOLS**, AKI VIRKKULA, Kimmo Teinilä, Risto Hillamo, Veli-Matti Kerminen, Finnish Meteorological Institute, Research and Development, Helsinki, Finland, Ismo K. Koponen, Department of Chemistry, University of Copenhagen, Copenhagen, Denmark, Markku Kulmala, Department of Atmospheric Sciences, University of Helsinki, Helsinki, Finland (p.701)
- 9F5 3:20 **MULTIPLE SCATTERING MEASUREMENTS USING MULTISTATIC LIDAR**, JIN HYEN PARK, THE PENNSYLVANIA STATE UNIVERSITY, UNIVERSITY PARK, PA, C. R. Philbrick, The Pennsylvania State University, University Park, PA (p.703)
- 9G Aerosol Physics-III (Poster)**  
Garden Court East  
*David Kane, Franco Prodi, Chairs*
- 9G1 2:00 **MODELING THE TRANSPORT OF FLY ASH FROM COAL FIRED POWER PLANTS**, KENNETH NOLL, Obatosin Aluko, Dept. of Chemical and Environmental Engineering, Illinois Institute of Technology, Chicago, IL; Michael Pilat, Department of Civil Engineering, University of Washington, Seattle WA (p.705)
- 9G2 2:00 **RESIDENCE TIME OF ATMOSPHERIC AEROSOLS IN ASSOCIATION WITH RADIOACTIVE NUCLIDES**, CONSTANTIN PAPASTEFANOU<sup>1,2\*</sup>, Alexandra Ioannidou<sup>2</sup>, 1.Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, 37831 USA. 2. Atomic and Nuclear Physics Laboratory, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece. \*Present address. (p.707)
- 9G3 2:00 **FILTER SAMPLING ARTEFACTS IN MEASUREMENTS OF MASS CONCENTRATION OF LUBRICANT OIL MIST DOWNSTREAM OF AN ELECTROSTATIC PRECIPITATOR**, Andrei Bologa, Klaus Woletz, HANNS-RUDOLF PAUR, Institut für Technische Chemie, Forschungszentrum Karlsruhe GmbH, Karlsruhe, Germany (p.709)
- 9G4 2:00 **DETERMINATION OF EXPERIMENTAL CORRELATIONS FOR AEROSOL DEPOSITION INTO CRACKED CONCRETE WALL**, THOMAS GELAIN, Jacques Vendel, Institut de Radioprotection et de Sûreté Nucléaire, Gif-sur-Yvette, France (p.711)
- 9G5 2:00 **PROGRESS IN SEMIEMPIRICAL DESIGN OF THE NUCLEATION RATE SURFACES**, MICHAEL ANISIMOV, Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia (p.713)
- 9G6 2:00 **DETECTING CHARGING STATE OF ULTRA-FINE PARTICLES: INSTRUMENTAL DEVELOPMENT AND AMBIENT MEASUREMENTS**, Stéphanie Gagné, Tuukka Petäjä, LAURI LAAKSO, Pasi Aalto, Markku Kulmala, University of Helsinki, Helsinki, Finland (p.715)
- 9G7 2:00 **THE IMPLEMENTATION OF A DISCRETE NODAL MODEL TO PROBE THE EFFECT OF SIZE-DEPENDENT SURFACE TENSION ON NANOPARTICLE FORMATION AND GROWTH.**, DIBYENDU MUKHERJEE, Anand Prakash and Michael R. Zachariah, University of Maryland, College Park, MD. (p.717)
- 9G8 2:00 **NUCLEATION SIMULATIONS WITH FLUENT-FPM**, ERIK HERRMANN, Markku Kulmala, University of Helsinki, Helsinki, Finland; Antti Hyvärinen, Heikki Lihavainen, Finnish Meteorological Institute, Helsinki, Finland (p.719)

- 9G9  
2:00 **FLUX DENSITY OF VAPOR INTO AEROSOL PARTICLE IN THE PRESENCE OF ADSORBABLE FOREIGN GAS**, VALERI LEVDANSKY, Heat and Mass Transfer Institute NASB, Minsk, Belarus; Jiri Smolik, Vladimir Zdimal, Pavel Moravec, Institute of Chemical Process Fundamentals AS CR, Prague, Czech Republic (p.721)
- 9G10  
2:00 **DYNAMICS OF EVAPORATION OF SMALL WATER CLUSTERS**, Ismo Napari, HANNA VEHKAMÄKI, Department of Physical Sciences, University of Helsinki, Helsinki, Finland (p.722)
- 9G11  
2:00 **QUNTUM NATURE OF THE SIGN PREFERENCE**, ALEXEY NADYKTO; Fangqun Yu, SUNY Albany, ASRC, NY; Anas Al Natsheh, University of Kuopio, Kuopio, Finland (p.723)
- 9G12  
2:00 **A POSSIBLE ORIGIN OF THE ERROR IN THE NUCLEATION RATE CALCULATIONS BY THE CLASSICAL THEORY OF HETEROGENEOUS NUCLEATION**, ANTTI LAURI, Evgeni Zapadinsky, Joonas Merikanto, Hanna Vehkamäki, Markku Kulmala, University of Helsinki, Finland (p.725)
- 9G13  
2:00 **INVESTIGATING AEROSOL PROPERTIES WITH CONDENSATION MODELS**, ILONA RIIPINEN, Heli Hietala, Ville Tilvis, Anca I. Gaman, Timo Vesala, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Finland; Paul M. Winkler, Paul E. Wagner, Institut für Experimentalphysik, Universität Wien, Austria; Kari E.J. Lehtinen, Finnish Meteorological Institute and University of Kuopio, Finland (p.727)
- 9G14  
2:00 **COMPARISON BETWEEN MONTE CARLO NUCLEATION SIMULATIONS AND THE CLASSICAL NUCLEATION THEORY**, JOONAS MERIKANTO, Evgeni Zapadinsky, Hanna Vehkamäki, Antti Lauri, Department of Physical Sciences, University of Helsinki, Finland (p.729)
- 9G15  
2:00 **ROLE OF ELECTRICAL CONDUCTIVITY ON CHARGE INSTABILITY INDUCED BREAKUPS OF DROPLETS**, HARRY HUNTER and Asit K. Ray, Department of Chemical Engineering, University of Kentucky, Lexington, KY 40506-0045, USA (p.730)
- 9G16  
2:00 **A KINETICALLY CORRECT MODEL FOR HETEROGENEOUS NUCLEATION**, Anni Määttänen, HANNA VEHKAMÄKI, Antti Lauri, Ismo Napari, Markku Kulmala, University of Helsinki, Finland; Paul E. Wagner, Universität Wien, Austria (p.731)
- 9G17  
2:00 **PARTICLE FORMATION BY OZONOLYSIS OF INDUCIBLE PLANT VOLATILES**, PASI MIETTINEN, Department of Applied Physics, University of Kuopio, Kuopio, Finland; Jarmo Holopainen, Department of Ecology and Environmental Science, University of Kuopio, Kuopio, Finland; Jorma Joutsensaari, Department of Environmental Sciences, University of Kuopio, Kuopio, Finland; (p.733)
- 9G18  
2:00 **ANTI-CORRELATIONS OF PARTICLE MODES AND FRAGMENTATION THEOREM FOR COMBUSTION AEROSOLS**, DMITRI K. GRAMOTNEV, Galina Gramotnev, Applied Optics Program, School of Physical and Chemical Science, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia (p.734)
- 9G19  
2:00 **EVAPORATIVE COOLING OF AEROSOL DROPLETS AND NANOPARTICLES GROWTH IN A LOW PRESSURE AEROSOL REACTOR**, SERGEY P. FISENKO, National Academy of Sciences, Minsk, Belarus; WEI-NING WANG, I. Wuled Lenggoro, Kikuo Okuyama, Hiroshima University, Higashi-Hiroshima, Japan (p.736)
- 9G20  
2:00 **PHYSICAL CHARACTERISATION OF ATMOSPHERIC AEROSOL PARTICLES OVER AN "URBAN-COASTAL ZONE"**, AUROMEET SAHA, Serge Despiauw, Tathy Missamou, Université du Sud Toulon-Var, France (p.738)

- 9G21 2:00 **PARAMETERIZATION OF AEROSOL SIZE DISTRIBUTION USING CONSTRAINED MATRIX FACTORIZATION.**, HEIKKI JUNNINEN, Markku Kulmala; University of Helsinki, Helsinki, Finland (p.740)
- 9G22 2:00 **MEASUREMENTS OF THERMOPHORETIC VELOCITIES OF AEROSOL PARTICLES IN MICROGRAVITY CONDITIONS IN DIFFERENT CARRIER GASES.** FRANCO PRODI, Gianni Santachiara, Lorenza Di Matteo, Institute ISAC-CNR, Bologna, Italy, Andrei Vedernikov, Microgravity Research Center, Université Libre de Bruxelles, Belgium, Sergey Beresnev, Vladimir Chernyak, Ural State University, Ekaterinburg, Russia (p.741)
- 9G23 2:00 **DETERMINATION OF THE EFFECTIVE DENSITY OF FRACTAL AGGREGATES BY SERIAL ANALYSIS OF ELECTRICAL MOBILITY AND AERODYNAMIC DIAMETERS: ESTABLISHMENT OF A DENSITY PROFILE FROM PRIMARY PARTICLES TO AGGREGATES.**, FRANCOIS-XAVIER OUF, Jacques Vendel, Institut de Radioprotection et de Sûreté Nucléaire, Laboratoire de Physique et Métrologie des Aérosols, Gif-sur-Yvette Cedex, France; Alexis Coppalle, Marc-Emmanuel Weill, Jérôme Yon, Complexe de Recherche Interprofessionnelle en Aérothermochimie, UMR 6614, Saint-Etienne du Rouvray Cedex, France (p.742)
- 9G24 2:00 **EFFECT OF DIESEL PARTICLES ON THE PHOTOCHEMICAL REACTIONS OF DIESEL EXHAUST-TOLUENE MIXTURE,** Seung-Bok Lee, GWI-NAM BAE, Kil-Choo Moon, Korea Institute of Science and Technology, Seoul, Korea; Mansoo Choi, Seoul National University, Seoul, Korea (p.744)
- 9G25 2:00 **AEROSOL DISPERSION MODELING WITH PROBABILISTIC IMPLICIT PARTICLE TRACKING ALGORITHM,** ANDREI SMIRNOV, Steven Rowan, James McCormick, West Virginia University, Morgantown, WV (p.745)
- 9H **Biomass Combustion and Organic Emissions (Poster)**  
Garden Court East  
*P. Yli-Pirila, James Schauer, Chairs*
- 9H1 2:00 **NEW ESTIMATION METHOD OF GASEOUS POLLUTANTS EMISSIONS FROM DIESEL LOCOMOTIVES,** DUCKSHIN PARK, Youngmin Cho, Korea Railroad Research Institute, Uiwang, Kyonggi, Korea; Dongsool Kim, Kyunghee University, Yongin, Kyonggi, Korea (p.232)
- 9H2 2:00 **EMISSIONS OF POLYBROMINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS FROM THE PYROLYSIS OF PRINTED CIRCUIT BOARDS,** Yi-Chieh Lai, Wen-Jhy Lee, National Cheng Kung University, Tainan, Taiwan; Lin-Chi Wang, Guo-Ping Chang-Chien, Cheng-Shiu University, Kaohsiung, Taiwan (p.234)
- 9H4 2:00 **FINE PARTICLE AND TOXIC HEAVY METAL EMISSIONS FROM WASTE INCINERATION,** JOUNI HOKKINEN, Carl Wilen, Antero Moilanen, VTT Technical Research Centre of Finland, Jorma K. Jokiniemi, VTT Technical Research Centre of Finland and University of Kuopio, Department of Environmental Sciences, Fine Particle and Aerosol Technology Laboratory, Risto Hillamo, Ulla Makkonen, Karri Saarnio, Finnish Meteorological Institute (p.238)
- 9H5 2:00 **THE EFFECTS OF SULFUR AND CHLORINE ADDITIVES ON PARTICLE FORMATION IN WOOD COMBUSTION,** OLLI M. J. SIPPULA, Jorma K. Jokiniemi, University of Kuopio, Department of Environmental Sciences, Fine Particle and Aerosol Technology Laboratory, Kuopio, Finland, Terttaliisa Lind, Jorma K. Jokiniemi, VTT Technical Research Center of Finland, Fine Particles, Espoo, Finland (p.239)

- 9H6  
2:00 **RESIDENTIAL BIOMASS COMBUSTION AEROSOLS - INFLUENCE OF COMBUSTION CONDITIONS ON PHYSICAL AND CHEMICAL PARTICLE CHARACTERISTICS**, JOAKIM PAGELS, Jenny Rissler, Andreas Massling, Jakob Löndahl, Erik Swietlicki, Lund University, Lund, Sweden; Christoffer Boman, Umeå University, Umeå, Sweden (p.240)
- 9H7  
2:00 **PARTICLE EMISSIONS FROM TWO DISTRICT HEATING UNITS OPERATING ON BIOFUEL AND HEAVY FUEL OIL**, PASI YLI-PIRILÄ, Olli Sippula, Pentti Willman, Jorma Jokiniemi, University of Kuopio, Kuopio, Finland; Jouni Hokkinen, Harri Puustinen, Jorma Jokiniemi, Technical Research Centre of Finland, Espoo, Finland (p.242)
- 9H8  
2:00 **FINE PARTICLE CHARACTERISATION BY ELECTRON MICROSCOPY IN A SMALL SCALE MASONRY HEATER DURING POOR AND GOOD COMBUSTION CONDITIONS**, Jorma Jokiniemi, JUSSI LYYRÄNEN, Unto Tapper, VTT Technical Research Centre of Finland, Fine Particles; Jorma Jokiniemi, Jarkko Tissari, University of Kuopio, Fine Particle and Aerosol Technology Laboratory (p.244)
- 9H9  
2:00 **PAH EMISSIONS FROM A MASONRY HEATER IN SMALL SCALE WOOD COMBUSTION**, KATI HYTÖNEN, Jarkko Tissari, Pasi Yli-Pirilä, Jorma Jokiniemi, University of Kuopio, Kuopio, Finland; Jorma Jokiniemi, VTT Technical Research Center, Espoo, Finland (p.245)
- 9H10  
2:00 **INVESTIGATION OF FIRE SMOKE SPREAD IN A TOWNHOUSE BUILDING**, C.S. Lin, S. C. WANG, C.B. Huang, Yuan Ze University, Taiwan, ROC. (p.247)
- 9H11  
2:00 **UNDERSTANDING THE ORIGIN OF CARBONACEOUS AEROSOLS IN THE NORTHERN INDIAN OCEAN**, ELIZABETH A. STONE, James Schauer, University of Wisconsin-Madison, Madison, WI (p.249)
- 9H Materials Synthesis-I (Poster)**  
Garden Court East  
*Jorma Jokiniemi, Wuled Lengoro, Chairs*
- 9H12  
2:00 **A NEW DESIGN OF THE ELECTROSPRAY PYROLYSIS SYSTEM USING PREMIXED FLAME AND SYNTHESIS OF CERIA NANOPARTICLES**, HYUNCHEOL OH, Sangsoo Kim, KAIST, Daejeon, Republic of Korea (p.32)
- 9H13  
2:00 **FLAME SYNTHESIS OF LINI1-Y-ZMNYCOZO2 NANOPARTICLES USING AN ULTRASONIC ATOMIZER**, HEE DONG JANG, Hankwon Chang, Korea Institute of Geoscience and Mineral Resources, Korea; Churl-Kyoung Lee, Kumoh National Institute of Technology, Korea (p.33)
- 9H14  
2:00 **TWO-STAGE SPRAY PYROLYSIS NANOPARTICLE GENERATOR**, Shang-Cong Cheng, Curtis Fekety, ANDREY FILIPPOV, Damon Osterhout, Carlton Truesdale, Marc Whalen, Sullivan Park Research Center, Corning, NY. (p.35)
- 9H15  
2:00 **PRODUCTION OF SILVER NANOPARTICLE BY DC PLASMA JET**, Sang Hoon Lee, DONG-WHA PARK, Inha University, Incheon, Korea; Seung-Min Oh, Daejoo Electronic Material Co., Siheung-shi, Kyunggi-do, Korea (p.36)
- 9H16  
2:00 **AEROSOL SYNTHESIS OF NANOPOROUS SILICA**, RAGHURAMAN PITCHUMANI, Physical Chemistry and Molecular Thermodynamics & Nanostructured Materials, DelftChemTech, Delft University of Technology, Delft, The Netherlands; Marc-Olivier Coppens, Physical Chemistry and Molecular Thermodynamics, DelftChemTech, Delft University of Technology, Delft, The Netherlands; Andreas Schmidt-Ott, Nanostructured Materials, DelftChemTech, Delft University of Technology, Delft, The Netherlands (p.38)



9H17  
2:00 **HIGHLY POROUS NANOSTRUCTURED MATERIALS FROM IMPACTED NANOPARTICLES**, CHRISTIAN PEINEKE and Andreas Schmidt-Ott, DCT/ Nanostructured Materials, Delft University of Technology, Delft, The Netherlands (p.39)

9H19  
2:00 **AEROSOL GROWTH OF CARBON NANOTUBES ON BIMETALLIC NANOCOMPOSITE PARTICLES PRODUCED BY SPRAY PYROLYSIS**, SOO H. KIM, Michael R. Zachariah, University of Maryland, College Park, MD and National Institute of Standards and Technology, Gaithersburg, MD (p.41)

9H20  
2:00 **SILVER NANOPARTICLES BY SUPERSONIC NOZZLE EXPANSION: SYNTHESIS AND THERMAL CHARGING**, JAE HEE JUNG, Sang Soo Kim, Korea Advanced Institute of Science and Technology, Daejeon, KOREA. (p.42)

9H21  
2:00 **SYNTHESIS OF THE METAL NANOPARTICLES USING FLAT PLATE TYPE HEATER**, JAE HEE JUNG, Hyun Cheol Oh, Sang Soo Kim, Korea Advanced Institute of Science and Technology, Daejeon, KOREA., Hyung Soo Noh, Jun Ho Ji, Samsung Electronics, Suwon, KOREA. (p.43)

9H22  
2:00 **GENERATION OF UNAGGLOMERATED NANOPARTICLES BY LASER ABLATION IN THE SOLUTION WITH UNIPOLAR CHARGE BY ELECTROSPRAY**, Joonghyuk Kim, Sangbok Kim and Sang Soo Kim, KAIST, Daejeon, Republic of Korea (p.44)

9H23  
2:00 **ONE-STEP PREPARATION OF BARIUM TITANATE NANOPARTICLES VIA AN AEROSOL ROUTE**, WEI-NING WANG, I. Wuled Lenggoro, Kikuo Okuyama, Hiroshima University, Higashi-Hiroshima, Japan (p.45)

9H24  
2:00 **COATING CARBON NANOTUBES WITH AEROSOL NANOPARTICLES**, Ganhua Lu, JUNHONG CHEN, University of Wisconsin-Milwaukee, Milwaukee, WI (p.46)

9H25  
2:00 **EFFECTS OF PULSE MODULATIONS ON PARTICLE GROWTH IN SILANE PLASMA REACTOR**, DONG-JOO KIM and Kyo-Seon Kim, Department of Chemical Engineering, Kangwon National University, Chuncheon, Kangwon-Do, Korea (p.47)

9H27  
2:00 **EFFECT OF OPERATING CONDITIONS ON THE CHARACTERISTICS OF MICRO- AND NANO-POWDERS SYNTHESIZED BY SPRAY DRYING AND PYROLYSIS**, MORTEZA ESLAMIAN, Nasser Ashgriz, Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, ON, Canada (p.49)

### Wednesday 3:40 PM - 4:00 PM

#### Coffee Break

Great River Ballroom, Garden Courts East & West

### Wednesday 4:00 PM - 5:20 PM

#### Session 10

#### 10A Urban Aerosol-V (Platform)

Minnesota Ballroom

*Kaarle Hämeri, S. Sobanska, Chairs*

10A1  
4:00 **SMALL SCALE VARIABILITY OF THE URBAN AEROSOL IN LEIPZIG, GERMANY**, THOMAS M. TUCH, Dieter Bake, Wolfram Birmili, Ulrich Franck, Korinna König, Maik Schilde, Andre Sonntag, Alfred Wiedensohler, Department of Human Exposure Research and Epidemiology, UFZ Centre for Environmental Research, Department of Physics, Leibniz Institute for Tropospheric Research, , Federal Environmental Agency, Berlin, Germany (p.1818)

10A2  
4:20 **ELEMENTAL AND MOLECULAR MICRO IMAGING OF URBAN AEROSOL PARTICLES FROM A COASTAL CITY**, Juliette Rimetz, SOPHIE SOBANSKA, Jacky Laureyns, Claude Brémard, Laboratoire de Spectrochimie Infrarouge et Raman, Villeneuve d'Ascq, France; Espéranza Perdrix, Ecole des Mines de Douai, France. (p.1820)

10A3  
4:40 **EMISSIONS AND CONCENTRATIONS OF SIZE DISTRIBUTED NUMBERS OF SUBMICROMETER URBAN PARTICLES**, SARA JANHÄLL, Magnus Hagström, Mattias Hallquist, Ardhendu Shannigrahi, Department of Chemistry, Atmospheric Science, Göteborg University, Sweden (p.1821)

10A4  
5:00 **URBAN-SCALE VARIABILITY OF AMBIENT PARTICULATE MATTER ATTRIBUTES**, TAL FREIMAN, Nurit Hirshel and David Broday, Technion - Israel Institute of Technology, Haifa, Israel (p.1822)

### 10B CCN Regional Effects (Platform)

Capitol Ballroom

*John Ogren, Cynthia Twohy, Chairs*

10B1  
4:00 **CCN ACTIVITY OF CLOUD PROCESSED ORGANIC AEROSOL COLLECTED DURING MASE 2005**, AKUA ASA-AWUKU, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Armin Sorooshian, John H. Seinfeld, California Institute of Technology, Pasadena, CA (p.1365)

10B2  
4:20 **MEASURING WATER-AEROSOL INTERACTIONS DOWNWIND OF MEXICO CITY: INFERENCES ABOUT CHEMICAL COMPOSITION AND AGING OF AMBIENT AEROSOLS**, SARA LANCE, Timothy VanReken, Matthew J. Dunn, James N. Smith, National Center for Atmospheric Research, Boulder, CO; Luz Padro, Akua Asa-Awuku, Amy Sullivan, Rodney Weber, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Michael Hannigan, University of Colorado, Boulder, CO (p.1367)

10B3  
4:40 **CHARACTERISTICS OF CLOUD CONDENSATION NUCLEI AND ICE NUCLEI IN DIFFERENT CLOUD TYPES AND REGIONS**, CYNTHIA TWOHY, Oregon State University, Corvallis, OR; James Anderson, Peter Crozier, Arizona State University, Tempe, AZ; James Hudson, Desert Research Institute, Reno, NV (p.1369)

10B4  
5:00 **THE EFFECT OF PREEXISTING AMMONIUM SULFATE SEED AEROSOL ON SECONDARY ORGANIC AEROSOL FORMATION IN IRRADIATED TOLUENE/NOX/AIR MIXTURES**, ZIFENG LU, Jiming Hao, Junhua Li, Shan Wu, Zhe Zhao, Tsinghua University, Beijing, CN; Hideto Takekawa, Toyota Central Research and Development Laboratory, Nagakute, Aichi, JP (p.1370)

### 10C Nanoparticle Measurement and Characterization (Platform)

Governors 1 & 5

*Vladek Szymanski, Alfred Weber, Chairs*

10C1  
4:00 **FIRST LDA MEASUREMENT OF NANOPARTICLE VELOCITIES IN LOW PRESSURE JETS**, ALFRED P. WEBER, Clausthal University of Technology, Germany, Kerstin Reuter, Gerhard Kasper, University of Karlsruhe, Germany, Stefan Roesler, University of Applied Sciences of Esslingen, Germany (p.84)

10C2  
4:20 **DESIGN, PERFORMANCE AND APPLICATION OF A NANO-AEROSOL MASS SPECTROMETER (NAMS) FOR CHEMICAL CHARACTERIZATION OF INDIVIDUAL AIRBORNE NANOPARTICLES**, Shenyi Wang, Christopher A. Zordan, MURRAY V. JOHNSTON, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE (p.86)

10C3  
4:40 **FIELD EXPERIENCES WITH A NEW KIND OF SMPS+E**, CHRISTIAN GERHART, Thomas Rettenmoser, Hans Grimm, Grimm Aerosol Technik GmbH, Ainring, Germany, Mathias Richter, GIP GmbH, Pouch, Germany (p.88)

10C4  
5:00 **COMPARISON OF TWO METHODS FOR ESTIMATING SURFACE AREA CONCENTRATION USING NUMBER AND MASS CONCENTRATIONS**, JI YOUNG  
PARK, Gurumurthy Ramachandran, Peter C. Raynor, Lynn E. Eberly, University of Minnesota, Minneapolis, MN; Andrew D. Maynard, Woodrow Wilson International Center for Scholars Project on Emerging Nanotechnologies, Washington, D.C., MD (p.89)

#### 10D Pharmaceutical Aerosols (Platform)

Governors 2 - 4

*Bahman Asgharian, Tomasz Ciach, Chairs*

10D1  
4:00 **PULSED-CONTROLLED GROUPING OF MEDICAL AEROSOL PARTICLES - A NEW ADMINISTRATION CONCEPT**, TAL SHAKKED, David Katoshevski, Institute for Applied Biosciences, Ben-Gurion University of the Negev, Israel (p.892)

10D2  
4:20 **RAPID SPRAY-FREEZE-DRYING, HIGH EFFICIENCY INHALATION DELIVERY FOR POWDERS CONTAINING ANTI-CANCER CONTAINING DRUG-LOADED NANOPARTICLES**, Lyle G. Sweeney, Zhaolin L. Wang, WARREN H. FINLAY, M. Peppler, Hua Chen, Raimar Loebenberg, Wilson Roa, University of Alberta, Edmonton, Canada (p.894)

10D3  
4:40 **ELECTROHYDRODYNAMIC SPRAYING OF LIPID NANOPARTICLES FOR DRUG DELIVERY**, YUN WU, Weiwei Hu, Jeffrey Chalmers, and Barbara Wyslouzil, Department of Chemical and Biomolecular Engineering, The Ohio State University, Columbus, OH (p.896)

10D4  
5:00 **EFFECT OF AIRFLOW TURBULIZERS ON AEROSOL EMISSION FROM A POWDER LAYER**, TOMASZ R. SOSNOWSKI, Pawel; Bernatek, Leon Gradon; Warsaw University of Technology, Warsaw, POLAND (p.898)

#### 10E Biomass Combustion (Platform)

Wabasha Suite

*Matti Maricq, Judith Chow, Chairs*

10E1  
4:00 **FINE PARTICLE EMISSIONS FROM RURAL HOUSEHOLD BIOFUEL COMBUSTION IN CHINA**, XINGHUA LI, Jiming Hao, Lei Duan, Jingchun Duan, Xingming Guo, Honghong Yi, Tsinghua University, Beijing, China (p.250)

10E2  
4:20 **EMISSION COMPARISON OF THE POOR AND GOOD COMBUSTION OF WOOD IN THE SMALL MASONRY HEATER**, JARKKO TISSARI. Kati hytönen, Pasi Yli-Pirilä, Valteri Suonmaa, Timo Turrek, Pentti Willman, Jorma Jokiniemi, University of Kuopio, Jussi Lyyränen, VTT, Technical Research Centre of Finland (p.252)

10E3  
4:40 **EMISSION FACTORS FOR CARBON MONOXIDE, ELEMENTAL CARBON, AND LIGHT ABSORPTION FROM LABORATORY COMBUSTION OF WILDLAND FUELS**, L.-W. Antony Chen, Hans Moosmüller, W. Pat Arnott, Judith Chow, John Watson, Desert Research Institute, Reno, NV; Ronald Susott, Ronald Babbitt, Cyle Wold, Emily Lincoln. Wei Min Hao, USDA Forest Service, Missoula, MT (p.254)

10E4  
5:00 **EFFECT OF FLUE GAS RE-CIRCULATION AND FUEL GASIFICATION ON FINE PARTICLE EMISSIONS FROM A SMALL-SCALE BIOMASS POWER PLANT**, ERKKI LAMMINEN, Elina Nieminen, Henna Tuomenoja, Ville Niemelä, Ari Ukkonen, Dekati Ltd., Tampere, Finland (p.256)

#### 10F Modeling Aerosol Properties (Platform)

Kellogg Suite

*Lynn Russell, Ari Laaksonen, Chairs*

10F1  
4:00 **MONTE CARLO SIMULATION OF DEPOSIT FORMATION FROM AEROSOL PARTICLES**, JOSE L. CASTILLO, Daniel Rodriguez-Perez, J. Carlos Antoranz, UNED, Madrid (Spain) (p.747)

- 10F2 **MOLECULAR DYNAMICS SIMULATIONS OF DELIQUESCENCE IN ATMOSPHERIC IONIC NANOPARTICLES**, RANJIT BAHADUR, Lynn M. Russell, Scripps Institution of Oceanography, La Jolla CA; Scot T. Martin, Harvard University, Cambridge MA; Peter R. Buseck, Arizona State University, Tempe AZ (p.749)
- 10F3 **THE EFFECT OF SURFACTANT PARTITIONING ON CRITICAL SUPERSATURATION OF CLOUD DROPS: A GENERALIZED APPROACH**, RIIKKA SORJAMAA, Ari Laaksonen, University of Kuopio, Department of Applied Physics, Kuopio, Finland (p.751)
- 10F4 **IMPLEMENTATION IN FLUENT OF A NEW STOCHASTIC MODEL FOR PARTICLE DISPERSION IN TURBULENT FLOWS**, ABDELOUAHAB DEHBI, Paul Scherrer Institute, Villigen, Switzerland, W. Timm, Fluent Deutschland GmbH (p.753)
- 10G Aerosol Chemistry-II (Poster)**  
Garden Court East  
*Astrid Kiendler-Scharr, Michael Zachariah, Chairs*
- 10G1 **SURFACE MODIFICATIONS OF MULTI-WALLED CARBON NANOTUBES**, YU-CHUN CHIANG, Chen-Yueh Lee, Yuan Ze University, Taoyuan, Taiwan, Chien-Cheng Lee, Yuan Ze University, Taoyuan, Taiwan (p.1051)
- 10G2 **TOPOLOGIES OF NUCLEATION RATE SURFACES FOR LASER ABLATION OF SOLIDS**, MICHAEL ANISIMOV, Anatoli M. Baklanov, and Tat'yana I. Golavskaya, Institute of Chemical Kinetics and Combustion SBRAS, 630090, Novosibirsk, Russia. E-mail: anisimovmp@mail.ru; Philip K. Hopke, Clarkson University, Box 5708, NY 13699-5708, Potsdam, USA (p.1053)
- 10G3 **MULTI-CHANNEL VAPOR NUCLEATION: SEQUENCE OF DIFFERENT PHASE GENERATION**, MICHAEL ANISIMOV, Institute of Kemical Kinetics and Combustion SBRAS, 630090, Novosibirsk, Russia, E-mail: anisimovmp@mail.ru; Vladimir Akimov, Department of Mechanics, Fare Eastern University of Transport, 68022, Khabarovsk, Russia (p.1055)
- 10G4 **A COMPARISON OF I2O5 AND SIO2 NANOPARTICLE MORPHOLOGIES AND GROWTH MECHANISMS**, RUSSELL SAUNDERS, John Plane, University of Leeds, UK (p.1057)
- 10G5 **KINETICS, THERMODYNAMICS AND COAGULATION STUDIES OF MANIPULATED AEROSOL DROPLETS**, JARIYA BUAJARERN, Laura Mitchem, Jonathan P. Reid, University of Bristol, Bristol, UK; Andrew D. Ward, CCLRC, Rutherford Appleton Laboratory, Didcot, UK (p.1058)
- 10G6 **GROWTH KINETICS MEASUREMENT OF AEROSOL CARBON NANOTUBES BY ELECTRICAL MOBILITY CLASSIFICATION**, SOO H. KIM, Michael R. Zachariah, University of Maryland, College Park, MD and National Institute of Standards and Technology, Gaithersburg, MD (p.1059)
- 10G7 **EFFECT OF CHARGE-DIPOLE INTERACTION ON THE EVAPORATION OF POLAR MOLECULES FROM CHARGED CLUSTERS**, FANGQUN YU, State University of New York at Albany, Albany, NY (p.1060)
- 10G8 **COMPONENT AND MORPHOLOGY BIASES ON QUANTIFYING SIZE AND COMPOSITION OF NANOPARTICLES USING SINGLE-PARTICLE MASS SPECTROMETRY**, LEI ZHOU, Ashish Rai and Michael R. Zachariah, Department of Mechanical Engineering and Department of Chemistry and Biochemistry, University of Maryland, College Park, 20742, USA (p.1062)

- 10G9 4:00 **THERMODYNAMIC CONSIDERATION OF THE CONTRIBUTION OF CARBOXYLIC AND DICARBOXYLIC ACIDS TO ATMOSPHERIC ORGANIC PARTICULATE MATTER VIA ESTER AND AMIDE FORMATION**, KELLEY BARSANTI, James Pankow, Oregon Health & Science University, Portland, OR (*p.1063*)
- 10G10 4:00 **ADVANCES IN COMPUTATIONALLY EFFICIENT ACTIVITY COEFFICIENT ESTIMATION METHOD FOR LARGE-SCALE ATMOSPHERIC MODELING**, ELSA I. CHANG and James F. Pankow, Oregon Health & Science University, Beaverton, OR (*p.1064*)
- 10G11 4:00 **REACTIVITY OF ORGANIC AEROSOL MIXTURES: USING COMPOUND-SPECIFIC UPTAKE COEFFICIENTS TO FOLLOW REACTION STOICHIOMETRY**, AMY M. SAGE, Emily A Weitkamp, Allen L. Robinson, Neil M. Donahue, Center for Atmospheric Particle Studies, Carnegie Mellon University, Pittsburgh, PA (*p.1065*)
- 10G12 4:00 **MECHANISM REDUCTION FOR THE FORMATION OF SECONDARY ORGANIC AEROSOL FOR INTEGRATION INTO A 3-DIMENSIONAL REGIONAL AIR QUALITY MODEL**, ADAM G. XIA, Diane V. Michelangeli, Center for Atmospheric Chemistry, York University, Toronto, Canada; Paul Makar, Air Quality Research Division, Environment Canada, Toronto, Canada (*p.1067*)
- 10G13 4:00 **MODELING HETEROGENEOUS ACID CATALYZED SECONDARY ORGANIC AEROSOL MASS PRODUCTION OF TERPENE OZONOLYSIS REACTIONS IN PRESENCE OF INORGANIC ACID**, AMANDA NORTH CROSS and Myoseon Jang, University of North Carolina (*p.1069*)
- 10G14 4:00 **SECONDARY ORGANIC AEROSOL FORMATION FROM OXIDATION OF TOLUENE BY OH RADICALS FROM PHOTOLYSIS OF H<sub>2</sub>O<sub>2</sub> IN THE ABSENCE OF NO<sub>x</sub>**, GANG CAO, Myoseon Jang, The University of North Carolina at Chapel Hill, Chapel Hill, NC (*p.1070*)
- 10G16 4:00 **ISOPRENE AND ALPHA-PINENE OXIDATION PRODUCTS IN BOREAL FOREST AEROSOLS FROM HYYTIÄLÄ, FINLAND, DURING A 2005 SUMMER PERIOD**, IVAN KOURTCHEV, Magda Claeys, Department of Pharmaceutical Sciences, University of Antwerp (Campus Drie Eiken), Wilrijk, Belgium, Taina Ruuskanen, Anni Reissell, Markku Kulmala, Department of Physical Sciences, Division of Atmospheric Sciences, University of Helsinki, Helsinki, Finland, Xuguang Chi, Willy Maenhaut, Department of Analytical Chemistry, Institute for Nuclear Sciences, Ghent University, Ghent, Belgium (*p.1072*)
- 10G17 4:00 **STABLE COMPLEXES OF FORMIC ACID WITH SULFURIC ACID AND ITS HYDRATES**, ALEXEY NADYKTO; Fangqun Yu, SUNY at Albany, ASRC, Albany, NY (*p.1073*)
- 10G18 4:00 **CHEMICAL CHARACTERIZATION OF PARTICLE NUCLEATION PRODUCTS FORMED DURING THE OZONOLYSIS OF VARIOUS MONOTERPENES USING MASS SPECTROMETRY**, KATHERINE J. HEATON and Murray V. Johnston, University of Delaware, Newark, DE (*p.1074*)
- 10G19 4:00 **WATER CLUSTERS IN THE BACKGROUND OF PARTICLE FORMATION EVENTS**, Tiia-Ene Parts, Aare Luts, and MARKO VANA, Institute of Environmental Physics, University of Tartu, Estonia (*p.1076*)
- 10G20 4:00 **EVAPORATION RATES AND VAPOUR PRESSURES OF MALONIC, SUCCINIC AND GLUTARIC ACIDS IN AQUEOUS SOLUTIONS**, ILONA RIIPINEN, Anca I. Gaman, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Finland; Ismo K. Koponen, Thomas Rosenorn, Merete Bilde, Department of Chemistry, University of Copenhagen, Denmark; Kari E.J. Lehtinen, Finnish Meteorological Institute and University of Kuopio, Finland (*p.1078*)

10G21 **CHEMISTRY OF SECONDARY ORGANIC AEROSOL FORMATION FROM REACTIONS OF NO<sub>3</sub> AND OH RADICALS WITH LINEAR AND CYCLIC ALKENES**, AIKO MATSUNAGA, Paul J. Ziemann, Air Pollution Research Center, University of California, Riverside, CA (p.1080)

10G22 **FORMATION OF SECONDARY ORGANIC AEROSOL FROM REACTIONS OF OH RADICALS WITH LINEAR, BRANCHED, AND CYLIC ALKANES UNDER HIGH AND LOW NO<sub>x</sub> CONDITIONS**, YONG BIN LIM, Paul J. Ziemann, Air Pollution Research Center, University of California, Riverside, CA (p.1081)

### 10H Materials Synthesis-II (Poster)

Garden Court East

*Knut Deppert, Goodarz Ahmadi, Chairs*

10H1 **DEVELOPMENT OF PRISTINE AND DOPED IRON OXIDE NANO EMULSION SYSTEMS AS A VEHICLE FOR TARGETED DRUG DELIVERY**, SOUBIR BASAK, Department of Chemical Engineering, Washington University in Saint Louis, MO; Greg Lanza, School of Medicine, Washington University in Saint Louis, MO; Pratim Biswas, Department of Chemical Engineering, Washington University in Saint Louis, MO (p.51)

10H2 **DIELECTRIC COATING THICKNESS IN CORE-SHELL MICRO/NANOCAPSULES FROM ELECTRIFIED COAXIAL JETS**, ALVARO G. MARÍN, Universidad de Sevilla, Sevilla, Spain, Ignacio G. Loscertales, Universidad de Málaga, Málaga, Spain, Antonio Barrero, Universidad de Sevilla, Sevilla, Spain (p.53)

10H3 **FUNCTIONAL SURFACE COATINGS WITH THIN POLYMER FILMS PROCESSED AT ATMOSPHERIC PRESSURE BY POST-DISCHARGE ELECTRO-SPRAY**, JP BORRA, Ludovic Tatoulian, Laboratoire de Physique des Gaz et des Plasmas CNRS, France, Michael Tatoulian, Farzy Arefi, Jacques Amouroux, Laboratoire de Génie des Procédés Plasma et Traitement de Surface, ENSCP-Paris VI University, Paris; Diego Mantovani, Département de Génie des mines et des matériaux, Laval University, Quebec (p.54)

10H4 **ELECTROSPRAYING OF INDIVIDUAL COLLOIDAL NANOPARTICLES FOR SEEDING THE GROWTH OF NANOWIRES**, Zhaoxia Bi, P.H. Michael Böttger, Kimberly A. Dick, Martin N.A. Karlsson, KNUT DEPPERT, Lund University, Sweden (p.56)

10H5 **SYNTHESIS OF NANOSTRUCTURES COMPOSED OF CARBON NANOTUBES ON MICRON-FIBROUS METAL FILTERS AND ITS EFFECT ON FILTRATION PERFORMANCE**, SEOK JOO PARK, Korea Institute of Energy Research, Korea;; Dong Geun Lee, Chungnam National University, Korea (p.58)

10H6 **SYNTHESIS OF SINGLE-WALLED CARBON NANOTUBES IN OXY-FUEL INVERSE DIFFUSION FLAMES WITH ONLINE DIAGNOSTICS**, CHAD UNRAU, Richard Axelbaum, Pratim Biswas, Washington University, St. Louis, MO; Phil Fraundorf, University of Missouri-St. Louis, St. Louis, MO (p.60)

10H7 **ANALYSIS ON PARTICLE COATING IN THE ROTATING PLASMA CHEMICAL VAPOR DEPOSITION PROCESS**, DONG-JOO KIM and Kyo-Seon Kim, Department of Chemical Engineering, Kangwon National University, Chuncheon, Kangwon-Do, Korea (p.62)

10H8  
4:00 **NANOPARTICLE PATTERNING THROUGH ELECTROSPRAY OF NANOPARTICLE SUSPENSION**, D. S. Kim, H. C. Lee, J. Suh, K. Jun, J. Lee, M. CHOI, National CRI Center for Nano Particle Control, Seoul National University, Seoul, Korea; (Present address - J. Suh: Samsung Electronics, Gyeonggi-do, Korea) (p.63)

10H9  
4:00 **AN ELECTROSPRAY METHOD FOR NANOPARTICLE COATING**, Changkeun Lee, KIMIN JUN, Mansoo Choi, Seoul National University, Seoul, Korea (p.64)

10H10  
4:00 **DEPOSITION OF TiO<sub>2</sub>-NANOPARTICLES ON A STEEL SURFACE IN LIQUID FLAME SPRAY METHOD**, JYRKI M MÄKELÄ, Helmi Keskinen, Mikko Aromaa, Erkki Levänen, Tapio Mäntylä, Tampere University of Technology, Tampere, Finland (p.65)

10H11  
4:00 **DISTINCTION BETWEEN SIZE EFFECT AND SPECIFIC SURFACE AREA EFFECT IN THE GAS SENSING BEHAVIOR OF SnO<sub>1.8</sub>:Ag MIXED NANOPARTICLE FILMS**, Rakesh K. Joshi, F. EINAR KRUIS, Dept. of Engineering Sciences, University of Duisburg-Essen, Duisburg (p.66)

10H12  
4:00 **THE PRODUCTION OF NANOPARTICLES USING A LASER ASSISTED AEROSOL REACTOR**, JAN VAN ERVEN, Zhao Fu, Tomek Trzeciak, Jan Marijnissen, Delft University of Technology, Delft, The Netherlands; Leon Gradon, Albert Podgorski, Warsaw University of Technology, Warsaw, Poland (p.67)

10H13  
4:00 **A DMA FOR PARTICLE SIZE SELECTION AT HIGH AEROSOL FLOW RATES**, ESTHER HONTANON, Ciemat, Madrid, Spain, F. Einar Kruis, University of Duisburg-Essen, Duisburg, Germany (p.68)

10H14  
4:00 **ADHESION AND REMOVAL MECHANISM FOR PARTICLES IN TURBULENT FLOWS WITH CAPILLARY EFFECT**, XINYU ZHANG, Goodarz Ahmadi, Clarkson University, Potsdam, NY (p.69)

10H15  
4:00 **PREVENTION OF DEBRIS RE-DEPOSITION DURING LASER CLEANING USING THERMOPHORESIS AND OTHER EFFECTS**, JIN HO KIM, Sang Soo Kim, Department of Mechanical Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Republic of Korea (p.71)

10H16  
4:00 **NANOPARTICLE AEROSOL GENERATION METHODS FROM BULK POWDERS**, LINDA H. SCHMOLL, Patrick O'Shaughnessy, Landon Pratt, University of Iowa, Iowa City, IA (p.72)

10H17  
4:00 **FABRICATION OF POROUS MATERIALS COMPOSED OF NANOPARTICLES SYNTHESIZED BY LASER ABLATION**, SEOK JOO PARK, Korea Institute of Energy Research, Korea; Dong Geun Lee, Chungnam National University, Korea (p.74)

**Wednesday 5:30 PM - 6:30 PM**  
**Working Group Meetings for Associations**

**Wednesday 7:00 PM - 10:00 PM**  
**IAC Conference Dinner and River Cruise**

**Thursday 8:00 AM - 9:20 AM**  
**Plenary**

Minnesota Ballroom

*Da-Ren Chen, Chair*

8:00 **PLENARY 4. HEALTH EFFECTS OF AMBIENT PARTICULATE MATTER**, Bert Brunekreef, Professor of Environmental Epidemiology and Director, Institute for Risk Assessment Sciences, Utrecht University, Utrecht, Netherlands (p.827)

9:00 **S.K. FRIEDLANDER AND B.Y.H. LIU AWARDS**, presented by David Leith

**Thursday 9:00 AM - 3:00 PM**  
**Exhibits Open**

Great River Ballroom

**Thursday 9:20 AM - 11:00 AM**  
**Poster Viewing with Continental Breakfast for Sessions 7 - 14**

Great River Ballroom, Garden Courts East & West

**Thursday 11:00 AM - 12:40 PM  
Session 11**

**11A Regional Modeling (Platform)**

Minnesota Ballroom

*John Seinfeld, Chair*

11A1 **IMPROVING REGIONAL AIR QUALITY**  
11:00 **MODEL AEROSOL SIZE DISTRIBUTIONS,**  
ROBERT A. ELLEMAN, David S. Covert,  
University of Washington, Seattle, WA  
(p.1823)

11A2 **CLIMATE CHANGE IMPACTS ON FINE**  
11:20 **PARTICULATE MATTER**  
**CONCENTRATIONS IN US,** EFTHIMIOS  
TAGARIS , Kao Jen Liao, Kasemsan  
Manomaiphiboon, Armistead G. Russell,  
School of Civil and Env. Engineering, Georgia  
Institute of Technology, Atlanta, GA; Jung-  
Hun Woo, Shan He, Praveen Amar,  
NESCAUM, Boston, MA; Lai-Yung (Ruby)  
Leung, Pacific Northwest National Laboratory,  
Richland, WA (p.1824)

11A3 **AEROSOL CHEMISTRY OBSERVATIONS**  
11:40 **USING THE TRANS-SIBERIAN RAILROAD**  
**- RESULTS OF THE YEAR 2005 TROICA-9**  
**EXPEDITION,** RISTO HILLAMO, Sanna  
Kuokka, Kimmo Teinilä, Minna Aurela, Sanna  
Saarikoski, Markus Sillanpää, Veli-Matti  
Kerminen, Finnish Meteorological Institute,  
Helsinki, Finland, Eija Vartiainen, Markku  
Kulmala, University of Helsinki, Helsinki,  
Finland, Andrei I. Skorokhod, Andrei A. Ralko,  
Nikolai F. Elansky, Igor B. Belikov, Obukhov  
Institute of Atmospheric Physics, Moscow,  
Russia (p.1826)

11A4 **QUANTIFYING THE CONTRIBUTION OF**  
12:00 **PARTICLE FORMATION TO GLOBAL**  
**ATMOSPHERIC AEROSOL,** KENNETH S.  
CARSLAW, Dominick V. Spracklen, Graham  
W. Mann, School of Earth and Environment,  
University of Leeds, Leeds, UK; Markku  
Kulmala, Sanna-Liisa Sihto, University of  
Helsinki, Dept of Physical Sciences, Helsinki,  
Finland; Velli-Matti Kerminen, Finnish  
Meteorological Institute, Helsinki, Finland  
(p.1828)

**11B Aerosol Properties (Platform)**

Capitol Ballroom

*Mireya Moya, Richard Flagan, Chairs*

11B1 **SATURATED AND UNSATURATED**  
11:00 **HYDROCARBONS AS INDICATORS OF**  
**AEROSOL EMISSION SOURCES DURING**  
**THE ICARTT 2004 CAMPAIGN.,** STEFANIA  
GILARDONI, Lynn M. Russell, Scripps  
Institution of Oceanography, UCSD, La Jolla,  
CA; Timothy S. Bates, Patricia Quinn, NOAA  
Pacific Marine Environmental Laboratory,  
Seattle, WA; John H. Seinfeld, Shane  
Murphy, California Institute of Technology,  
Pasadena, CA; James Allan, The University  
of Manchester, Manchester, UK (p.1372)

11B2 **INJECTION OF LOW-LEVEL AEROSOL**  
11:20 **PARTICLES AND GAS INTO THE UPPER**  
**TROPICAL TROPOSPHERE BY DEEP**  
**CONVECTIVE CELLS: EVIDENCE FROM**  
**ACTIVE CAMPAIGN AND MODELLING**  
**STUDY,** Marie Monier, Geraint Vaughan,  
Thomas Choularton, Paul Connolly, Martin  
Gallagher, Keith Bower, Atmospheric  
Sciences, University of Manchester, UK, Yan  
Yin, Department of Applied Meteorology,  
Nanjing University of Information Science &  
Technology, China, and the ACTIVE Team  
(p.1374)

11B3 **AEROSOL PROPERTIES AT THE MOST**  
11:40 **WESTERN POINT OF CONTINENTAL**  
**EUROPE,** ANA MARIA SILVA, Frank  
Wagner, Sérgio Pereira, Centro de Geofísica,  
Évora, PT, Thierry Elias, MétéoFrance,  
Toulouse, FR (p.1376)



11B4  
12:00 **MALTE - MODEL TO PREDICT NEW AEROSOL FORMATION IN THE LOWER TROPOSPHERE**, MICHAEL BOY, Markku Kulmala, University of Helsinki, Helsinki, Finland; Olaf Hellmuth, Leibniz Institute for Tropospheric Research, Leipzig, Germany; Hannele Korhonen, Finnish Meteorological Institute, Helsinki, Finland; Douglas Nilsson, Stockholm University, Stockholm, Sweden; Douglas ReVelle, Los Alamos National Laboratory, Los Alamos, NM; MICHAEL BOY, Andrew Turnipseed, National Center for Atmospheric Research, Boulder, CO; Frank Arnold, Max-Planck Institute for Nuclear Physics, Heidelberg, Germany (p.1378)

**11C Symposium: Nanoparticle Dosimetry, Toxicology and Cellular Interactions-I (Platform)**

Governors 1 & 5

*Chong Kim , Marianne Geiser, Chairs*

11C1  
11:00 **NANOPARTICLES AND RESPIRATORY HEALTH - HOW IMPORTANT ARE PARTICLE SIZE AND SURFACE AREA CHARACTERISTICS?**, DAVID B WARHEIT (p.135)

11C2  
11:20 **SYSTEMIC TRANSLOCATION OF NANOPARTICLES TOWARDS SECONDARY TARGET ORGANS**, WOLFGANG G. KREYLING, Manuela Semmler-Behnke, Stephanie Fertsch, GSF - National Research Center for Environment and Health, Institute of Inhalation Biology and Focus Network Aerosols and Health, Neuherberg / Munich, Germany; Wolfgang Brandau, University of Essen; Institute of Nuclear Chemistry and Radio Pharmacology, Essen, Germany; Ralph Sperling, Wolfgang Parak, Ludwig-Maximilians-University, Center of NanoScience, Munich, Germany; Guenter Schmid, University of Essen; Institute of Inorganic Chemistry, Essen, German (p.136)

11C3  
11:40 **INHALATION EXPOSURE STUDY OF TITANIUM DIOXIDE NANOPARTICLES WITH A PRIMARY PARTICLE SIZE OF 2-5 NM**, VICKI H. GRASSIAN, Patrick O'Shaughnessy, John Pettibone, Andrea Dodd, Peter Thorne, University of Iowa, Iowa City, IA (p.138)

11C4  
12:00 **EXPOSURE OF IN VITRO HUMAN EPITHELIAL CELLS TO SECONDARY ORGANIC AEROSOL COATED ON MAGNETIC NANOPARTICLES SUSPENDED IN THE GAS MEDIA**, Myoseon Jang, Gang Cao, Amanda Northcross, The University of North Carolina at Chapel Hill, Chapel Hill, NC; Andrew Ghio, National Health and Environmental Effects Research Laboratory, EPA, RTP, NC; Weidong Wu, Center for Environmental Medicine, Asthma, and Lung Biology, UNC-Chapel Hill, Chapel Hill, NC (p.139)

11C5  
12:20 **NANOPARTICLE INTERACTIONS WITH LUNG ALVEOLAR EPITHELIUM: BARRIER AND TRAFFICKING PROPERTIES**, N. Yaghoobian , C. Liang, J. Xie, S.F. Hamm-Alvarez, C.A Peng, L. DeMaio, Z. Borok, EDWARD D. CRANDALL, K.J. Kim (p.141)

**11D Electrical Analyzers (Platform)**

Governors 2 - 4

*Heinz Burtscher, Suresh Dhaniyala, Chairs*

11D1  
11:00 **A FULL-RANGE DIFFERENTIAL MOBILITY ANALYZER (FRDMA)**, MANUEL ALONSO, National Center for Metallurgical Research (CSIC), Madrid, Spain (p.456)

11D2  
11:20 **OPERATIONAL CHARACTERISTICS OF THE MINIATURE ELECTRICAL AEROSOL SPECTROMETER (MEAS)**, MANISH RANJAN, Suresh Dhaniyala, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY (p.457)

11D3 11:40 **THE DIFFUSION SIZE CLASSIFIER (DISC) - A PORTABLE DEVICE TO MEASURE PARTICLE NUMBER CONCENTRATION AND MEAN DIAMETER**, Martin Fierz, Peter Steigmeier, HEINZ BURTSCHER, Institute for Aerosol and Sensor Technology, University of Applied Sciences, Northwestern Switzerland, Windisch, Switzerland (p.458)

11D4 12:00 **SCANNING MODE OPERATION OF THE AEROSOL PARTICLE MASS ANALYZER**, KENSEI EHARA, Hiromu Sakurai, Akira Yabe, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan; Kevin Coakley, National Institute of Standards and Technology, Boulder, CO (p.460)

### 11E Nucleation and On Road Particle Formation (Platform)

Wabasha Suite

*Leon Ntziachristos, Reinhard Niessner, Chairs*

11E1 11:00 **THE EFFECT OF DIFFERENT DILUTION-COOLING CONDITIONS ON NUCLEATION IN DIESEL EXHAUST**, MIKKO LEMMETTY, Topi Rönkkö, Jyrki M. Mäkelä, Jorma Keskinen, Tampere University of Technology, Tampere, Finland; Liisa Pirjola, Helsinki Polytechnic Stadia, Helsinki, Finland (p.1628)

11E2 11:20 **IS ON-ROAD PARTICLE NUMBER CONCENTRATION DEPENDENT ON AMBIENT TEMPERATURE AND RELATIVE HUMIDITY**, XIAOHONG YAO, N.T., Lau, Ming Fang, Institute for the Environment, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong and Chak K. Chan, Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong (p.1630)

11E3 11:40 **EFFECT OF DRIVING PARAMETERS ON NUCLEATION MODE PARTICLES IN DIESEL EXHAUST: LABORATORY AND ON-ROAD STUDY**, TOPI RÖNKKÖ, Annele Virtanen, Kati Vaaraslahti, Jorma Keskinen, Tampere University of Technology, Tampere, Finland; Liisa Pirjola, Helsinki Polytechnic, Helsinki, Finland; Maija Lappi, VTT Processes, Helsinki, Finland (p.1631)

11E4 12:00 **IN SITU MEASUREMENTS OF CHEMICAL AND PHYSICAL PARAMETERS OF VARIOUS TRAFFIC RELATED PARTICLES UNDER CRUISE CONDITIONS**, JOHANNES SCHNEIDER, Particle Chemistry Department, Max-Planck-Institute for Chemistry, Mainz, Germany, Ulf Kirchner, Ford Research Center Aachen, Aachen, Germany (p.1633)

11E5 12:20 **ANALYSIS OF CHANGES IN THE STRUCTURE AND REACTIVITY OF SOOT UNDERGOING OXIDATION AND GASIFICATION BY RAMAN MICROSCOPY**, Natalia Ivleva, Armin Messerer, Ulrich Pöschl, REINHARD NIESSNER, Institute of Hydrochemistry, Technical University of Munich, Germany (p.1635)

### 11F Aerosol Sampling (Platform)

Kellogg Suite

*David Kane, Virgil Marple, Chairs*

11F1 11:00 **EXPERIMENTAL STUDY FOR BIO-AEROSOL COLLECTOR CYCLONE**, YOUNGJIN SEO, Andrew R. McFarland, Texas A&M University, College Station, TX; John S. Haglund, The University of Texas, Austin, TX (p.461)

11F2 11:20 **NAVAL UNIVERSAL OMNI-DIRECTIONAL INLET (NUODI): A NEW OMNI-DIRECTIONAL INLET FOR THE DRY FILTER UNIT (DFU)**, Virgil A. Marple, Bernard A. Olson, Particle Calibration Laboratory, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN 55455 USA; Edward A. Lustig, Jr., Alan W. Hall, Naval Surface Warfare Center/Dahlgren Division, United States Navy, Dahlgren, VA, USA (p.463)

11F3 11:40 **A NEW WIND TUNNEL FOR AEROSOL INHALABILITY AND SAMPLING AT REALISTIC LOW WIND SPEEDS**, YI-HSUAN WU, Darrah K. Sleeth, James H. Vincent, University of Michigan, Ann Arbor, MI; Sigurd Anderson, William Hambleton, ELD Inc., Lake City, MN (p.464)

- 11F4 12:00 **DIGITAL MICRO-FLUIDIC IMPACTOR FOR DETERMINATION OF SULPHATE IN AMBIENT AEROSOL**, Yilin Ma, ANDREY KHLYSTOV, CEE, Duke University, Durham, NC; Vladislav Ivanov, Richard B. Fair, ECE, Duke University, Durham, NC (p.528)
- 11G Respiratory Deposition and Workplace Aerosols (Poster)**  
Garden Court West  
*Patrick O'Shaughnessy, Brian Wong, Chairs*
- 11G1 11:00 **RESPIRATORY TRACT DEPOSITION OF RESIDENTIAL BIOMASS COMBUSTION AEROSOL PARTICLES IN HUMAN SUBJECTS**, JAKOB LÖNDAHL, Joakim Pagels, Andreas Massling, Erik Swietlicki, Jenny Rissler, Lund University, Lund, Sweden, Christoffer Boman, Anders Blomberg, Thomas Sandström, Umeå universitet, Umeå, Sweden (p.900)
- 11G2 11:00 **COMPARISON OF DOSIMETRY PREDICTIONS IN MURINE ANIMAL MODELS OF HUMAN DISEASE**, MICHAEL J. OLDHAM, Department of Community and Environmental Medicine, School of Health Sciences, University of California, Irvine, California (p.902)
- 11G3 11:00 **NUMERICAL SIMULATIONS OF AIRFLOW AND PARTICLE DEPOSITION IN FOUR HUMAN PROXIMAL LUNG BIFURCATION MODELS**, Yu Zhang and Warren H. Finlay; Department of Mechanical Engineering, University of Alberta, T6G 2G8, Edmonton, Alberta, Canada (p.904)
- 11G4 11:00 **FIBER DEPOSITION IN THE TRACHEOBRONCHIAL REGION: COMPARISON OF EXPERIMENTAL DATA AND THEORETICAL MODELS**, YUE ZHOU, Wei-Chung Su, Lovelace Respiratory Research Institute, Albuquerque, NM; Goodarz Ahmadi, Philip K. Hopke, Clarkson University, Potsdam, NY; Yung Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM (p.905)
- 11G5 11:00 **EFFECTS OF RESPIRATORY FLOW PATTERNS ON PARTICLE DEPOSITION IN HUMAN LUNGS**, JUNG-IL CHOI, North Carolina State University, Raleigh, NC; Chong S. Kim, US Environmental Protection Agency, Research Triangle Park, NC (p.906)
- 11G6 11:00 **COMPUTER SIMULATION OF ELLIPSOIDAL PARTICLE TRANSPORT AND DEPOSITION IN HUMAN TRACHEOBRONCHIAL TREE WITH 3-D SYMMETRIC AND ASYMMETRIC BIFURCATION MODEL**, LIN TIAN, Goodarz Ahmadi, Department of Aeronautical and Mechanical Engineering, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY; Philip K. Hopke, Department of Chemical Engineering, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY; Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM (p.908)
- 11G7 11:00 **USE OF DIFFERENT MODELING TECHNIQUES TO SIMULATE DEPOSITION IN ASTHMA**, RISA J. ROBINSON, John N. DiFlorio, Rochester Institute of Technology, Rochester, NY (p.910)
- 11G8 11:00 **HUMAN NASAL PASSAGE FIBROUS PARTICLE DEPOSITION: THE INFLUENCE OF PARTICLE LENGTH, FLOW RATE AND PASSAGE GEOMETRY**, Zuo Cheng Wang, PHILIP HOPKE, Goodarz Ahmadi, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY; Paul Baron, Gregory Deye, National Institute for Occupational Safety and Health, Cincinnati, OH; Yung-Sung Cheng, Wei-Chung Su, Lovelace Respiratory Research Institute, Albuquerque, NM (p.911)
- 11G9 11:00 **AIRFLOW AND PARTICLE DEPOSITION IN THE CENTRAL AIRWAY MODELS OF THE HUMAN LUNG**, BAHMAN ASGHARIAN, Sravan Gudi, CIIT Centers for Health Research, Research Triangle Park, NC. (p.913)

- 11G10 11:00 **SMALL AIRWAY MODELS FOR MEASURING DEPOSITION OF FIBROUS AEROSOLS**, ANDREW R. MARTIN, and Warren H. Finlay, Department of Mechanical Engineering, University of Alberta, Edmonton, AB, Canada. (p.915)
- 11G11 11:00 **A COMPLEX MICRODOSIMETRIC MODEL FOR THE ASSESSMENT OF LUNG CANCER RISK ARISING FROM THE INHALATION OF ALPHA EMITTING PARTICLES**, ISTVÁN SZÖKE, Imre Balásházy, Árpád Farkas, Hungarian Academy of Sciences KFKI Atomic Energy Research Institute, Budapest, Hungary; Werner Hofmann, University of Salzburg, Salzburg, Austria (p.916)
- 11G12 11:00 **NUMERICAL MODELING OF THE AIRFLOW AND AEROSOL DEPOSITION IN OBSTRUCTED, OCCLUDED AND TUMOROUS CENTRAL AIRWAYS**, ÁRPÁD FARKAS, Imre Balásházy, István Szöke, Hungarian Academy of Sciences KFKI Atomic Energy Research Institute, Werner Hofmann, Division of Physics and Biophysics, University of Salzburg (p.918)
- 11G13 11:00 **A NUMERICAL MODEL OF THE HUMAN BRONCHIAL EPITHELIUM TO COMPUTE CELLULAR DOSES OF INHALED AEROSOLS**, Gabor Barcsa, Technoorg-Linda Scientific Technical Development Co., Imre F. Barna, Istvan Szoke, Hungarian Academy of Sciences KFKI Atomic Energy Research Institute., IMRE BALASHAZY, Hungarian Academy of Sciences KFKI Atomic Energy Research Institute., Respirisk Scientific Research Co. Ltd. (p.920)
- 11G14 11:00 **STRUCTURE OF A CFD BASED RESPIRATORY TRACT DEPOSITION MODEL**, IMRE BALASHAZY, Arpad Farkas, Istvan Szoke, MTA KFKI Atomic Energy Research Institute, Budapest, Hungary; Werner Hofmann, University of Salzburg, Salzburg Austria (p.921)
- 11G15 11:00 **INHALED PARTICLE DEPOSITION EFFICIENCY IN AN INDIVIDUAL'S NASAL AIRWAY: MEASUREMENTS IN VIVO AND IN AIRWAY REPLICAS**, BRIAN A. WONG, CIIT Centers for Health Research, RTP, NC (p.923)
- 11G16 11:00 **COMPUTATIONAL ANALYSIS OF SPHERICAL PARTICLE TRANSPORT AND DEPOSITION IN THE HUMAN NASAL SYSTEM FOR IMPACTION REGIME**, PARSAM ZAMANKHAN, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering and Center of Air Resources Engineering and Science Clarkson University, Potsdam, NY; Philip K. Hopke, Department of Chemical Engineering and Center of Air Resources Engineering and Science Clarkson University, Potsdam, NY; Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM (p.925)
- 11G18 11:00 **DIFFERENCES IN ESTIMATES OF BERYLLIUM AEROSOL SIZE DISTRIBUTION FOR TOXICITY STUDIES USING PHASE CONTRAST MICROSCOPY, SCANNING ELECTRON MICROSCOPY, AND LIQUID PARTICLE COUNTER TECHNIQUES**, ALEKSANDR B. STEFANIAK, Mark D. Hoover, Gregory A. Day, National Institute for Occupational Safety and Health, Morgantown, WV; Patrick N. Breyse, Johns Hopkins Bloomberg School of Public Health; Ronald C. Scripsick, Los Alamos National Laboratory (p.928)
- 11G19 11:00 **DETAILED SINGLE PARTICLE ANALYSIS OF ULTRAFINE WELDING PARTICLES**, RONNY LORENZO, Empa Materials Science & Technology, Duebendorf, Switzerland; Ralf Kaegi, Eawag Aquatic Research, Duebendorf, Switzerland; Bernard Grobety, University of Fribourg, Fribourg, Switzerland (p.930)
- 11G20 11:00 **PARTICULATE NUMBER AND MASS SIZE DISTRIBUTION IN CAST IRON FOUNDRY**, TERO LÄHDE, Rainer Schimberg, Panu Oksa, Asko Vähäsöyrinki, Kaarle Hämeri, Finnish Institute of Occupational Health, Finland, TERO LÄHDE, Kaarle Hämeri, University of Helsinki, Finland (p.931)

- 11G21 **ON-LINE MEASUREMENTS OF PARTICLE COMPOSITION AND SIZE DISTRIBUTIONS AT A COKE OVEN FACILITY**, FRANK DREWNICK, Silke S. Hings, Max-Planck Institute for Chemistry, Mainz, Germany; Xavier Chaucherie, Sechaud Environnement, Maizeres-les-Metz, France (p.933)
- 11G22 **MEASUREMENT OF SULFURIC ACID MIST CONCENTRATIONS IN PHOSPHATE FERTILIZER PLANTS**, YU-MEI HSU, Chang-Yu Wu, Dale A. Lundgren, Department of Environmental Engineering Sciences, University of Florida, Gainesville, FL; Brian K. Birky, Florida Institute of Phosphate Research, Bartow, FL (p.934)
- 11G23 **DISTRIBUTIONS OF LOCAL DEPOSITION OF SUB-MICRON PARTICLES IN MODEL GEOMETRY OF HUMAN OROPHARYNX AT VARIABLE AIRFLOW**, ARKADIUSZ MOSKAL, Tomasz R. Sosnowski, Leon Gradon; Warsaw University of Technology, Warsaw, POLAND (p.936)
- 11G24 **IS NANO STILL NANO IN THE ATMOSPHERE? - GENERATION AND CHARACTERIZATION OF TEST ATMOSPHERES FOR INHALATION STUDIES**, Bennard van Ravenzwaay, Lan Ma-Hock, Armin O. Gamer, Edgar Leibold, BASF Aktiengesellschaft, Ludwigshafen, Germany (p.938)
- 11G25 **MEASURING THE AVALANCHE SCENARIO IN ALVEOLAR MACROPHAGES: APPLICATION OF THE CONFOCAL LSM IN SEMI-AUTOMATED COUNTING OF IN VITRO MACROPHAGE UPTAKE OF NANOPARTICLES.**, OWEN MOSS, Victoria Wong, CIIT Centers for Health Research, Research Triangle Park, NC, USA (p.940)
- 11G26 **GENERATION OF NANODROPLETS AND ITS EFFECT OF INACTIVATING E.COLI**, KIYOKO MIZOTA, Motoaki Adachi, Masakazu Furuta, Osaka Prefecture University, Sakai, Osaka, Japan (p.941)
- 11G27 **NON-COMBUSTION SOOT (NCS) NANOPARTICLES GENERATE HIGHLY AFFINE IGG CLASS ANTIBODIES AGAINST POLYCYCLIC AROMATIC HYDROCARBONS WITHIN VERTEBRATES**, Diana Matschulat, Harald Prestel, Dietmar Knopp, REINHARD NIESSNER, Institute of Hydrochemistry, Technical University Munich, München, Germany; Ferdinand Haider, Institute of Physics, University of Augsburg, Germany (p.942)
- 11G28 **PERSONAL BIOAEROSOL SAMPLER BASED ON A CYCLONE WITH RE-CIRCULATING LIQUID FILM**, Alexander Tolchinsky, VLADIMIR SIGAEV, Alexander Varfolomeev, Ekaterina Zvyagina, Toxicological Center, Serpukhov, Moscow Region, Russia; Yueng-Sung Cheng, Trevor Brazel, Lovelase Respiratory Research Institute, Albuquerque, NM, USA (p.944)
- 11G29 **CONCENTRATION PROFILES OF AIRBORNE MYCOBACTERIUM TUBERCULOSIS IN THE MEDICAL CENTER**, Pei-Shih Chen and Chih-Shan Li\*, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University, Room 1449, No. 1, Jen Ai Road, 1st Section 100, Taipei, Taiwan, R.O.C. (p.946)
- 11G31 **AN EPIDEMIOLOGICAL STUDY OF ORGANIC SPECIES IN TONG LIANG, CHINA WITH IN-INJECTION PORT THERMAL DESORPTION-GAS CHROMATOGRAPHY/MASS SPECTROMETRY METHOD**, STEVEN SAI HANG HO, Judith C. Chow, John G. Watson, Desert Research Institute, Reno, NV (p.947)

- 11G32 **DETECTION OF AIRBORNE BACTERIA IN HVAC FILTERS BY POLYMERASE CHAIN REACTION**, M.A. RAMAKRISHNAN, Sagar M. Goyal, Senthilvelan Anantharaman, Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN; Seung Won Kim, Peter C. Raynor, Division of Environmental Health Sciences, School of Public Health, University of Minnesota, Minneapolis, MN; Nicholas J. Stanley, Thomas H. Kuehn, Department of Mechanical Engineering, Institute of Technology, University of Minnesota, Minneapolis, MN (p.949)
- 11G33 **MEASUREMENT OF AEROSOL FROM DU PENTRATOR PERFORATION OF ARMORED VEHICLES**, YUNG SUNG CHENG, Thomas D. Holmes, Lovelace Respiratory Research Institute, Albuquerque, NM; Raymond A. Guilmette. Los Alamos National Laboratory, Los Alamos, NM; Mary Ann Parkhurst, Pacific Northwest National Laboratory, Richland, WA (p.950)
- 11G34 **GENERATION AND CHARACTERIZING OF TEST PARTICLES FOR VERIFICATION OF EXPLOSIVE TRACE DETECTION SYSTEMS**, ROBERT FLETCHER, Jennifer Verkouteren, George A. Klouda, and Greg Gillen , National Institute of Standards and Technology, Gaithersburg, MD (p.952)
- 11H Control Technology-I (Poster)**  
Garden Court West  
*Yung-Sung Cheng, Meng-dawn Cheng, Chairs*
- 11H2 **PARTICLE COLLECTION BY REVERSE JET SPRAYS**, KYOUNGSOO Lim, Sihyun Lee, Hyunseol Park, Korea Institute of Energy Research, Daejeon, Korea (p.265)
- 11H3 **EFFECT OF SONIC WAVES ON WET GAS FILTRATION BY GRANULAR BEDS**, Leonid Moldavsky, CHAIM GUTFINGER, Alexander Oron and Mati Fichman, Aerosol Research Laboratory, Faculty of Mechanical Engineering, Technion – Israel Institute of Technology, Haifa 32000, Israel. (p.267)
- 11H4 **DEPOSITION OF NANOPARTICLES IN THE COMPOSITES OF NANO- AND MICROSIZED FIBERS**, Rafal Przekop, LEON GRADON (p.269)
- 11H5 **PENETRATION OF AEROSOL PARTICLES THROUGH HVAC FILTERS ENHANCED BY THE UNIPOLAR AIR IONIZATION UPSTREAM OF THE FILTER**, SERGEY A. GRINSHPUN, Center for Health-Related Aerosol Studies, University of Cincinnati, Cincinnati, Ohio, USA; Igor E. Agranovski, Ruth Huang, Oleg V. Pyankov, Igor S. Altman, Faculty of Environmental Sciences, Griffith University, Brisbane, 4111, QLD, Australia (p.271)
- 11H6 **EXPERIMENTAL STUDY OF NANOPARTICLE AGGLOMERATE FILTRATION EFFICIENCY**, SEONG CHAN KIM, Andres Marquez-Guzman, David Y.H. Pui, University of Minnesota, Minneapolis, MN (p.272)
- 11H7 **FILTRATION EFFICIENCY OF GRANULAR BED FILTERS UNDER NORMAL, HYPER- AND MICROGRAVITY: EXPERIMENTS AND MONTE-CARLO SIMULATIONS.**, WERNER HOLLÄNDER, Karl-Bernd Junker, Hubert Lödging, Wilhelm Dunkhorst and Horst Windt; Fraunhofer ITEM, Hannover, DE (p.273)
- 11H8 **REVERSE FLOW EFFECT ON PROTECTION OF CRITICAL SURFACES AGAINST PARTICLE CONTAMINATIONS**, Jung Hyeun Kim, University of Seoul, Seoul, Korea; David Pui, Se-Jin Yook, University of Minnesota, Minneapolis, MN; Christof Asbach, Heinz Fissan, IUTA, Duisburg, Germany (p.274)
- 11H9 **DETERMINATION OF HEXAVALENT CHROMIUM BY ION CHROMATOGRAPHY (IC)**, Philip K. Hopke, MIN YANG, Eleanor F. Hopke, Clarkson University, Potsdam, NY (p.276)

11H11  
11:00 **DECOMPOSITION OF GASEOUS POLLUTANTS USING A SUPERSONIC FLOW OF NANO TiO<sub>2</sub> AEROSOL**, Masami Furuuchi, Takako Sakano, Mai Taniuchi, Mitsuhiko Hata, Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa 920-1192, Japan; Pratim Biswas, Environmental Engineering Science, Department of Chemical Engineering, Washington University Saint Louis, Saint Louis, Missouri, 63130, USA (p.280)

11H12  
11:00 **COLLECTION OF SUBMICRON PARTICLES BY AN ELECTROSTATIC PRECIPITATOR USING A DIELECTRIC BARRIER DISCHARGE**, Jeong Hoon Byeon, Jung-ho Hwang, Jae Hong Park, Ki Young Yoon, Byung Ju Ko, Yonsei University (School of Mechanical Engineering); Jun Ho Ji, Samsung Electronics Co., Ltd. (Division of digital appliance network) (p.281)

11H13  
11:00 **ELECTROSTATIC-DIRECTED DEPOSITION OF NANOPARTICLES ON A FIELD-GENERATING SUBSTRATE: THEORETICAL AND EXPERIMENTAL ANALYSIS**, DE-HAO TSAI, Kuk Cho, Takumi Hara, Michael Zachariah, University of Maryland, College Park, and the National Institute of Standards and Technology, Gaithersburg, MD; Shy-Hauh Guo, Ray J. Phaneuf, Laboratory for Physical Science, and University of Maryland, College Park, MD (p.282)

11H14  
11:00 **PREDICTING RESISTANCE OF AIR FILTER MEDIA HAVING LOG-NORMAL FIBER DIAMETER DISTRIBUTION AND RANDOM 2-DIMENSION SPACING BY CFD SIMULATION**, PAOLO TRONVILLE, Politecnico di Torino, Turin, ITALY; Richard Rivers, EQS inc., Louisville, KY (p.283)

11H15  
11:00 **DEPOSITION EFFICIENCY OF FRACTAL-LIKE AGGREGATES IN FIBROUS FILTERS CALCULATED USING BROWNIAN DYNAMICS APPROACH FOR VARIOUS METHODS OF THE FRICTION COEFFICIENT DETERMINATION**, ANNA BALAZY, Albert Podgorski, Warsaw University of Technology, Poland (p.284)

11H16  
11:00 **MODELING OF DEPOSITION OF ELECTRICALLY NEUTRAL, SUBMICRON AEROSOL PARTICLES IN BIPOLARLY CHARGED FIBROUS FILTERS – BROWNIAN DYNAMICS APPROACH**, ALBERT PODGORSKI, Anna Balazy, Warsaw University of Technology, Poland (p.286)

11H17  
11:00 **EFFECTS OF DIFFUSIVE DEPOSITION ON THE EFFICIENCY OF FIBROUS FILTERS**, SARAH DUNNETT, Loughborough University, Loughborough, U.K., Charles Clement, Wantage, Oxon, U.K. (p.288)

11H18  
11:00 **MEASUREMENT FOR FILTRATION EFFICIENCY OF RESPIRATOR BY SODIUM FLAME METHOD**, FENG JIANG, ZhenZhong Zhang, SuiSheng Ye, Institute of Nuclear and New Energy Technology, Tsinghua University, BeiJing, China (p.289)

**Thursday 12:40 PM - 2:00 PM  
Lunch (on your own)**

**Thursday 2:00 PM - 3:40 PM  
Session 12**

**12A Cloud and Fog Aerosol Interactions-III  
(Platform)**

Minnesota Ballroom

*John Seinfeld, Chair*

12A1  
2:00 **THE CCN ACTIVITY OF WATER-SOLUBLE SECONDARY ORGANIC AEROSOLS GENERATED FROM THE OZONOLYSIS OF ALKENES**, AKUA ASA-AWUKU, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Song Gao, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA (p.1380)

- 12A2  
2:20 **ROLE OF ORGANICS IN THE HYGROSCOPICITY AND CCN ACTIVITY OF URBAN AEROSOL PARTICLES: RESULTS FROM IMPACT 2004 IN TOKYO**, Michihiro Mochida, Kimitaka Kawamura, Institute of Low Temperature Science, Hokkaido University, Sapporo, Japan; Mikinori Kuwata, Takuma Miyakawa, Nobuyuki Takegawa, Yutaka Kondo, Research Center for Advanced Science and Technology, the University of Tokyo, Tokyo, Japan (*p.1382*)
- 12A3  
2:40 **AEROSOL-CLOUD INTERACTIONS IN THE LOWER FREE TROPOSPHERE AS MEASURED AT THE HIGH ALPINE RESEARCH STATION JUNGFRAUJOCH IN SWITZERLAND**, Ernest Weingartner et al. (*p.1383*)
- 12A4  
3:00 **AEROSOL PROCESSING IN CLOUDS: MONTE CARLO SIMULATIONS ON THE IMPACT OF COAGULATION ON THE MIXING STATE**, NICOLE RIEMER, Stony Brook University, Stony Brook, NY; Matthew West, Stanford University, CA (*p.1385*)
- 12A5  
3:20 **ACTIVATION OF LOS ANGELES URBAN AEROSOL**, MICHAEL J. CUBISON, Kenneth Docherty, Peter DeCarlo, Ingrid Ulbrich, Edward Dunlea, Alex Huffman, Jose L. Jimenez, University of Colorado, CO; Barbara Ervens, Graham Feingold, NOAA Earth Systems Laboratory, Boulder, CO; Athanasios Nenes, Georgia Institute of Technology (*p.1387*)

**12B Remote and Rural Aerosols (Platform)**  
Capitol Ballroom

*Andrey Khlystov, Roberta Vecchi, Chairs*

- 12B1  
2:00 **DEPENDENCE OF DEPOSITION FLUXES ON PARTICLE SIZE AND FRICTION VELOCITY**, S.C. PRYOR (1), R.J. Barthelmie (2,1,3), L.L. Sørensen (2) and S.E. Larsen (2); (1)Atmospheric Science Program, Department of Geography, Indiana University, Bloomington IN 47405, USA (2)Department of Wind Energy and Atmospheric Physics, Risø National Laboratory, Roskilde, Denmark (3) Institute of Energy Systems, School of Engineering, University of Edinburgh, Edinburgh, Scotland (*p.1203*)
- 12B2  
2:20 **PHOSPHORUS IN AEROSOLS: DIFFICULT TO MEASURE, BUT WORTH THE EFFORT**, THOMAS A. CAHILL, Steven S. Cliff, Department of Physics and the DELTA Group, Depts. of Chemical Engineering and Applied Science, University of California, Davis, CA; Kevin D. Perry, Dept. of Meteorology, University of Utah, Salt Lake City, UT (*p.1205*)
- 12B3  
2:40 **A COMPREHENSIVE CHARACTERIZATION ON BACKGROUND ATMOSPHERIC AEROSOLS: RESULTS OF AN INTENSIVE CAMPAIGN CARRIED OUT AT A HIGH ALTITUDE SITE IN ITALY**, ROBERTA VECCHI, Michela Ceriani, Alessandra D'Alessandro, Gianluigi Valli, Institute of Applied General Physics, University of Milan, IT; Franco Marengo, Federico Mazzei, Paolo Prati, Department of Physics, University of Genoa, IT; Massimo Chiari, Silvia Nava, National Institute of Nuclear Physics, IT; Franco Lucarelli, Department of Physics, University of Florence, IT; Paolo Bonasoni, Francescopiero Calzolari, Paolo Cristofanelli, Institute of Atmospheric Sciences and Climate, National Research Council, IT; Paola Fermo, Andrea Piazzalunga, Department of Inorganic, Metallorganic and Analytical Chemistry, University of Milan, IT (*p.1207*)



12B4  
3:00 **ANALYSIS OF PRELIMINARY DATA FROM THE REGIONAL AEROSOL INTENSIVE NETWORK (RAIN)**, GEORGE ALLEN, Alan Leston, NESCAUM, Boston MA (p.1209)

12B5  
3:20 **PARTICULATE CARBON IN THE AIR AND SNOW ON THE GREENLAND ICE SHEET**, GAYLE HAGLER, Michael Bergin, Eugene Smith, Georgia Institute of Technology, Atlanta, GA; Robert Greenwald, Emory University, Atlanta, GA; James Schauer, Martin Shafer, University of Wisconsin, Madison, WI; Jack Dibb, University of New Hampshire, Durham, NH (p.1211)

**12C Symposium: Nanoparticle Dosimetry, Toxicology and Cellular Interactions-II (Platform)**

Governors 1 & 5

*Chong Kim , Wolfgang Kreyling, Chairs*

12C1  
2:00 **THE FATE OF INHALED ULTRAFINE TITANIUM DIOXIDE PARTICLES**, MARIANNE GEISER, Marco Casaulta, Barbara Kupferschmid, Institute for Anatomy, University of Bern, Switzerland; Manuela Behnke-Semmler, Holger Schulz, Wolfgang Kreyling, GSF - National Research Center for Environment and Health, Institute for Inhalation Biology, Neuherberg/Munich, Germany (p.143)

12C2  
2:20 **AEROSOL SYNTHESIS AND GENE DELIVERY PROPERTIES OF CALCIUM PHOSPHATE BIOCERAMIC NANOPARTICLES**, RENATO P. CAMATA, Hyunbin Kim, Rakesh Kapoor, Selvarangan Ponnazhagan, University of Alabama at Birmingham, Birmingham, AL (p.144)

12C3  
2:40 **CELLULAR INTERPLAY AND INFLAMMATORY RESPONSE IN AN EPITHELIAL AIRWAY MODEL AFTER EXPOSITION TO FINE- AND NANOPARTICLES**, FABIAN BLANK, Barbara M. Rothen-Rutishauser, Peter Gehr, Institute of Anatomy, Division of Histology, University of Bern, Bern, Switzerland (p.146)

12C4  
3:00 **REGIONAL DEPOSITION DOSE OF INHALED NANO SIZE PARTICLES IN HUMAN LUNGS DURING CONTROLLED NORMAL BREATHING**, CHONG S. KIM, USEPA National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC; Peter Jaques, Department of Biology, Clarkson University, Potsdam, NY; Shu-Chieh Hu, Life Sciences Operation, IIT Research Institute, Chicago, IL (p.148)

12C5  
3:20 **DETERMINATION OF DYNAMIC SHAPE FACTORS OF NANOPARTICLE AGGREGATES FROM FRACTIONAL DEPOSITION DATA**, WERNER HOFMANN, Renate Winkler-Heil, University of Salzburg, Austria; Lidia Morawska, Queensland University of Technology, Brisbane, Australia (p.150)

**12D Continuous Physical & Chemical Characterization (Platform)**

Governors 2 - 4

*Jay Turner, Russell Long, Chairs*

12D1  
2:00 **SEMI-CONTINUOUS DETERMINATION OF WATER-SOLUBLE PARTICULATE COMPONENTS AND THEIR GASEOUS PRECURSORS: LABORATORY AND FIELD EVALUATION OF INSTRUMENTATION BASED ON WET WALL DENUDER AND ION CHROMATOGRAPHY TECHNOLOGY**, RUSSELL W. LONG and Matthew S. Landis, U.S. EPA, National Exposure Research Laboratory, Research Triangle Park, NC; Keith G. Kronmiller, Alion Science and Technology, Research Triangle Park, NC; Brett D Grover and Delbert J. Eatough, Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT; Rida Al-Horr, Dionex Corporation, Sunnyvale, CA; Robert K. Stevens, Florida Department of Environmental Protection, Tallahassee, FL (p.468)

- 12D2  
2:20 **AEROSOL PARTICLE DENSITY DETERMINATION USING LIGHT SCATTERING IN CONJUNCTION WITH MASS SPECTROMETRY**, EBEN CROSS, Paul Davidovits, Boston College Chemistry Department, Chestnut Hill, MA; Timothy Onasch, Douglas Worsnop, Center for Aerosol and Cloud Chemistry Aerodyne Research, Billerica, MA (p.470)
- 12D3  
2:40 **SIMULTANEOUS MEASUREMENTS OF PM10 AND PM1 USING A SINGLE TEOM**, ULRICH K. KRIEGER, Sabrina Rupp, Edwin Hausammann, Institut für Atmosphäre und Klima, ETH Zürich, Zurich, Switzerland (p.471)
- 12D4  
3:00 **INVESTIGATION OF THE SECONDARY ORGANIC AEROSOL FRACTION, SUMMER 2005 BRITISH COLUMBIA**, ANDREW J. KNOX, Greg J. Evans, University of Toronto, Toronto, Canada; Jeffrey R. Brook, Yayne Aklilu, Environment Canada, Toronto, Canada (p.473)
- 12D5  
3:20 **THERMAL DESORPTION AEROSOL GCXGC (2DTAG): COMPREHENSIVE CHROMATOGRAPHIC RESOLUTION FOR IN-SITU MEASUREMENTS OF ORGANIC AEROSOLS**, ALLEN GOLDSTEIN, Brent Williams, University of California, Berkeley, CA; Susanne Hering, Nathan Kreisberg, Aerosol Dynamics Inc., Berkeley, CA; Ognjen Panic, Tadeusz Górecki, University of Waterloo, Waterloo, ON, Canada (p.475)
- 12E Motor Vehicle Combustion (Platform)**  
Wabasha Suite  
*Chris Sorensen, David Kittelson, Chairs*
- 12E1  
2:00 **PHYSICAL CHARACTERISATION AND EFFECTIVE DENSITY MEASUREMENTS OF PARTICLES EMITTED FROM GASOLINE AND DIESEL LIGHT DUTY VEHICLES WITH ADVANCED AFTERTREATMENT**, LEONIDAS NTZIACHRISTOS, Athanasios Mamakos, Zissis Samaras, Lab of Applied Thermodynamics, Aristotle University, Thessaloniki, Greece; Michael Geller, Costas Sioutas, Dept. of Civil & Environmental Engineering, University Southern California, Los Angeles, CA (p.257)
- 12E2  
2:20 **CHARACTERIZATION OF NANOPARTICLES GENERATED FROM A GASOLINE VEHICLE**, DOH-WON LEE, John Storey, Brian West, and Scott Sluder, Oak Ridge National Laboratory, Oak Ridge, TN; Jian Wang, Brookhaven National Laboratory, Upton, NY (p.258)
- 12E3  
2:40 **AN ELECTRICAL SENSOR FOR ROUTINE TESTING OF PARTICULATE EMISSIONS FROM DIESEL EXHAUST**, Kauko Janka, JUHA TIKKANEN, Arto Kekki, Dekati Ltd., Tampere, Finland; Antti Rostedt, Marko Marjamäki, Jorma Keskinen, Aerosol Physics Laboratory, Tampere University of Technology, Tampere, Finland, Kimmo Pietarinen, Innoment Oy, Tampere, Finland, Mark Davis, ESP Holdings Inc., E. Granby, CT; M. Matti Maricq, Research & Advanced Engineering, Ford Motor Company, Dearborn, MI (p.260)
- 12E4  
3:00 **NANOPARTICLE FORMATION IN THE EMISSIONS FROM A TRAP-EQUIPPED HEAVY DUTY DIESEL TRUCK**, JORN DINH HERNER and Alberto Ayala, California Air Resources Board, Research Division, Sacramento, CA. USA. (p.261)

12E5 **ON THE SIZE DISTRIBUTION OF DIESEL  
3:20 SOOT AGGREGATES**, A.G.  
KONSTANDOPOULOS, M. Kostoglou,  
Aerosol and Particle Technology Laboratory,  
CERTH/CPERI, PO Box 361, Thessaloniki, Greece (p.263)

### 12F Bioaerosols (Platform)

Kellogg Suite

*Sergey Grinshpun, Charles Purdy, Chairs*

12F1 **ERGOSTEROL - CONVERSION FACTOR  
2:00 FOR ESTIMATING FUNGAL  
CONCENTRATION IN AMBIENT  
AEROSOLS**, ARTHUR P.S. LAU, and Ming  
Fang, Institute for the Environment, Hong  
Kong University of Science and Technology,  
Hong Kong, Jessica Y.W. Cheng,  
Environmental Engineering Program, Hong  
Kong University of Science and Technology,  
Hong Kong (p.953)

12F2 **NEW FIELD-COMPATIBLE METHOD FOR  
2:20 COLLECTION AND ANALYSIS OF B-  
GLUCAN IN FUNGAL FRAGMENTS**, TIINA  
REPONEN, Sung-Chul Seo, Yulia Iossifova,  
Atin Adhikari, Sergey A. Grinshpun, University  
of Cincinnati, Cincinnati, Ohio, USA (p.955)

12F3 **SUPPRESSION OF EXHALED  
2:40 BIOAEROSOL PRODUCTION FROM THE  
RESPIRATORY SYSTEM BY INHALATION  
THERAPY**, WESLEY H. DEHAAN, Matthew  
Brande, Jennifer Kenyon and Robert Clarke,  
Pulmatrix Inc, Cambridge, MA (p.956)

12F4 **BIOLOGICAL PERFORMANCE OF  
3:00 PORTABLE IMPACTORS WHEN  
COLLECTING AIRBORNE BACTERIA AND  
FUNGI**, MAOSHENG YAO and Gediminas  
Mainelis, Department of Environmental  
Sciences, Rutgers University, NJ (p.957)

12F5 **FLUOROCHROME, FLOW CYTOMETRY,  
3:20 AND FLUORESCENT IN SITU  
HYBRIDIZATION TO MONITOR  
BIOAEROSOLS IN CHICKEN HOUSES**,  
MIAO-CHING CHI, Chih-Shan Li, Graduate  
Institute of Environmental Health, College of  
Public Health, National Taiwan University,  
Taipei, Taiwan, R.O.C. (p.958)

### 12G Instrumentation-III (Poster)

Minnesota Ballroom

*Chaolong Qi, George Mullholland, Chairs*

12G1 **PHYSICAL AND CHEMICAL FIELD  
2:00 VALIDATION OF THE PERFORMANCE OF  
THE MINIATURE VERSATILE AEROSOL  
CONCENTRATION ENHANCEMENT  
SYSTEM (MVACES)**, KATHARINE MOORE,  
Zhi Ning, Satya B Sardar, Philip M Fine,  
Michael D Geller, Andrea Polidori,  
Mohammed Arhami, Constantinos Sioutas,  
University of Southern California, Los  
Angeles, CA (p.477)

12G2 **HIGH-VOLUME VIRTUAL IMPACTORS FOR  
2:00 ENHANCEMENT OF INSTRUMENT  
PERFORMANCE FOR COARSE  
PARTICLES**, KAUKO JANKA, Riku  
Reinivaara, Dekati Ltd., Tampere, Finland,  
Antti Rostedt, Marko Marjamäki, Jorma  
Keskinen, Tampere University of Technology,  
Tampere, Finland, Matti Lehtimäki, VTT  
Technical Research Centre of Finland,  
Tampere, Finland (p.479)

12G3 **COMPARISON OF PARTICLE  
2:00 CONCENTRATION FOR A PORTABLE  
REAL-TIME MONITOR WITH THE  
FEDERAL REFERENCE METHOD**, C. H.  
HUANG, Yuanpei University of Science and  
Technology, Hsinchu, Taiwan; H. L. Chiang,  
China Medical University, Taichung, Taiwan  
(p.480)

12G4 **COMPARISON BETWEEN A DIRECT-  
2:00 READING REAL-TIME AEROSOL  
MONITOR AND A GRAVIMETRIC  
INSTRUMENT FOR PM1 MEASUREMENTS  
IN THE ATMOSPHERE OF ATHENS,  
GREECE.**, B. Georgalas, G. Grivas, A.  
Chaloulakou, School of Chemical  
Engineering, National Technical University of  
Athens, Greece (p.481)

12G5 **210-POLONIUM AGING EFFECTS IN THE  
2:00 ELECTROSPRAY AEROSOL GENERATOR**,  
STANLEY L. KAUFMAN, TSI Incorporated,  
Saint Paul, USA (p.483)

- 12G6  
2:00 **MEASUREMENT OF PARTICLE SIZE DISTRIBUTION USING THE PARTICLE BEAM MASS SPECTROMETER WITHOUT DEFLECTION VOLTAGE SCAN**, J. G. Na, D. G. Jo, J. B. Choi, Y. J. Kim and T. Kim, Sungkyunkwan University, Korea (South) (p.485)
- 12G7  
2:00 **TIME SERIES MEASUREMENTS OF LOS ANGELES URBAN AEROSOL RETRIEVED BY APPLYING THE OPTIMAL ESTIMATION METHOD TO SMPS-APM DATA**, MICHAEL J. CUBISON, Jose L. Jimenez, University of Colorado, CO (p.486)
- 12G8  
2:00 **COMPARISON OF ULTRAFINE CONDENSATION PARTICLE COUNTERS FOR THE GAS-PHASE ELECTROPHORETIC MOBILITY MACROMOLECULE ANALYZER (GEMMA)**, XIAOLIANG WANG, Phillip Tan, and Stanley L. Kaufman, TSI Inc., St Paul, MN 55126, USA (p.488)
- 12G9  
2:00 **SCATTERING PROPERTIES OF COATED NANOPARTICLES COMPARED TO WATER DROPLETS**, PÉTER JANI, L. Vámos, Research Institute for Solid State Physics and Optics, Budapest, Hungary (p.490)
- 12G10  
2:00 **A COMPACT INSTRUMENT FOR VOLATILITY STUDY OF ULTRAFINE PARTICLES**, MANISH RANJAN and Suresh Dhaniyala, Department of Mechanical and Aeronautical Engineering., Clarkson University, Potsdam, NY (p.491)
- 12G11  
2:00 **PERFORMANCE OF DMAS OPERATED AT THE CONDITION OF UNEQUAL POLYDISPERSE AEROSOL AND MONODISPERSE AEROSOL SAMPLING FLOWRATES**, Lin Li, Da-Ren Chen, Environmental Engineering Science Program, Washington University in St. Louis, One Brookings Drive, Saint Louis, MO, U.S.A.; Weiling Li, Sensory Department, Philip Morris, 2000 Bells Road, Richmond, VA, U.S.A. (p.492)
- 12G12  
2:00 **MOBILITY CLASSIFICATION OF DIAMETER-CONTROLLED AEROSOL NANOWIRES: EXPERIMENT AND THEORY**, SOO H. KIM, George W. Mulholland, Michael R. Zachariah, University of Maryland, College Park, MD and National Institute of Standards and Technology, Gaithersburg, MD (p.494)
- 12G13  
2:00 **APPLICATION OF NCDMA (NANOPARTICLE CROSSFLOW DIFFERENTIAL MOBILITY ANALYZER) FOR VOLATILITY MEASUREMENTS**, DONG-KEUN SONG, Suresh Dhaniyala, Philip K. Hopke, Clarkson University, Potsdam, NY (p.495)
- 12G14  
2:00 **INTERCOMPARISON OF THE PERFORMANCE OF A FAST MOBILITY PARTICLE SIZER AND AN ULTRAFINE WATER-BASED CONDENSATION PARTICLE COUNTER FOR MEASURING PARTICLE NUMBER AND SIZE DISTRIBUTIONS IN THE ATMOSPHERE**, CHEOL-HEON JEONG, Greg J. Evans, University of Toronto, Toronto, ON, Canada (p.496)
- 12G15  
2:00 **PROCESSING OF THE DIFFUSION BATTERY DATA ON THE BASE OF MULTIPLE SOLUTIONS AVERAGING ALGORITHM (MSA)**, TAMARA OVCHINNIKOVA, Institute for Water and Environmental Problems Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia; Sergey Eremenko, Anatoly Baklanov, Institute of Chemical Kinetics and Combustion, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia (p.497)
- 12G16  
2:00 **ON OPTIMAL CONSTRUCTION OF GROUND NETWORK FOR ATMOSPHERIC AEROSOL MEASUREMENTS**, ASADOV HIKMAT HAMID, doctor of technical sciences, head of department of atmospheric measurements of Azerbaijan National Aerospace Agency, Abbaszadeh Elnur Sanan- engineer of said department. (p.499)

- 12G17 2:00 **SYNERGETIC USE OF MSG-SEVIRI AND ENVISAT-AATSR IMAGERY FOR THE RETRIEVAL OF AEROSOL PROPERTIES OVER LAND AND SEA SURFACES**, YASMINE S. BENNOUNA, Gerrit de Leeuw, TNO Defence, Security and Safety, The Hague, The Netherlands (p.501)
- 12G18 2:00 **THERMODENUDE-AERODYNE AEROSOL MASS SPECTROMETER SYSTEM: LAB CHARACTERIZATION AND INITIAL FIELD DEPLOYMENT RESULTS**, J. ALEX HUFFMAN, Jose L. Jimenez, Department of Chemistry and Biochemistry, and Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado, Boulder, CO, Paul J. Ziemann, Department of Environmental Sciences, University of California, Riverside, CA, John T. Jayne, Doug R. Worsnop, Aerodyne Research Inc., Billerica, MA (p.502)
- 12G19 2:00 **DESIGN AND EVALUATION OF A NEW AERODYNAMIC LENS FOR THE AERODYNE AEROSOL MASS SPECTROMETER**, LEAH WILLIAMS, John T. Jayne, Aerodyne Research, Inc., Billerica, MA; Rensheng Deng, Kenneth A. Smith, MIT, Cambridge, MA; Margaret A. Farrar, Cambridge Rindge and Latin School, Cambridge, MA; Kori Moore, Utah State University, Logan, UT; Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA. (p.504)
- 12G20 2:00 **AEROSOL COLLECTION MODULE FOR ON-LINE SIZE-RESOLVED CHEMICAL AND PHYSICAL CHARACTERIZATION OF PARTICULATE ORGANICS**, Dagmar Trimborn, JOHN T. JAYNE, Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA; Michael L. Alexander, Pacific NW National Laboratory, Richland, WA; Hacene Boudries, General Electric, Wilmington, MA; Kenneth A. Smith, Massachusetts Institute of Technology, Cambridge, MA (p.505)
- 12G21 2:00 **IMPROVED AEROSOL APPORTIONMENT BY BAYESIAN CLASSIFIER**, THOMAS REBOTIER, Stephen Toner, Kimberly Prather, University of California San Diego, La Jolla, CA (p.506)
- 12G22 2:00 **CHARACTERIZATION OF CHEMICAL COMPOSITION IN DIFFERENT SIZE FRACTIONS OF FRESH CIGARETTE SMOKE PARTICLES**, JUDY Q. XIONG, Dritan Xhillari, Beverly S. Cohen, Department of Environmental Medicine, New York University School of Medicine, 57 Old Forge Road, Tuxedo, NY 10987, USA (p.508)
- 12G23 2:00 **EXPERIMENTAL EVALUATION OF AEROSOL CONCENTRATORS**, FRANCISCO ROMAY, Virgil A. Marple, MSP Corporation, Shoreview, MN (p.510)
- 12G24 2:00 **FIELD VALIDATION OF A NOVEL PERSONAL CYCLONE SAMPLER FOR COLLECTION OF FUNGAL SPORES**, Janet M. Macher, California Department of Health Services, Richmond, CA; TEH-HSUN (BEAN) CHEN, National Institute for Occupational Safety and Health, Morgantown, WV; Carol Y. Rao, Centers for Disease Control and Prevention, Atlanta, GA (p.512)
- 12G25 2:00 **DETECTION OF BIOAEROSOLS USING FLAPS IN AN ASHRAE STANDARD 52.2 FILTER TEST FACILITY**, WEIHUA TANG, Thomas H. Kuehn, Department of Mechanical Engineering, Institute of Technology, University of Minnesota, Minneapolis, MN; M. A. Ramakrishnan, Sagar M. Goyal, Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN (p.514)
- 12G26 2:00 **PROGRESS TOWARDS REAL-TIME MEASUREMENT OF THE MASS AND COMPOSITION OF PARTICLES**, KENNETH C WRIGHT, Peter T. A. Reilly, and William B. Whitten., Chemical Science Division, Oak Ridge National Laboratory, Oak Ridge, TN (p.515)
- 12G27 2:00 **CONDENSATION OF METHANOL IN A SUPERSONIC NOZZLE: THE EFFECT OF GAS PHASE CLUSTERING**, HARTAWAN S. LAKSMONO, Shinobu Tanimura, Barbara E. Wyslouzil, The Ohio State University, Columbus, OH (p.517)

12G28 **EXPERIMENTAL EVALUATION OF MOBILITY, MICROSCOPY AND OPTICAL TECHNIQUES FOR THE CHARACTERIZATION OF FLAME PARTICULATES**, Yingwu Teng, UMIT O. KOYLU, Department of Mechanical and Aerospace Engineering, University of Missouri-Rolla, Rolla, MO (p.519)

### 12H Control Technology-II (Poster)

Garden Court West

*Dibyendu Mukherjee , Sandeep Agnihotri,*

*Chairs*

12H1 **A COMPARISON OF TWO NANO-SIZED PARTICLE AIR FILTRATION TESTS IN THE DIAMETER RANGE OF 10 TO 400 NANOMETERS.**, DANIEL A. JAPUNTICH, Andrew S. Viner, 3M Company, Saint Paul, MN; Luke M. Franklin, David Y. Pui, Thomas H. Kuehn, Seong Chan Kim, University of Minnesota, Minneapolis, MN (p.290)

12H2 **MANUFACTURING AND EVALUATION OF ELECTROPOSITIVELY MODIFIED FILTERS FOR REMOVING OF FINE PARTICLES IN LIQUID FILTRATION**, JINHYOUK SHIN, LG Electronics, Changwon, South Korea, Sunghak Jung, Jaekeun Lee, Pusan National University, Busan, South Korea (p.291)

12H3 **DETERMINATION OF FILTRATION EFFICIENCY OF AEROSOL PARTICLES THROUGH MULTILAYER FIBROUS FILTERS**, TOMASZ JANKOWSKI, CENTRAL INSTITUTE FOR LABOUR PROTECTION-NATIONAL RESEARCH INSTITUTE, WARSAW, POLAND (p.293)

12H4 **MODELING TRANSITIONAL LOADING OF FILTERS WITH SOLID AEROSOL PARTICLES**, SHO TAKAGAKI, David Y. H. Pui, Benjamin Y. H. Liu, University of Minnesota, Minneapolis MN, USA; Michael Shapiro, Technion-ILL, Haifa, Israel (p.295)

12H5 **EMISSION REDUCTIONS OF BOTH PARTICULATE MATTER AND POLYCYCLIC AROMATIC HYDROCARBONS BY ADDING BIO-SOLUTION IN EMULSIFIED DIESEL FUEL**, Yuan-Chung Lin\*, Wen-Jhy Lee\*, Chun-Chi Chen, Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan; Yuan-Chung Lin\*, Wen-Jhy Lee\*, Chun-Chi Chen, Sustainable Environment Research Center, National Cheng Kung University, Tainan, Taiwan; Chung-Ban Chen, Heavy Duty Diesel Engine Emission Group, Refining and Manufacturing Research Center, Chinese Petroleum Corporation, Chia-Yi, Taiwan (p.297)

12H6 **VENTILATION SYSTEM COMPRISING A DIELECTRIC BARRIER DISCHARGER AND UV-TIO2 PHOTOCATALYST FILTERS FOR SIMULTANEOUS REMOVAL OF GASEOUS AND PARTICULATE CONTAMINANTS IN THE TEST CHAMBER**, Jae Hong Park, Jeong Hoon Byeon, Ki Young Yoon, Jungho Hwang, Yonsei University (School of Mechanical Engineering) (p.299)

12H7 **PHOTOCATALYSIS OF GASEOUS POLLUTANTS BY ULTRASONIC MIST INCLUDING TIO2 PARTICLES**, Kazuhiko Sekiguchi, Keisuke Yamamoto, Kazuhiko Sakamoto, Saitama University , Saitama, Japan (p.300)

12H8 **PARTICLE DEPOSITION ON A HORIZONTAL CIRCULAR PLATE THAT MOVING IN THE SAME DIRECTION OF AIRFLOW IN CLEANROOMS**, Shih-Cheng Hu, Cheng-Wei Ku, Yang-Cheng Shih, James C. M. Tsao, Department of Air Conditioning and Refrigeration Engineering, National Taipei University of Technology, Taipei, Taiwan (p.302)

12H9 **TEMPORAL ALIGNMENT IN ON-BOARD DIESEL TRANSIT BUS PARTICLE MEASUREMENT AND MODAL EMISSIONS ANALYSIS**, OLIVER H. GAO, Cornell University, Ithaca, NY; Britt A. Holmén, University of Connecticut, Storrs, CT (p.303)

- 12H10 **INDOOR REDUCTION OF SMOKE AEROSOLS USING A TITANIUM DIOXIDE CATALYST**, VICTOR W.-C. CHANG, Lynn M. Hildemann (p.304)
- 12H11 **NUMERICAL INVESTIGATION OF FILTRATION BY ELLIPTICAL FIBERS**, JING WANG, David Pui, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN (p.305)
- 12H12 **FILTRATION AND ELECTRICAL PROPERTIES OF ELECTROSPUN FILTER MEDIA**, HYUN-SEOL PARK, Korea Institute of Energy Research, Daejeon, Korea (p.306)
- 12H13 **PARTICLE DEPOSITION BEHAVIOUR ON SINGLE FIBERS – PARTICULATE STRUCTURES AND SINGLE FIBER EFFICIENCY**, STEFAN SCHOLLMEIER, Jörg Meyer, Heinz Umhauer, Gerhard Kasper, Institute for Mechanical Process Engineering and Applied Mechanics, University of Karlsruhe (p.307)
- 12H14 **OPTIMUM DROP DIAMETER FOR COLLECTION OF AEROSOL PARTICLES**, MICHAEL PILAT, University of Washington, Seattle, WA (p.309)
- 12H15 **EVALUATIONS OF VARIOUS NOBEL CATALYTIC AIR FILTERS: FOR SIMULTANEOUS REMOVAL OF BIOAEROSOLS AND MICROBIAL VOLATILE ORGANIC COMPOUNDS**, Byung Ju Ko, Ki Young Yoon, Jeong Hoon Byeon, Jae Hong Park, Jungho Hwang, Yonsei University (School of mechanical engineering); Hee Seung Yoon, Seung Kon Ryu, Chungnam National University (School of chemical engineering) (p.310)
- 12H16 **DECOMPOSITION OF PAHS IN AMBIENT PM BY SOFT X-RAY IRRADIATION**, Yunhe Bai, Masami Furuuchi, Yoshio Otani, Mitsuhiko Hata and Masaya Aizawa, Graduate School of Natural Science and Technology, Kanazawa University, Kakumamachi, 920-1192, Kanazawa Japan ;Sirima Panyametheekul, Department of Environmental Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok, Thailand (p.312)

- 12H17 **AIR FILTRATION TESTING USING A SCANNING MOBILITY PARTICLE SIZER FOR SOLID AEROSOLS OF 3.5 TO 100NM DIAMETER**, DANIEL A. JAPUNTICH, 3M Company, St. Paul, MN; Luke M. Franklin, David Y. Pui, Thomas H. Kuehn, University of Minnesota, Minneapolis, MN. (p.314)
- 12H18 **RESEARCH ON FILTRATION EFFICIENCY OF MOISTURE SEPARATOR FOR NUCLEAR REACTOR**, ZHENZHONG ZHANG, Feng Jiang, Suisheng Ye, Institute of Nuclear and New Energy Technology, Tsinghua University, Beijing, China (p.315)

**Thursday 3:40 PM - 5:30 PM**  
**Fuchs and IARA Award Presentations,**  
**AAAR-25 Celebration**

Minnesota Ballroom

*John Seinfeld and David Pui, Chair*

**FUCHS MEMORIAL AWARD**, presented by the Presidents of GAeF, JAST and AAAR

**FUCHS LECTURE**, by the Award winner

**INTERNATIONAL AEROSOL FELLOW AWARD**, presented by Helmuth Horvath

**FISSAN-PUI-TSI AWARD**, presented by Kaarle Hämeri

**AEROSOL SCIENCE AND ENGINEERING: FROM THE LAST TWENTY-FIVE YEARS TO THE NEXT**, Sheldon K. Friedlander, UCLA

**CELEBRATION OF THE ACHIEVEMENTS OF AEROSOL RESEARCH ASSOCIATIONS AROUND THE WORLD**,

**Thursday 5:45 PM - 7:00 PM**  
**Fuchs Award and AAAR-25 Reception**

Science Museum of Minnesota

**Thursday 7:00 PM - 8:00 PM**  
**Working Group Chairs Meeting**

**Friday 8:00 AM - 9:20 AM**  
**Plenary**

Minnesota Ballroom

*David Pui, Chair*

8:00 **PLENARY 5. PRIMARY VERSUS SECONDARY AND BIOGENIC VERSUS ANTHROPOGENIC ORGANIC AEROSOL: GRAND CHALLENGES IN ATMOSPHERIC AEROSOL RESEARCH**, Urs Baltensperger, Head of the Laboratory of Atmospheric Chemistry, Paul Scherrer Institut & ETH Zurich, Switzerland (*p.1109*)

9:00 **RECOGNITION OF SERVICE TO IARA AND AAAR**, David Pui and Pratim Biswas

**Friday 9:20 AM - 9:40 AM**

**Coffee Break**

Great River Ballroom, Garden Courts East & West

**Friday 9:40 AM - 11:00 AM**

**Session 13**

**13A Nucleation in the Environment-II (Platform)**

Minnesota Ballroom

*Liisa Pirjola, Alfred Wiedensohler, Chairs*

13A1 **A LINEAR MODEL OF NUCLEATION BURST**, ALEX LUSHNIKOV, Markku Kulmala, and Yulia Lyubovtseva, University of Helsinki (*p.1637*)

13A2 **EFFECT OF ION-INDUCED NUCLEATION ON PARTICLE FORMATION IN A BOREAL FOREST**, LAURI LAAKSO, Anne Hirsikko, Miikka Dal Maso, Marko Vana, Markku Kulmala, University of Helsinki, Finland; Veli-Matti Kerminen, Finnish Meteorological Institute, Finland (*p.1639*)

13A3 **FORMATION OF H<sub>2</sub>SO<sub>4</sub>/H<sub>2</sub>O PARTICLES IN THE ABSENCE OF ORGANICS**, TORSTEN BERNDT, Olaf Böge, Frank Stratmann, Leibniz-Institut für Troposphärenforschung, Leipzig, Germany (*p.1641*)

13A4 **CHARGED FRACTION OF FRESHLY NUCLEATED PARTICLES DURING NUCLEATION AND GROWTH EVENTS: IMPLICATIONS FOR THE NUCLEATION MECHANISMS**, FANGQUN YU, State University of New York at Albany, NY (*p.1643*)

**13B Urban and Regional Aerosol-II (Platform)**

Capitol Ballroom

*Andre Prevot, Prakash Bhave, Chairs*

13B1 **EMISSIONS INVENTORY OF PM<sub>2.5</sub> TRACE ELEMENTS ACROSS THE U.S.**, ADAM REFF, Prakash Bhave, U.S. EPA National Exposure Research Laboratory, Research Triangle Park, NC (*p.1830*)

13B2 **ATMOSPHERIC LEAD IN EAST BALTIC REGION: CONCENTRATIONS, SOURCES AND ISOTOPIC COMPOSITION**, Darius Ceburnis, National University of Ireland, Galway, Ireland, Darius Ceburnis, Darius Valiulis, Kestutis Kvietkus, Jonas Sakalys, Institute of Physics, Vilnius, Lithuania (*p.1832*)

13B3 **METEOROLOGICALLY ADJUSTED LONG-TERM TRENDS (1991 TO 2004) OF PM<sub>10</sub> IN SWITZERLAND**, CHRISTOPH HUEGLIN, Stefan Henne, Brigitte Buchmann, Empa, Duebendorf, Switzerland; Carlos Ordonez, Andre Prevot, PSI, Villigen, Switzerland (*p.1834*)

13B4 **ASSESSMENT OF THE AIR QUALITY IN THE WESTERN US NATIONAL PARKS: MODEL PERFORMANCE EVALUATION**, MARCO A. RODRIGUEZ, Cooperative Institute for Research in the Atmosphere Colorado State University, Fort Collins, CO; Michael G. Barna, Bret A. Schichtel, Air Resources Division National Park Service, Fort Collins, CO (*p.1836*)



**13C Symposium on Non-Invasive Scattering Techniques for Nanoaerosol Characterization: Neutrons, X-rays and Light-I (Platform)**

Governors 1 & 5

*Barbara Wyslouzil, Chris Sorensen, Chairs*

- 13C1 **LIGHT SCATTERING AS A PROBE OF NANOPARTICLE AEROSOLS**, C.M. SORENSEN, Department of Physics, Kansas State University, Manhattan, KS (p.91)  
9:40
- 13C2 **ELASTIC LIGHT SCATTERING AND PHOTOELECTRON IMAGING OF NANOPARTICLES USING TUNABLE VACUUM ULTRAVIOLET RADIATION**, KEVIN R. WILSON, Musahid Ahmed Chemical Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA, Stephen R. Leone, Departments of Chemistry and Physics, University of California, Berkeley, CA, Jinian Shu, Research Center for Eco-Environmental Sciences, P.O. Box 2871, Beijing 100085, China, Eckart Rühl, Christina Graf, Institut für Physikalische Chemie, Universität Würzburg, Am Hubland, D-97074 Würzburg, Germany (p.92)  
10:00
- 13C3 **PATTERNS IN ELECTROMAGNETIC SCATTERING**, MATTHEW BERG, Chris Sorensen, Amit Chakrabarti, Kansas State University, Manhattan, KS (p.93)  
10:20
- 13C4 **SANS: A TOOL FOR QUANTITATIVE INVESTIGATION OF NANOSIZED STRUCTURES**, Paul D. Butler, National Institute of Standards and Technology, Gaithersburg, MD (p.95)  
10:40

**13D Symposium: Aerosol and Bioterrorism Defense-I (Platform)**

Governors 2 - 4

*Edward Stuebing, Sergey Grinshpun, Chairs*

- 13D1 **BIOAEROSOL COLLECTION EFFICIENCY FOR DIFFERENT FILTER MATERIALS USING BACILLUS ATROPHAEUS AND MS2 BACTERIOPHAGE AS BIOTERRORISM SURROGATES**, NANCY CLARK BURTON, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Cincinnati, OH, Atin Adhikari, Sergey A. Grinshpun, and Tiina Reponen, University of Cincinnati, Cincinnati, OH (p.959)  
9:40
- 13D2 **DEVELOPMENT OF A TIME-RESOLVED HIGH-VOLUME BIOAEROSOL REFERENCE SAMPLER**, Kevin T. Hommema, Rodney S. Black, and Matthew J. Shaw, Battelle Memorial Institute, Columbus, OH (p.960)  
10:00
- 13D3 **AIRBORNE HUMAN VIRUSES CAPTURED BY HVAC FILTERS**, SENTHILVELAN ANANTHARAMAN, M. A. Ramakrishnan, Sagar M. Goyal, Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN; Seung Won Kim, Peter C. Raynor, Division of Environmental Health Sciences, School of Public Health, University of Minnesota, Minneapolis, MN; Nicholas J Stanley, Thomas H. Kuehn, Department of Mechanical Engineering, Institute of Technology, University of Minnesota, MN (p.962)  
10:20
- 13D4 **CONTROL OF ORTHOPOXVIRUS INFECTION IN MOUSE MODELS USING SOFT X-RAY ENHANCED ELECTROSTATIC PRECIPITATION**, ERIC KETTLESON, Pratim Biswas, Environmental Engineering Science, Washington University, St. Louis, MO; Divey Saini, Jill Schriewer, R. Mark L. Buller, Molecular Microbiology and Immunology, Saint Louis University, St. Louis, MO (p.963)  
10:40

**13E Remote Sensing (Platform)**

Wabasha Suite

Wynn Eberhard, Gregory Schuster, Chairs

- 13E1  
9:40 **REMOTE QUANTIFICATION OF PLUME AEROSOL CONCENTRATIONS AND PLUME SPREAD OVER AGRICULTURAL AND FOREST CANOPIES**, APRIL L HISCOX, David R. Miller, Carmen J. Nappo, Department of Natural Resources Management and Engineering, The University of Connecticut, Storrs, CT (p.520)
- 13E2  
10:00 **SOME RESULTS OF AEROSOL AND PRE-CURSOR GAS OBSERVATIONS OVER NORTHERN AND SOUTHERN LOCATIONS IN INDIA DURING LAND CAMPAIGN PROGRAMS**, P.C.S. Devara, P. Ernest Raj, K.K. Dani, S.K. Saha, S.M. Sonbawne, R.S. Maheskumar and R.L. Bhawar, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, Pashan, Pune 411 008, India (p.522)
- 13E3  
10:20 **FIRST TWO YEARS OF AUTOMATIC UNATTENDED PARTICLE MEASUREMENTS AT THE FINNISH ANTARCTIC RESEARCH STATION ABOA**, RISTO HILLAMO, Aki Virkkula, Jaakko Laakia, Pasi Aalto and Markku Kulmala; Finnish Meteorological Institute, Research and Development, FIN-00560 Helsinki, Finland and Department of Atmospheric Sciences, University of Helsinki, FIN-00014 Helsinki, Finland (p.1227)
- 13E4  
10:40 **BLACK CARBON CONCENTRATION FROM WORLDWIDE AEROSOL ROBOTIC NETWORK (AERONET) MEASUREMENTS**, GREGORY L. SCHUSTER, NASA Langley Research Center, Hampton, VA; Oleg Dubovik, Brent N. Holben, NASA Goddard Spaceflight Center, Greenbelt, MD; Eugene E. Clothiaux, Pennsylvania State University, University Park, PA. (p.526)

**13F PM and Environmental Health-I (Platform)**

Kellogg Suite

Gedi Mainelis, Lupita Montoya, Chairs

- 13F1  
9:40 **EXAMINING THE CARDIOVASCULAR HEALTH EFFECTS OF ATLANTA AEROSOL USING THREE SOURCE APPORTIONMENT TECHNIQUES**, JEREMY A. SARNAT, Mitchel Klein, Paige E. Tolbert, Emory University, Atlanta, GA, Amit Marmur, Armistead G. Russell, Jim A. Mulholland, Georgia Institute of Technology, Atlanta, GA , Eugene Kim, Philip K. Hopke, Clarkson University, Potsdam, NY (p.965)
- 13F2  
10:00 **ASSOCIATIONS OF CHEMICAL COMPOSITION OF AMBIENT PM2.5 WITH HEART RATE VARIABILITY IN SPONTANEOUS HYPERTENSIVE RATS**, MASAKO MORISHITA, Gerald Keeler, Ali Kamal, University of Michigan, Ann Arbor, MI; James Wagner, Jack Harkema, Michigan State University, East Lansing, MI; Annette Rohr, Electric Power Research Institute, Palo Alto, CA (p.967)
- 13F3  
10:20 **PERSONAL EXPOSURE OF TORONTO RESIDENTS TO PM0.1 AND PM2.5 DURING THE SUMMER OF 2005**, KELLY SABALIAUSKAS, Greg Evans, Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Canada; Monica Campbell, Franca Ursitti, Environmental Protection Office, Toronto Public Health, Toronto, Canada; Anna-Maria Frescura, David Steib, Amanda Wheeler, Air Health Effects Division, Health Canada, Ottawa, Canada; Jeff Brook, Air Quality Research Division, Environment Canada, Toronto, Canada (p.968)
- 13F4  
10:40 **HEALTH STATUS OF WORKERS EXPOSED TO TALCUM IN HOSPITAL**, THITIWORN CHOOSONG, Pitchaya Phakthongsuk, Occupational Health Unit, Department of Community Medicine, Prince of Songkla University, Songkla, Thailand (p.969)

**13G Instrumentation-IV (Poster)**

Minnesota Ballroom

*Peter Jani, Mark Stolzenburg, Chairs*

13G2 **COMPARISON OF APS AND BETA AS CONTINUOUS MONITORS FOR MEASURING PM10 CONCENTRATIONS IN URBAN AIR**, DEVRAJ THIMMAIAH, Jan Hovorka, Charles University in Prague, Czech Republic (p.530)

13G3 **POSITIVE ARTEFACT FORMATION DURING SAMPLING SEMI-VOLATILE NITRATE AEROSOL USING WET-WALLED DENUDEERS**, ANDREY KHLYSTOV, Yilin Ma, Department of Civil and Environmental Engineering, Duke University, Durham, NC (p.532)

13G4 **VALIDATION OF PM2.5 CARBON MEASUREMENT PROTOCOLS FOR SEMI-CONTINUOUS CARBON MONITOR**, Jin-Seok Han, Kwang-Joo Moon, Yu-Duk Hong, National Institute of Environmental Research, Incheon, Republic of Korea, Yutaka Kondo, Yuzo Miyazaki, University of Tokyo (RCAST/UT), Tokyo, Japan, Young-Jun Kim, Gwangju Institute of Science and Technology (GIST), Gwangju, Republic of Korea (p.534)

13G5 **INTERCOMPARISON OF REAL TIME PM2.5 AMMONIUM MEASUREMENTS AT URBAN AND RURAL LOCATIONS IN NEW YORK**, MIN-SUK BAE, Kenneth L. Demerjian, James J. Schwab, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; Jian Hou, Xianliang Zhou, Wadsworth Center, NYS Department of Health and School of Public Health, University at Albany, NY; Kevin Rhoads, and Doug Orsini, Department of Chemistry, Siena College, Loudonville, NY (p.536)

13G7 **COAGULATION: A FEASIBLE METHOD FOR A NUMBER CONCENTRATION STANDARD IN EXHAUST GAS MEASURING SYSTEMS?**, GERHARD POHLMANN, Katharina Schwarz, Wolfgang Koch, Department of Aerosol Technology, Fraunhofer Institute Toxicology and Experimental Medicine, Hannover, Germany (p.539)

13G8 **EXPERIMENTAL EVALUATION OF THE TRANSFER FUNCTION OF TSI MODEL 3081 DMAS**, HIROMU SAKURAI, Yoshihiro Sato, Akira Yabe, Kensei Ehara, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan; Chih-Min Lin, Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan (p.540)

13G9 **DEVELOPMENT AND EVALUATION OF THE PRIMARY CALIBRATION STANDARD FOR THE AEROSOL NUMBER CONCENTRATION**, HIROMU SAKURAI, Kensei Ehara, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan; Naoko Tajima, Nobuhiko Fukushima, Kanomax Japan Inc., Suita, Japan (p.541)

13G10 **ONLINE MEASUREMENT OF ULTRAFINE AGGREGATE VOLUME BY ELECTRICAL MOBILITY ANALYSIS: COMPARISON OF DIFFERENTIAL MOBILITY ANALYZER AND AEROSOL PARTICLE MASS ANALYZER DATA**, ANSHUMAN AMIT LALL, Weizhi Rong, Lutz Mädler, and Sheldon K. Friedlander, Department of Chemical and Biomolecular Engineering, University of California, Los Angeles, CA (p.542)

13G13 **NEW LAB-ON-A-CHIP APPROACHES FOR FAST ONLINE MEASUREMENT OF AEROSOL COMPOSITION**, JEFFREY L. COLLETT, JR., Lynn Rinehart, Xiao-Ying Yu, Atmospheric Science Department, Colorado State University, Fort Collins, Colorado, USA; David MacDonald, Yan Liu, Scott Noblitt, Charles S. Henry, Department of Chemistry, Colorado State University, Fort Collins, Colorado, USA; Nathan M. Kreisberg, Gregory S. Lewis, Susanne V. Hering, Aerosol Dynamics Inc., Berkeley, California, USA (p.544)

13G15 **CLOUD PARTICLE SAMPLER DESIGN: SAMPLING OF INTERSTITIAL PARTICLES**, PATRICK EDDY, Suresh Dhaniyala, Clarkson University, Potsdam, NY (p.546)

- 13G16 9:40 **AIRBORNE TESTS OF A NEW LOW-PRESSURE WATER-BASED CN INSTRUMENT**, DAVID C. ROGERS, Research Aviation Facility, National Center for Atmospheric Research, Broomfield, CO; Susanne Hering, Aerosol Dynamics Inc., Berkeley, CA; Mark R. Stolzenburg, Dept. of Mechanical Engineering, University of Minnesota, Minneapolis MN; Derek Oberreit, Fred Quant, Quant Technologies, Blaine, MN (p.547)
- 13G17 9:40 **SELF-CONSTRUCTED AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER**, T. LAITINEN, K. Hartonen, K. Kuuspallo, M. Rasilainen, M. Kulmala, M.-L. Riekkola, University of Helsinki, Helsinki, Finland, H. Lihavainen, Y. Viisanen, Finnish Meteorological Institute, Helsinki, Finland (p.549)
- 13H Atmospheric Aerosols: Visibility, Remote and Rural Aerosols (Poster)**  
Garden Court East  
*Thomas Cahill, Y. Lee, Chairs*
- 13H1 9:40 **VOLATILITY CHARACTERISTICS OF AEROSOLS MEASURED AT NY-ÅLESUND COMPARED WITH A BACKGROUND-RURAL AND A SEMI-URBAN LOCATION**, GUY COULSON, National Institute of Water and Atmospheric Research, Auckland, New Zealand; Stephan Nyeki, University of Bern, Switzerland; Mike Cubison, University of Colorado, Boulder, USA; Ian Colbeck, University of Essex, UK (p.1212)
- 13H2 9:40 **THERMODYNAMIC PREDICTIONS FOR IN-SITU PH IN PM2.5 IN HONG KONG**, Xiaohong Yao, Ming Fang, Institute for the Environment, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, Tsz Yan Ling, Chak K. Chan, Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong (p.1214)
- 13H3 9:40 **DIFFERENCE OF AEROSOL CHEMICAL COMPOSITIONS MEASURED AT NORTHERN AND SOUTHERN AREAS OF EAST CHINA SEA**, AKINORI TAKAMI, Takao Miyoshi, Shiro Hatakeyama, National Institute for Environmental Studies, Tsukuba, Japan, Akio Shimono, Sanyu Plant Service Ltd., Sagami-hara, Japan (p.1215)
- 13H4 9:40 **MODELING THE CONSEQUENCES OF DIFFERENT PARTICLE DEPOSITION ALGORITHMS OVER DIFFERENT LAND COVER TYPES**, S.C. Pryor, Atmospheric Science Program, Department of Geography, Indiana University, Bloomington, IN, USA, F. S. BINKOWSKI, C. Mattocks, Carolina Environmental Program, The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA (p.1216)
- 13H5 9:40 **EARLY INDICATIONS OF NITROGEN AND SULFUR SOURCES AT ROCKY MOUNTAIN NATIONAL PARK**, KRISTI GEBHART (p.1217)
- 13H6 9:40 **A DETAILED SNOW CORE RECORD OF RECENT ATMOSPHERIC DEPOSITION OF TRACE METALS TO CENTRAL (SUMMIT) GREENLAND**, MARTIN SHAFER, Erika von Schneidemesser, Joel Overdier, James Schauer, Environmental Chemistry & Technology, University of Wisconsin-Madison, Madison, WI; Gayle Hagler, Mike Bergin, Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA. (p.1218)
- 13H7 9:40 **CHARACTERIZATION OF PARTICLE GROWTH EVENTS AT WESTERN COASTAL SITE OF KOREA IN 2005**, Young-Gon Lee, Korea Global Atmosphere Watch Observatory, Meteorological Research Institute, KMA, Taejeon, Korea; Chun-Ho Cho, Korea Global Atmosphere Watch Observatory, Meteorological Research Institute, KMA, Taejeon, Korea; Byoung-cheol Choi, Remote Sensing Research Laboratory, Meteorological Research Institute, KMA, Seoul, Korea (p.1220)

- 13H8  
9:40 **CHARACTERISTICS OF THE AEROSOL FORMATION AND GROWTH EVENTS IN THE KOREA GLOBAL ATMOSPHERE WATCH OBSERVATORY (KGAWO) DURING OCTOBER 2005**, Byoung-Cheol Choi, Remote Sensing Research Laboratory, Meteorological Research Institute, KMA, Seoul, Korea; Young-Gon Lee, Korea Global Atmosphere Watch Observatory, Meteorological Research Institute, KMA, Taejeon, Korea (p.1222)
- 13H9  
9:40 **GAS-PHASE POLYCHLOROBIPHENYLS AT TERRA NOVA BAY, ANTARCTICA**, Andrea Gambaro, Roberta Zangrando, Gabriele Capodaglio, Institute for the Dynamics of Environmental Processes - National Research Council, Venice, Italy; LAURA MANODORI, Silvia De Pieri, Ca' Foscari University, Venice, Italy (p.1224)
- 13H10  
9:40 **AEROSOL PROPERTIES AT A BACKGROUND SITE IN INDIA**, Heikki Lihavainen, MIKA KOMPPULA, Veli-Matti Kerminen, Petteri Taalas, Yrjö Viisanen, Finnish Meteorological Institute, Helsinki, Finland; T S Panwar, Vishal Verma, R K Pachauri, The Energy and Resources Institute, New Delhi, India (p.1226)
- 13H12  
9:40 **SPATIAL AND TEMPORAL VARIABILITY IN AMBIENT CONCENTRATIONS OF PM<sub>2.5</sub> SULFATE, NITRATE, AMMONIUM AND PRE-CURSORS SO<sub>2</sub>, HNO<sub>3</sub>, AND NH<sub>3</sub> AT A PREDOMINANTLY RURAL MONITOR NETWORK IN THE EASTERN & CENTRAL UNITED STATES**, Kirk R. Baker, Lake Michigan Air Directors Consortium, Des Plaines, Illinois, USA (p.1228)
- 13H13  
9:40 **MEASUREMENT OF OXYGENATED AEROSOL FLUXES ABOVE AN OAK FOREST IN HAMPSHIRE, U.K.**, RICK THOMAS, Gavin Phillips, Emily House, Eiko Nemitz, Centre for Ecology and Hydrology, Edinburgh, UK, Mark Broadmeadow, Forest Research, Alice Holt Lodge, Farnham, Surrey, GU10 4LH, England (p.1230)
- 13H14  
9:40 **ATMOSPHERIC SAMPLING AT A REMOTE SITE ON ITALIAN ALPS**, M.G. PERRONE, L. Ferrero, Z. Lazzati, C. LoPorto, S. Petraccone, G. Sangiorgi, E. Bolzacchini, Department of Environmental Science and Technology, University of Milano-Bicocca, Milan, Italy; E. DelNevo, P. Fermo, F. Martino, A. Piazzalunga, F. Pedrielli, Department of Inorganic, Metallorganic and Analytical Chemistry, University of Milan, Milan, Italy (p.1231)
- 13H15  
9:40 **PRESCRIBED FIRE EMISSIONS AND THE IMPACT ON AIR QUALITY OVER THE SOUTHEASTERN US IN SPRING**, TAO ZENG, Yuhang Wang, Yasuko Yoshida, School of Earth and Atmospheric Science, Georgia Institute of Technology, Atlanta, GA; Di Tian, Amistead G. Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA; William R. Barnard, MACTEC Engineering and Consulting, Inc., Newberry, FL (p.1233)
- 13H16  
9:40 **DETERMINATION OF IN SITU AEROSOL MASS SCATTERING EFFICIENCIES AS A FUNCTION OF RELATIVE HUMIDITY USING DATA FROM THE IMPROVE FINE AEROSOL MONITORING NETWORK**, JENNIFER A. ESKER, Kevin D. Perry, University of Utah, Salt Lake City, UT (p.1234)
- 13H18  
9:40 **IDENTIFICATION OF SULFATE AND NITRATE SOURCES FOR SELECT IMPROVE SITES USING MULTI-RECEPTOR TRAJECTORY SOURCE APPORTIONMENT (TSA)**, STEPHANIE LEE and Lowell Ashbaugh, Crocker Nuclear Lab, University of California, Davis, CA (p.1235)
- 13H19  
9:40 **THE EFFECT OF TIME AVERAGING ON THE RELATIONSHIP BETWEEN AEROSOL EXTINCTION AND RELATIVE HUMIDITY**, MELISSA LUNDEN, Shaheen Tonse, De Ling Liu, Nancy Brown, Atmospheric Science Department, Lawrence Berkeley National Laboratory, Berkeley, CA, USA (p.1237)

13H21 **CONTRIBUTION OF SMOKE TO REGIONAL HAZE IN THE CLASS I AREAS OF THE WESTERN UNITED STATES**, JIN XU, Ilias Kavouras, Dave DuBois, Vic Etyemezian, Mark Green, Desert Research Institute, Las Vegas, NV; Marc Pitchford, NOAA Air Resource Laboratory, Las Vegas, NV (p.1238)

**13H Symposium: NanoMaterials and Occupational Health-III (Poster)**

Garden Court West

Mark Hoover, C.J. Tsai, Chairs

13H22 **ON-LINE DEPOSITION CHAMBER FOR ORGANIC AEROSOLS ONTO LUNG EPITHELIAL CELL CULTURES – DEPOSITION CHARACTERISTICS AND FIRST RESULTS OF MORPHOLOGICAL ANALYSES AND CELLULAR RESPONSES**, MARKUS KALBERER, ETH Zurich, Switzerland, Melanie Savi, Doris Lang, Marianne Geiser, University of Bern, Bern, Switzerland, Heinz Burtscher, Martin Fierz, University of Applied Sciences Northwestern Switzerland, Windisch, Switzerland, Martin Mohr, Empa, Material Science and Technology, Dübendorf, Switzerland (p.152)

13H23 **A COMPARISON OF THE NANOPARTICLE SURFACE AREA MONITOR AND THE SCANNING MOBILITY PARTICLE SIZER IN EVALUATING HVAC PANEL FILTER EFFICIENCY**, NICHOLAS STANLEY, Seong Chan Kim, David Y.H. Pui, University of Minnesota, Minneapolis, MN (p.154)

13H24 **WORKPLACE ASSESSMENT OF POTENTIAL EXPOSURE TO CARBONACEOUS NANOMATERIALS**, EILEEN BIRCH, Douglas Evans, Mark Methner, Robert McCleery, Keith Crouch, Bon-Ki Ku, National Institute for Occupational Safety and Health (NIOSH), Cincinnati, OH; Mark Hoover, Division of Respiratory Disease Studies (NIOSH), Morgantown, WV (p.155)

13H25 **REDUCTION OF EXPOSURE TO WELDING PROCESS GENERATED NANOPARTICLES BY VENTILATION CHANGES IN AN OCCUPATIONAL ENVIRONMENT**, MYONG-HWA LEE, Sang Bum Kim, Gyung Soo Kim, Korea Institute of Industrial Technology, Chonan-Si, Chungnam, South Korea; Joe Candela, Sheet Metal Workers, St.Louis, MO, USA; Pratim Biswas, Washington University in St. Louis, St.Louis, MO, USA (p.156)

13H26 **A NOVEL INSTRUMENT FOR MEASURING LUNG-DEPOSITED SURFACE AREA OF NANOPARTICLES**, MANISHA SINGH, Hee-Siew Han, Manpreet S. Phull and Brian L. Osmondson, TSI Incorporated, Shoreview, MN. (p.158)

13H27 **HIGHLIGHTS OF SELECTED CONTRIBUTIONS TO THE NANOPARTICLE INFORMATION LIBRARY (NIL)**, ART MILLER, National Institute for Occupational Safety and Health, Spokane, WA; Mark Hoover, National Institute for Occupational Safety and Health, Morgantown WV. (p.160)

13H28 **PRODUCTION AND CHARACTERIZATION OF NANOFIBROUS FILTERS FOR RESPIRATORS**, LEON GRADOŃ, Albert Podgórski, Anna Bałazy (p.162)

13H29 **NUCLEATION RATE SURFACES FOR METASTABLE SOLIDS: AEROSOL GENERATION IN SCRATCHED CRYSTAL**, MICHAEL ANISIMOV, Institute of Chemical Kinetics and Combustion SB RAS, 630090, Novosibirsk, Russia, Institute of Catalysis SB RAS, RAS, 630090, Novosibirsk, Russia, E-mail: anisimovmp@mail.ru; Marina Chaykina, Institute of the Solid State Chemistry and Mechanochemistry SB RAS, 630090, Novosibirsk, Russia (p.164)

13H30 **PATTERNING OF NANOPARTICLES ON SUBSTRATE BY CLUSTER ION DEPOSITION METHOD**, HIROYUKI SHIRAI, Motoaki Adachi, Osaka Prefecture University, Sakai, Osaka, Japan (p.166)

13H31 **SIZE SELECTIVE TEM SAMPLING DEVICE  
9:40 BASED ON THERMOPHORESIS AND  
DIFFUSION**, HANNU JOUTSINIEMI, Jouni  
Pyykönen, Unto Tapper, Ari Auvinen, Jorma  
Jokiniemi, VTT Technical Research Centre of  
Finland, Fine Particles, Espoo, Finland;  
Jorma Jokiniemi, University of Kuopio,  
Department of Environmental Sciences, Fine  
Particle and Aerosol Technology Laboratory,  
Kuopio, Finland (p.167)

13H32 **EVALUATION OF NANOPARTICLE  
9:40 EMISSION FOR TIO2 NANOPOWDER  
COATING MATERIALS**, Li-Yeh Hsu, Hung-  
Min Chein, Industry Technology Research  
Institute (p.168)

13H33 **DIAMETER DISTRIBUTION AND  
9:40 DISPERSION OF CARBON NANOTUBES  
BY RAMAN SPECTROSCOPY**, MADALINA  
M. CHIRILA, William P. Chisholm and Martin  
Harper, Health Effects Laboratory Division,  
National Institute for Occupational Safety and  
Health, Morgantown, WV (p.170)

**Friday 11:00 AM - 11:20 AM  
Coffee Break**

Great River Ballroom, Garden Courts East &  
West

**Friday 11:20 AM - 12:40 PM  
Session 14**

**14A Aerosol Physical Properties (Platform)**

Minnesota Ballroom

*James Allan, Marek Sitarski, Chairs*

14A1 **DIFFUSIOPHORETIC ENHANCEMENT OF  
11:20 BROWNIAN COAGULATION OF KNUDSEN  
AEROSOLS; KINETICS OF CAPTURE OF  
SOOT PARTICLES BY MARINE AEROSOL  
DROPLETS**, MAREK A. SITARSKI, Husson  
College, Bangor, ME (p.755)

14A2 **EXPERIMENTAL METHODOLOGY FOR  
11:40 THE DETERMINATION OF DRY  
DEPOSITION VELOCITIES OF  
SUBMICRONIC AEROSOLS:  
APPLICATION TO DIFFERENT RURAL  
AND URBAN SUBSTRATES**, DENIS MARO,  
Olivier Connan, Didier Hébert, Marianne  
Rozet, Jacques Vendel, Denis Boulaud,  
Institut de Radioprotection et de Sûreté  
Nucléaire, France (p.756)

14A3 **THE CLASSIFICATION OF THE CHARGED  
12:00 PARTICLE FORMATION EVENTS  
MONITORED IN BOREAL FOREST**, ANNE  
HIRSIKKO, Tommi Bergman, Lauri Laakso,  
Markku Kulmala, Department of Physical  
Sciences, University of Helsinki, Finland  
(p.758)

14A4 **A SIMPLE PROCEDURE FOR  
12:20 CORRECTING LOADING EFFECTS OF  
AETHALOMETER DATA**, AKI VIRKKULA ,  
Timo Mäkelä and Risto Hillamo, Finnish  
Meteorological Institute, Research and  
Development, Helsinki, Finland, Tarja Yli-  
Tuomi, National Public Health Institute,  
Department of Environmental Health, Kuopio,  
Finland, Anne Hirsikko, Department of  
Atmospheric Sciences, University of Helsinki,  
Finland, Ismo K.Koponen, Department of  
Chemistry, University of Copenhagen,  
Denmark (p.760)

**14B Biomass & Biogenic Aerosols  
(Platform)**

Capitol Ballroom

*A. Prevot, Chair*

- 14B1 11:20 **CHARACTERISATION OF BIOMASS AEROSOL FROM AN AEROSOL MASS SPECTROMETER**, PAUL IVOR WILLIAMS, Hugh Coe, Jonathon Crosier, James Allan, Keith N Bower, School of Earth, Atmosphere and Environmental Science, University of Manchester, Manchester, M60 1QD, UK; Doug Worsnop, Aerodyne Research Inc., Billerica, MA 01821-3976, USA; J. Hopkins, Jackie Hamilton, Ally Lewis, Department of Chemistry, University of York, Heslington, York, YO10 5DD, UK; James B McQuaid, Department of Chemistry, University of Leeds, Leeds, LS2 9JT; Ruth Purvis, FAAM, Cranfield University, Cranfield, Bedford, MK43 0AL; Jim Haywood, Martin Glew, The Met Office, Fitzroy Road, Exeter, EX1 3PB, UK (*p. 1239*)
- 14B2 11:40 **BIOGENIC AEROSOL FORMATION IN A NATIVE AUSTRALIAN EUCALYPT FOREST**, TANJA SUNI, Eva van Gorsel, Helen Cleugh, Ray Leuning, Steve Zegelin, Dale Hughes, Mark Kitchen, Richard Hurley, CSIRO Marine and Atmospheric Research, Canberra, Australia; Larisa Sogacheva, Lauri Laakso, Anne Hirsikko, Miikka Dal Maso, Timo Vesala, Markku Kulmala, Division of Atmospheric Sciences, University of Helsinki, Finland (*p. 1241*)

- 14B3 12:00 **AEROSOLS FROM WOOD BURNING VERSUS TRAFFIC IN ALPINE VALLEYS (AEROWOOD PROJECT)**, ANDRE S.H. PREVOT, Jisca Sandradewi, M. Rami Alfarra, Kathrin Gaeggeler, Josef Dommen, Silke Weimer, Claudia Mohr, Markus Furger, Ernest Weingartner, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institut, Switzerland; Soenke Szidat, Department of chemistry and biochemistry, University of Berne, Switzerland; Geir Legreid, Matthias Hill, Stefan Reimann, Swiss Federal Laboratories for Materials Testing and Research (Empa), Switzerland; Alexandre Caseiro, Anne-Kasper-Giebl, Hans Puxbaum, Institute of Chemical Technologies and Analytics, Vienna University of Technology, Austria; Aniko Veres, Zoltan Bozoki, University of Szeged, Hungary; Deborah Gross, Carleton College, Northfield, USA (*p. 1242*)
- 14B4 12:20 **AEROSOL YIELDS FROM THE OZONOLYSIS OF ALPHA-PINENE, LIMONENE AND ISOPRENE AT 243-313 K**, HARALD SAATHOFF, Ottmar Möhler, Karl-Heinz Naumann, Ulrich Schurath, Institute for Meteorology and Climate Research, Forschungszentrum Karlsruhe, Karlsruhe, Germany; Astrid Kiendler-Scharr, Thomas Mentel, Ralf Tillmann, Institute of Chemistry and Dynamic of the Geosphere, Forschungszentrum Jülich, Jülich, Germany; Åsa Jonsson, Mattias Hallquist, Department of Chemistry, Atmospheric Science, Göteborg University, Göteborg, Sweden; Yoshi Iinuma, Leibniz-Institut für Troposphärische Forschung, Leipzig, Germany (*p. 1243*)



**14C Symposium on Non-Invasive Scattering Techniques for Nanoaerosol Characterization: Neutrons, X-rays and Light-II (Platform)**

Governors 1 & 5

*Barbara Wyslouzil, Chris Sorensen, Chairs*

14C1 **SMALL ANGLE NEUTRON SCATTERING FROM NANODROPLETS: FORMATION RATES AND STRUCTURE**, BARBARA WYSLOUZIL, The Ohio State University, Columbus, OH; Gerald Wilemski University of Missouri – Rolla, Rolla MO; Reinhard Strey, Universität zu Köln, Köln, Germany (p.96)

14C2 **IN SITU CHARACTERIZATION OF NANOPARTICLES ON SURFACES BY GRAZING INCIDENCE SMALL-ANGLE SCATTERING**, RANDALL E. WINANS, Byeongdu Lee, Stefan Vajda, Soenke Seifert, Argonne National Laboratory, Argonne, IL (p.98)

14C3 **STATIC AND TIME-RESOLVED SMALL-ANGLE X-RAY SCATTERING OF AEROSOL FORMATION DURING COMBUSTION OF HYDROCARBON FUELS**, JAN P. HESSLER, Chemistry Division, Argonne National Laboratory, Argonne, IL (p.100)

14C4 **AGGREGATE GROWTH AND BRANCHING KINETICS IN FLAME SYNTHESIS OF NANOMETER-SCALE CERAMICS.**, G. Beaucage, A. Kulkarni, N. Agashe, S. E. Pratsinis, H. K. Kammler, R. Jossen, T. Narayanan (p.102)

**14D Symposium: Aerosol and Bioterrorism Defense-II (Platform)**

Governors 2 - 4

*Sergey Grinshpun, Edward Stuebing, Chairs*

14D1 **INDOOR REMOTE BIOLOGICAL AEROSOL MEASUREMENT**, JIM HO, Defence R & D Canada Suffield, Alberta, Canada (p.971)

14D2 **SIMULTANEOUS FORWARD AND BACKWARD HEMISPHERE TAOS PATTERNS OF RESPIRABLE AEROSOLS**, GUSTAVO E FERNANDES, Yong-Le Pan, Richard K. Chang, Yale University, New Haven, CT; Kevin Aptowicz, West Chester University, West Chester, PA; Ronald G. Pinnick, Steven C. Hill, US Army Research Laboratory, Adelphi, MD (p.973)

14D3 **ON-LINE MALDI OF HIGH MASS BIOAEROSOLS WITH ION TRAP MASS SPECTROMETERS**, WILLIAM A. HARRIS, Peter T.A. Reilly, William B. Whitten, Oak Ridge National Lab, Oak Ridge, TN (p.975)

14D4 **ATMOSPHERIC PRESSURE FOCUSING OF 3-10 MICRON DIAMETER PARTICLES**, Jody C. Wormhoudt, David K. Lewis and ANDREW FREEDMAN, Aerodyne Research, Inc., Billerica, MA; Rengsheng Deng and Kenneth A. Smith, Massachusetts Institute of Technology, Cambridge, MA (p.977)

**14E Control Technology-III (Platform)**

Wabasha Suite

*Perng-Jy Tsai, Shannon Mahurin, Chairs*

14E1 **THE PERFORMANCE OF NYLON 6 NANOFILTERS FOR REMOVING NANOPARTICLES**, Gil-Tae Kim, Yu-Jin Hwang, Chang-Gun Lee, Seong-Ir Cheong, Hee-Soo Shin, and Jae-Keun Lee, Department of Mechanical Engineering, Pusan National University, San 30, Jangjeon-dong, Keumjeong-ku, 609-735, Busan, Korea; Ahn-Young Chull, Research Institute of Mechanical Technology, Pusan National University, San 30, Jangjeon-dong, Keumjeong-ku, Busan, 609-735, Korea (p.317)

14E2 **NANOFIBROUS MEDIA – PROMISING TOOLS FOR FILTRATION OF NANOSIZED AEROSOL PARTICLES**, LEON GRADON, Anna Balazy, Albert Podgorski, Warsaw University of Technology, Poland (p.319)

14E3  
12:00 **EFFECT OF RELATIVE HUMIDITY ON THE PERFORMANCE OF FILTERS LOADED WITH SUPERMICRON-SIZED SODIUM CHLORIDE PARTICLES**, Ta-Chih Hsiao, and Da-Ren Chen, Environmental Engineering Science Program, Washington University in St. Louis, MO 63130, St Louis, USA (p.321)

14E4  
12:20 **EVALUATION OF IODINE-TREATED FILTER MEDIA FOR THE REMOVAL AND DISINFECTION OF BACTERIAL SPORES AND VIRAL AEROSOLS**, JIN-HWA LEE, Chang-Yu Wu, Samuel Farrah, Katherine M. Wysocki, University of Florida, Gainesville, FL; Joseph Wander, Air Force Research Laboratory, Tyndall Air Force, Base, FL (p.323)

#### 14F PM and Environmental Health-II (Platform)

Kellogg Suite

*Bean Chen, Owen Moss, Chairs*

14F1  
11:20 **GENERATION OF HYDROXYL RADICALS FROM PARTICULATE TRANSITION METALS IN A SURROGATE LUNG FLUID**, EDGAR VIDRIO, Heejung Jung, Cort Anastasio, University of California, Davis, CA (p.979)

14F2  
11:40 **MEASUREMENTS OF THE CONTRIBUTION OF ASBESTOS TO AEROSOLS DERIVED FROM BRAKE WEAR**, Stephen M. Wall, Jeff Wagner, Don Scales, and Diamon Pon, California Department of Health Services, Environmental Health Laboratory, Richmond, CA. 94804 (p.981)

14F3  
12:00 **CONTROLLED HUMAN CHAMBER EXPOSURE STUDIES OF BIOMASS COMBUSTION AEROSOLS**, CHRISTOFFER BOMAN, Anders Nordin, Energy Technology and Thermal Process Chemistry, Umeå University, SE-901 87, Umeå, Sweden; Joakim Pagels, Mats Bohgard, Division of Aerosol Technology (EAT), Lund Institute of Technology, PO Box 118, SE-221 00, Lund, Sweden; Andreas Massling, Jakob Löndahl, Jenny Rissler, Erik Swietlicki, Department of Physics, Lund Institute of Technology, PO Box 118, SE-221 00, Lund, Sweden; Anders Blomberg, Thomas Sandström, Department of Respiratory Medicine and Allergy, University Hospital, SE-901 85, Umeå, Sweden (p.982)

14F4  
12:20 **COMPOSITION AND HEALTH EFFECTS OF GASOLINE ENGINE EMISSIONS**, JACOB D. MCDONALD, JeanClare Seagrave, Mathew Reed, Mathew Campen, Edward G. Barrett and Joe L. Mauderly (p.984)

#### 14G Aerosol Chemistry-III (Poster)

Garden Court East

*Chak Chan, Allison Aiken, Chairs*

14G1  
11:20 **CORRELATION BETWEEN PM-1 AND PARTICLE BOUND PAH**, Thomas Rettenmoser, Christian Gerhart, Thomas Petry, Roland Hagler, HANS GRIMM, Grimm Aerosol Technik GmbH, Ainring, Germany, Mathias Richter, GIP GmbH, Pouch, Germany (p.1082)

14G3  
11:20 **MEASURING HETEROGENEOUS UPTAKE COEFFICIENT OF NO<sub>2</sub> ON SOLID AND LIQUID (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> SURFACES**, Carole Aghnatios, Sophie Sobanska, FLORENT LOUIS, Université des Sciences et Technologies de Lille, France (p.1085)

- 14G4 11:20 **N2O5 HYDROLYSIS ON COMPONENTS OF MINERAL DUST AND SEA SALT AEROSOL: COMPARISON STUDIES IN AN ENVIRONMENTAL CHAMBER**, PRAVEEN K MOGILI, Department of Chemical and Biochemical Engineering; Vicki H Grassian, Mark A Young, Department of Chemistry; Paul D Kleiber, Department of Physics and Astronomy, University of Iowa, Iowa City, IA. (p.1086)
- 14G5 11:20 **UPTAKE OF NITRIC ACID ON NaCl AT DIFFERENT RELATIVE HUMIDITIES MEASURED BY BACKSCATTERING SPECTROMETRY**, MAURUS HESS, Ulrich K. Krieger, Claudia Marcolli, Thomas Peter, Swiss Federal Institute of Technology, Zurich, Switzerland; William A. Lanford, State University of New York, Albany, NY, USA (p.1088)
- 14G6 11:20 **TRACKING SMOG CHAMBER SOA WITH A RADIOCARBON TRACER**, CHARLES LEWIS, Tadeusz Kleindienst, Michael Lewandowski, John Offenberg, Edward Edney, U.S. Environmental Protection Agency, Research Triangle Park, NC; Mohammed Jaoui, Alion Science and Technology, Research Triangle Park, NC (p.1090)
- 14G7 11:20 **THE MS-CHAOS AT PSI (MASS SPECTROMETERS FOR THE CHEMICAL ANALYSIS OF ORGANIC SUBSTANCES AT THE SMOG CHAMBER OF THE PAUL SCHERRER INSTITUTE)**, ANDRE S.H. PREVOT, M. Rami. Alfara, Josef Dommen, Kathrin Gaeggeler, Astrid Gascho, Axel Metzger, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institut, Switzerland; Allison Aiken, Peter De Carlo, Edward Dunlea, Joel Kimmel, Jose-Luis Jimenez, University of Colorado, Boulder, USA; Aurelia Brunner, Markus Jocher, Agroscope, Zürich, Switzerland; Silke Hings, F. Drewnick, Max Planck Institute, Mainz, Germany; Deborah Gross, Carleton College, Northfield, USA; Kevin Wyche, Paul Monks, University of Leicester, Leicester, Great Britain; Megan Northway, Achim Trimborn, Doug Worsnop, Aerodyne Research, Billerica, USA (p.1091)
- 14G8 11:20 **CONTROLLED OH PRODUCTION VIA OZONE-ALKENE REACTIONS FOR USE IN AEROSOL AGING STUDIES**, ANDREW T. LAMBE, Jieyuan Zhang, Andrew P. Grieshop, Allen L. Robinson, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA (p.1092)
- 14G10 11:20 **DETECTION OF B-CARYOPHYLLENE OXIDATION PRODUCTS IN SMOG CHAMBER SOA AND AMBIENT PM2.5 SAMPLES**, MICHAEL LEWANDOWSKI, John H. Offenberg, Tadeusz E. Kleindienst, Edward O. Edney, National Exposure Research Laboratory, U.S. Environmental Protection Agency, RTP, NC; Mohammed Jaoui, Alion Science and Technology, RTP, NC (p.1094)
- 14G11 11:20 **OZONOLYSIS OF A-PINENE AT ATMOSPHERICALLY RELEVANT CONCENTRATIONS: TEMPERATURE DEPENDENCE OF AEROSOL YIELDS**, RAVI KANT PATHAK, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA; Charles O. Stanier, University of Iowa, Iowa City, IA; Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA; and University of Patras, Patra, Greece (p.1095)

- 14G12 **SECONDARY ORGANIC AEROSOL FORMATION FROM THE PHOTOOXIDATION OF M, O, AND P-XYLENE**, Chen Song, Kwangsam Na, DAVID R. COCKER III, Department of Chemical and Environmental Engineering and College of Engineering, Center for Environmental Research and Technology, UC Riverside, Riverside, CA (p.1097)
- 14G13 **FIELD AND LABORATORY STUDIES OF PHOTOCHEMICAL OXIDATION OF ORGANIC MOLECULAR MARKERS USED FOR SOURCE APPORTIONMENT**, EMILY A WEITKAMP, Kara E. Huff Hartz, Amy M. Sage, Neil M. Donahue, Allen L. Robinson Center for Atmospheric Particle Studies, Carnegie Mellon University, Pittsburgh, PA (p.1099)
- 14G14 **SEASONAL VARIATION AND FUNCTIONAL GROUPS ANALYSIS OF HIGH MOLECULAR WEIGHT COMPOUNDS IN THE WATER-SOLUBLE FRACTION OF ORGANIC URBAN AEROSOLS**, Vera SAMBUROVA, Renato Zenobi, Markus Kalberer, Swiss Federal Institute of Technology Zürich, Switzerland (p.1101)
- 14G15 **ATMOSPHERIC TRANSFORMATION OF ORGANIC COMPOUNDS ON ULTRAFINE DIESEL PARTICLES**, Zhong Chen and Britt A. Holmén, Civil & Environmental Engineering, University of Connecticut, Storrs, CT 06269, USA (p.1103)
- 14G16 **HETEROGENEOUS COMPOSITION OF SECONDARY ORGANIC AEROSOLS FORMED IN ENVIRONMENTAL CHAMBER: ANALYSIS BY LASER IONIZATION TIME-OF-FLIGHT MASS SPECTROMETRY**, MASAHIRO NARUKAWA, Yutaka Matsumi, Jun Matsumoto, Kenshi Takahashi, Solar-Terrestrial Environment Laboratory, Nagoya University, Toyokawa, Japan; Akihiro Yabushita, Horiba Ltd., Kyoto, Japan; Kei Sato, Takashi Imamura, National Institute for Environmental Studies, Tsukuba, Japan (p.1104)
- 14G17 **CARBOXYLIC AND DICARBOXYLIC ACIDS IN RURAL AEROSOLS FROM K-PUSZTA, HUNGARY**, IVAN KOURTCHEV, Magda Claeys, Department of Pharmaceutical Sciences, University of Antwerp (Campus Drie Eiken), Wilrijk, Belgium, Lucian Copolovici, Willy Maenhaut, Department of Analytical Chemistry, Institute for Nuclear Sciences, Ghent University, Ghent, Belgium (p.1105)
- 14G18 **FORMATION OF HIGH MOLECULAR-WEIGHT ORGANIC PEROXIDES IN THE OZONOLYSIS OF PURE AND MIXED METHYL OLEATE PARTICLES**, MICHIIHIRO MOCHIDA, Yasmine Katrib, Scot T. Martin, Harvard University, Cambridge, MA; John T. Jayne, Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA (p.1106)
- 14G19 **HIGHLY TIME- AND SIZE-RESOLVED PARTICLE ACIDITY MEASUREMENTS IN PITTSBURGH AND IMPLICATIONS OF ACIDIC PARTICLES FOR SOA FORMATION**, QI ZHANG, Atmospheric Science Research Center, State University of New York, Albany, NY, 12203, USA; Jose-Luis Jimenez, CIRES, University of Colorado-Boulder, CO, 80309, USA; Douglas Worsnop, Manjula Canagaratna, Aerodyne Research Inc, Billerica, MA, 01821, USA (p.1107)
- 14H Atmospheric Aerosols: Clouds, Fog and Nucleation (Poster)**  
Garden Court East  
*Nicole Riemer, J. Wilson, Chairs*
- 14H1 **MORPHOLOGY OF AEROSOL PARTICLES FROM A CARIBIC FLIGHT AT 10 KM ALTITUDE FROM 50° NORTH TO 30° SOUTH**, HUNG NGOC NGUYEN, Bengt G. Martinsson, Div. Nuclear Physics in Lund University, Lund Sweden. (p.1389)
- 14H2 **SINGLE PARTICLE MASS SPECTROMETRY OF ICE NUCLEATING AEROSOL AT THE JUNGFRAUJOCH HIGH ALTITUDE RESEARCH STATION**, DANIEL CZICZO, Stéphane Gallavardin, Olaf Stetzer, Ulrike Lohmann, Institute for Atmospheric and Climate Science, ETH-Zürich (p.1391)

- 14H3  
11:20 **OBSERVATION OF DEHYDRATION IN THE NORTHERN HEMISPHERE MIDLATITUDE TROPOPAUSE REGION DURING STREAM 1998**, FARAHNAZ KHOSRAWI, Department of Applied Environmental Science, Stockholm, Sweden; Rolf Mueller, Juergen Beuermann, Paul Konopka, Cornelius Schiller, Forschungszentrum Juelich, Juelich, Germany (p.1392)
- 14H4  
11:20 **BLACK CARBON CONTRIBUTION TO THE AEROSOL PHASE AND ITS SCAVENGED FRACTION IN MIXED PHASE CLOUDS AT THE HIGH ALPINE SITE JUNGFRAUJOCH (3580M ASL)**, J. Cozic, B. Verheggen, U. Baltensperger, E. WEINGARTNER, Paul Scherrer Institut, Switzerland; S. Mertes, Leibniz-Institute for Tropospheric Research, Leipzig, Germany; M. Flynn, P. Connolly, K. Bower, University of Manchester, Manchester, United Kingdom; A. Petzold, German Aerospace Centre, Wessling, Germany (p.1393)
- 14H5  
11:20 **SUBMICROMETER AEROSOL PARTICLES IN THE UPPER TROPOSPHERE AND LOWER STRATOSPHERE – RESULTS FROM THE CARIBIC PROJECT**, MARKUS HERMANN, Jost Heintzenberg, Manuela Reichelt, Alfred Wiedensohler, Leibniz Institute for Tropospheric Research, Leipzig, Germany, Carl A. M. Brenninkmeijer, Franz Slemr, Atmospheric Chemistry Department, Max Planck Institute for Chemistry, Mainz, Germany, Bengt G. Martinsson, Hung N. Nguyen, Division Nuclear Physics, Lund University, Lund, Sweden, Hans Schlager, Helmut Ziereis, Institute of Atmospheric Physics, Deutsches Zentrum für Luft- und Raumfahrt, Weßling, Germany, Andreas Zahn, Institute for Meteorology and Climate Research, Forschungszentrum Karlsruhe, Karlsruhe, Germany (p.1395)
- 14H6  
11:20 **A STUDY OF NEW PARTICLE FORMATION IN THE UPPER TROPOSPHERE AND LOWER STRATOSPHERE DURING THE HIAPER PROGRESSIVE SCIENCE MISSIONS**, DAVID BENSON, Shan-Hu Lee, Kent State University, Kent, OH; James C. Wilson, University of Denver, Denver, CO; David Rodgers, Jorgen Jensen, Teresa Campos, Jeff Stith, National Center for Atmospheric Research, Broomfield, CO; Ru-Shan Gao, National Oceanic and Atmospheric Administration, Boulder, CO (p.1397)
- 14H7  
11:20 **CHARACTERISTICS OF SUBMICRON AEROSOL NEAR THE TROPICAL TROPOPAUSE: IMPACT ON THE STRATOSPHERIC AEROSOL**, JAMES CHARLES WILSON, J. Michael Reeves, Bernard G. Lafleur, University of Denver, Denver, CO; M. J. Mahoney, Robert Herman, Jet Propulsion Laboratory, Pasadena, CA (p.1398)
- 14H8  
11:20 **SIMULATION OF PSC TYPE IB FORMATION DURING THE ARCTIC WINTER 1997 AND 2005**, FARAHNAZ KHOSRAWI, ITM, Stockholm University, Sweden  
U. Blum, Forsvarets Forskningsinstitut, Kjeller, Norway  
G. Baumgarten, Leibniz Institut fuer Atmosphaerenphysik, Kuehlungsborn, Germany  
K. H. Fricke, Physikalisches Institut der Universitaet Bonn, Bonn, Germany  
R. Mueller, Institute for Stratospheric Chemistry, Forschungszentrum Juelich, Germany (p.1399)
- 14H9  
11:20 **CAN H<sub>2</sub>SO<sub>4</sub>/H<sub>2</sub>O OVER-LAYER EXIST AROUND ICE PARTICLES IN SUB-VISIBLE CIRRUS CLOUDS?**, ANATOLI BOGDAN, Markku Kulmala, Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Helsinki, Finland (p.1401)

- 14H10 11:20 **PHASE DIAGRAM OF DILUTED H<sub>2</sub>SO<sub>4</sub>/H<sub>2</sub>O AEROSOL DROPS: IMPLICATION FOR CIRRUS CLOUD FORMATION**, ANATOLI BOGDAN, Markku Kulmala, Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Helsinki, Finland (*p.1402*)
- 14H11 11:20 **IMPACT OF H<sub>2</sub>SO<sub>4</sub>/H<sub>2</sub>O COATING ON RADIATIVE PROPERTIES OF SUB-VISUAL CIRRUS CLOUDS**, ANATOLI BOGDAN, 1Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Helsinki, Finland, Petri Raisanen, Finnish Meteorological Institute, Helsinki, Finland (*p.1404*)
- 14H12 11:20 **MICROPHYSICS OF FREEZING DILUTED H<sub>2</sub>SO<sub>4</sub>/H<sub>2</sub>O AEROSOL DROPS**, ANATOLI BOGDAN, Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Helsinki, Finland (*p.1406*)
- 14H13 11:20 **MIXING AND AEROSOL BEHAVIOUR IN VOLCANIC PLUMES**, CHARLES CLEMENT, Enviros-QuantiSci, Wantage, Oxon, U.K.; Tamsin Mather, Department of Earth Sciences, University of Cambridge, Cambridge, U.K. (*p.1408*)
- 14H14 11:20 **SIMULATION OF THE ACIDITY AND GROWTH OF MULTICOMPONENT NUCLEATED PARTICLES IN THE EASTERN UNITED STATES**, JAEGUN JUNG, Peter J. Adams, Spyros N. Pandis, Carnegie Mellon University, PA (*p.1409*)
- 14H15 11:20 **PERIODIC CHANGES OF CONDENSATIONAL AEROSOL WITH SOURCE IN FINITE SYSTEMS**, VALERY ZAGAYNOV, Alex Lushnikov, Marina Bahtyreva, Andrey Lutsenko, Karpov Institute of Physical Chemistry, Moscow, RUSSIA (*p.1411*)
- 14H16 11:20 **NUCLEATION AT THE FINISH BOREAL FOREST: AN ATTEMPT TO EXPLAIN SEASONAL BEHAVIOUR**, Boris Bonn, Anne Hirsikko and MARKKU KULMALA, Department of Physical Sciences, Atmospheric Sciences Division, University of Helsinki, P.O. Box 64, FIN-00014 Helsinki, Finland, Hannele Hakola2, Finnish Meteorological Institute, Air Chemistry Laboratory, P.O. Box 503, FIN-10101 Helsinki, Finland (*p.1413*)
- 14H17 11:20 **OBSERVATIONS OF ATMOSPHERIC NUCLEATION EVENTS IN THE LOWER FREE TROPOSPHERE**, Bart Verheggen, Julie Cozic, ERNEST WEINGARTNER, Urs Baltensperger, Paul Scherrer Institute, Villigen PSI, Switzerland; Marko Vana, Pasi Aalto, Anne Hirsikko, Markku Kulmala, University of Helsinki, Finland (*p.1415*)
- 14H18 11:20 **EXPLAINING ATMOSPHERIC AEROSOL NUCLEATION EVENTS USING DATA MINING TOOLS, BACK-TRAJECTORIES AND LAND COVER CHARACTERISTICS.**, HEIKKI JUNNINEN, Saara Hyvönen, Lauri Laakso, Miiikka Dal Maso, Tiia Grönholm, Boris Bonn, Larisa Sogacheva, Petri Keronen, Pasi Aalto, Samuli Launiainen, Veijo Hiltunen, Toivo Pohja, Pertti Hari, Heikki Mannila, Markku Kulmala University of Helsinki, Helsinki, Finland; Harri Niska University of Kuopio, Kuopio Finland; Peter Tunved, Institute for Applied Environmental Research, Stockholm, Sweden; Veli-Matti Kerminen Finnish Meteorological Institute, Helsinki, Finland (*p.1417*)
- 14H19 11:20 **VARIABILITY OF THE AEROSOL SIZE DISTRIBUTION: NEW PARTICLE FORMATION AND GROWTH AT THE EASTERN COAST OF THE BALTIC SEA**, VIDMANTAS ULEVICIUS, Kristina Plauskaite, Environmental Physics and Chemistry Laboratory, Institute of Physics, Savanoriu av. 231, LT-02300 Vilnius (*p.1419*)

- 14H20 11:20 **ONSET OF AEROSOL FORMATION BY LARGE EDDIES IN THE ATMOSPHERIC BOUNDARY LAYER**, JOHANNA LAUROS, Miikka Dal Maso, Markku Kulmala, University of Helsinki, Helsinki, Finland; E. Douglas Nilsson, University of Stockholm, Stockholm, Sweden (*p.1421*)
- 14H21 11:20 **NUCLEATION AND PARTICLE FORMATION STUDIES USING A REGIONAL CTM**, ARI ASMI, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Helsinki, Finland (*p.1422*)
- 14H22 11:20 **ON THE BUDGET OF NUCLEATION MODE PARTICLES ABOVE THE BOREAL FOREST IN FINLAND**, WOLFGANG JUNKERMANN, research center Karlsruhe, IMK-IFU, Garmisch-Partenkirchen, Germany (*p.1423*)
- 14H23 11:20 **NEW PARAMETERIZATION OF WATER-SULPHURIC ACID-AMMONIA TERNARY NUCLEATION IN ATMOSPHERIC CONDITIONS**, JOONAS MERIKANTO, Ismo Napari, Hanna Vehkamäki, Tatu Anttila, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Finland (*p.1424*)
- 14H24 11:20 **CONNECTION BETWEEN SPRING RECOVERY OF PHOTOSYNTHESIS IN BOREAL FOREST AND ATMOSPHERIC PARTICLE FORMATION: ANALYSIS OF LONG TIME SERIES**, MIIKKA DAL MASO, Pertti Hari, Markku Kulmala, University of Helsinki, Helsinki, Finland (*p.1425*)
- 14H25 11:20 **TIME SERIES ANALYSIS OF ATMOSPHERIC PARTICLE FORMATION: A COMPARISON OF FOUR NORDIC STATIONS**, MIIKKA DAL MASO, Ilona Riipinen, Anne Hirsikko, Robert Wagner, Laura Korhonen, Ville Suur-Uski, Pasi P. Aalto, Markku Kulmala, University of Helsinki, Helsinki, Finland; Mika Komppula, Finnish Meteorological Institute, Helsinki, Finland; Peter Tunved, Hans-Christen Hansson, Stockholm University, Stockholm, Sweden (*p.1426*)
- 14H26 11:20 **CHARACTERISTICS OF AIR IONS AND AEROSOL PARTICLES AT THE HIGH ALPINE RESEARCH STATION JUNGFRAUJOCH**, MARKO VANA, Anne Hirsikko, Pasi Aalto, Markku Kulmala, University of Helsinki, Finland; Eduard Tamm, University of Tartu, Estonia; Bart Verheggen, Julie Cozic, Ernest Weingartner, Urs Baltensperger, Paul Scherrer Institute, Switzerland (*p.1427*)
- 14H27 11:20 **ACTIVATION PROPERTIES OF ATMOSPHERIC NANO-PARTICLES IN THE SIZE RANGE 3 TO 10 NANOMETERS: CONTRASTS BETWEEN URBAN AND RURAL OBSERVATIONS**, Wolfram Birmili, Genrik Mordas, Tuukka Petäjä, Pasi P. Aalto, Ilona Riipinen, Tiia Grönholm, Kaarle Hämeri, and MARKKU KULMALA (*p.1428*)
- 14H28 11:20 **IDENTIFYING THE CONTRIBUTION OF ION INDUCED NUCLEATION FROM MEASUREMENTS OF CHARGE DISTRIBUTIONS AND AEROSOL SIZE DISTRIBUTIONS**, Kenjiro Iida, Mark R. Stolzenburg, Peter H. McMurry, University of Minnesota, Minneapolis, MN; Matthew Dunn, James N. Smith, Fred Eisele, National Center for Atmospheric Research, Boulder, CO; Pat Keady, Quant Technologies, LLC, Blaine, MN (*p.1430*)
- 14H29 11:20 **ICE NUCLEATION CHARACTERISTICS OF MINERAL DUST AEROSOL PARTICLES AFTER EXPOSURE TO AMMONIA WITH A CONTINUOUS FLOW DIFFUSION CHAMBER**, ABDUS SALAM, Ulrike Lohmann, Glen Lesins, Department of Physics and Atmospheric Science, Dalhousie University, Halifax, NS, Canada (*p.1432*)

- 14H30  
11:20 **AEROSOL ACTIVATION BEHAVIOUR PREDICTED USING A PRIMITIVE FORM OF THE KÖHLER EQUATION AND A VARIETY OF SURFACE TENSION MODELS.**, DAVID TOPPING, Gordon McFiggans, Hugh Coe. School of Earth, Atmospheric and Environmental Science, Manchester University, Manchester, UK; Gyula Kiss, Zsófia Varga. Hungarian Academy of Sciences, Univeristy of Veszprem, Veszprem, Hungary; Miheala Mircea, Stefano Decesaril, Institute of Atmospheric Sciences and Climate (ISAC), National Research Council, Bologna, Italy. (p.1434)
- 14H31  
11:20 **MODEL CALCULATIONS AND CHARACTERISATION OF THE FAST ICE NUCLEUS COUNTER FINCH**, BJÖRN NILLIUS, Ruprecht Jaenicke, Johannes Gutenberg University, Mainz, Germany; Heinz Bingemer, Thomas Wetter, Ulrich Bundke, Wolfgang Goethe University, Frankfurt, Germany (p.1436)
- 14H32  
11:20 **THE FRIDGE (FRANKFURT ICE-NUCLEI DEPOSITION FREEZING EXPERIMENT) COUNTER NEW DEVELOPMENTS AND FIRST MEASUREMENTS.**, ULRICH BUNDKE, Heinz Bingemer, Holger Klein, Thomas Wetter, University of Frankfurt, Frankfurt, Germany (p.1437)
- 14H33  
11:20 **CLOUD MODEL STUDIES ON THE EFFECT OF HUMIC-LIKE SUBSTANCES ON CLOUD DROPLET ACTIVATION**, HARRI KOKKOLA, Finnish Meteorological Institute, Kuopio Unit, Finland; Riikka Sorjamaa, Anu Peräniemi, Tomi Raatikainen, Ari Laaksonen, University of Kuopio, Finland (p.1438)
- 14H34  
11:20 **ACTIVITIES AT A NEW URBAN AEROSOL-CLOUD INTERACTION MEASUREMENT SITE IN PUUJO TOWER**, ARI LESKINEN, Kari Lehtinen, Harri Portin, Heikki Lihavainen, Mika Komppula, Yrjö Viisanen, Finnish Meteorological Institute, Finland; Kari Lehtinen, Ari Laaksonen, Pasi Miettinen, University of Kuopio, Finland (p.1439)
- 14H35  
11:20 **INHERENT CONTAMINATION OF NEWBORN CLOUD DROPLET CAUSED BY ASSIMILATORY DISSOLUTION OF KERNEL CCN IN ITS BODY WATER**, SADATAKA SHIBA, Osaka University, Toyonaka, Japan; Shunsaku Yagi, Setsunan University, Neyagawa, Japan (p.1441)
- 14H36  
11:20 **AIRBORNE MEASUREMENTS OF THE EVOLUTION AND CLOUD INTERACTIONS OF AEROSOLS IN POLLUTED PLUMES**, KEITH BOWER, James Allan, Jonathan Crosier, Gerard Capes, Hugh Coe, Martin Gallagher, Gordon McFiggans, David Topping, Tom Choullarton, University of Manchester, UK; Phil Brown, The Met Office, UK; Alastair Lewis, University of York, UK; Claire Reeves, University of East Anglia, UK (p.1443)
- 14H38  
11:20 **METHODS FOR THE ANALYSIS OF CARBONACEOUS AEROSOL MOLECULAR MARKERS IN RAIN AND SNOW**, ERIKA VON SCHNEIDEMESSER, James J. Schauer, University of Wisconsin-Madison, Madison, WI (p.1447)
- 14H39  
11:20 **CCN STUDIES AT DIFFERENT LOCATIONS**, Barbara Ervens, Graham Feingold, Elisabeth Andrews, John A. Ogren, NOAA Earth Systems Laboratory, Boulder, CO; MICHAEL J. CUBISON, Kenneth Docherty, Ingrid Ulbrich, Jose L. Jimenez, University of Colorado, CO; Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA. (p.1448)
- 14H40  
11:20 **STABILITY OF PARTICULATE WOOD SMOKE MARKER SPECIES TOWARDS CLOUD PROCESSING**, HEIDE MCILWRAITH, Pierre Herckes, Arizona State University, Tempe, AZ (p.1450)
- 14H42  
11:20 **TRACKING THE FATE AND RADIATIVE FORCING POTENTIAL OF ANTHROPOGENIC AEROSOL IN A GLOBAL 3D AEROSOL MICROPHYSICS MODEL**, PAUL MANKTELOW, Dominick Spracklen, Kirsty Pringle, Ken Carslaw, Graham Mann, Martyn Chipperfield, University of Leeds, Leeds, UK (p.1451)



- 14H43  
11:20 **PRELIMINARY ANALYSIS OF THE AEROSOL PARTICLE SIZE DISTRIBUTION IN AIR MASSES ARRIVED AT HYYTIÄLÄ, SOUTHERN FINLAND, FROM THE EAST USING BACK TRAJECTORY ANALYSIS**, Larisa Sogacheva, Miikka Dal Maso, Markku Kulmala, Department of Physical Sciences, University of Helsinki (p.1453)
- 14H44  
11:20 **PROPERTIES OF AGED FOREST FIRE PLUMES AFTER INTERCONTINENTAL TRANSPORT**, Bernadett Weinzierl, ANDREAS PETZOLD, Markus Fiebig, Heidi Huntrieser, Andreas Minikin, Deutsches Zentrum für Luft- und Raumfahrt, Wessling, Germany, Andreas Stohl, Norwegian Institute for Air Research, Kjeller, Norway, Elsa Real, Kathy Law, CNRS Service Aeronomie, Paris, France, Julie Cozic, Ernest Weingartner, Paul Scherrer Institute, Villigen PSI, Switzerland (p.1455)
- 14H45  
11:20 **QUANTIFYING THE LONG-RANGE TRANSPORT OF NORTH AFRICAN MINERAL DUST TO THE EASTERN UNITED STATES USING POSITIVE MATRIX FACTORIZATION**, KEVIN D. PERRY, Scott A. Robertson, University of Utah, Salt Lake City, UT (p.1457)
- 14H46  
11:20 **OBSERVATIONS OF PROCESSED ASIAN POLLUTION WITH A HIGH RESOLUTION AERODYNE AEROSOL MASS SPECTROMETER FROM THE C-130 AIRCRAFT DURING THE INTEX-B FIELD CAMPAIGN**, EDWARD DUNLEA, Peter DeCarlo, Joel Kimmel, Allison Aiken, Jose Jimenez, Cooperative Institute for Research in Environmental Science, University of Colorado, Boulder, CO (p.1458)
- 14H47  
11:20 **MASS ACCOMMODATION OF H<sub>2</sub>SO<sub>4</sub> AND CH<sub>3</sub>SO<sub>3</sub>H**, DAVID HANSON, Augsburg College, Minneapolis, MN and NCAR, Boulder, CO (p.1460)
- 14H48  
11:20 **DETECTING NEUTRAL ATMOSPHERIC CLUSTERS WITH A CPC PAIR: FIRST RESULTS**, ILONA RIIPINEN, Genrik Mordas, Tuukka Petäjä, Anne Hirsikko, Mikko Sipilä, Kaarle Hämeri, Markku Kulmala, Department of Physical Sciences, University of Helsinki, Finland (p.1462)
- 14H49  
11:20 **FAST AIRBORNE AEROSOL SIZE AND COMPOSITION MEASUREMENTS FROM THE C-130 DURING THE MIRAGE-MEX 2006 FIELD CAMPAIGN**, PETER DECARLO, Ed Dunlea, Joel Kimmel, Jose-Luis Jimenez, University of Colorado, Boulder, CO (p.1464)
- 14H50  
11:20 **PREDICTED SECONDARY ORGANIC AEROSOL CONCENTRATIONS FROM THE OXIDATION OF ISOPRENE IN THE EASTERN UNITED STATES**, TIMOTHY LANE and Spyros Pandis, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA (p.1465)
- 14H51  
11:20 **PARTICLE EMISSIONS FROM BIOMASS BURNING**, ARINTO WARDOYO, Lidia Morawska, Zoran Ristovski, Jack Marsh, International Laboratory for Air Quality and Health, Queensland University of Technology, Brisbane, Australia (p.1467)
- 14H53  
11:20 **SIMULATING SECONDARY ORGANIC AEROSOL FORMATION FROM THE OXIDATION OF BIOGENIC HYDROCARBONS IN THE EASTERN UNITED STATES**, TIMOTHY LANE, Ravi Pathak, Neil Donahue, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA (p.1469)
- 14H55  
11:20 **CONTRIBUTION OF FUNGAL SPORES TO ORGANIC CARBON IN URBAN AND URBAN-FRINGE AEROSOLS**, HEIDI BAUER, gert Weinke, Elisabeth Schueller, Anne Kasper-Giebl, Hans Puxbaum, Vienna University of Technology, Vienna, Austria (p.1471)
- 14H56  
11:20 **ON MEASURING THE CRITICAL DIAMETER OF CLOUD CONDENSATION NUCLEI USING MOBILITY SELECTED AEROSOL**, MARKUS D. PETTERS, Anthony J. Prenni, Sonia M. Kreidenweis, Paul J. DeMott. Department of Atmospheric Science, Colorado State University, Fort Collins, USA

14H57 **A NEW PARAMETERISATION FOR THE**  
11:20 **HOMOGENEOUS NUCLEATION RATE OF**  
**NITRIC ACID DIHYDRATE**, OTTMAR  
MOEHLER, Helmut Bunz, Robert Wagner,  
Institute for Meteorology and Climate  
Research (IMK-AAF), Forschungszentrum  
Karlsruhe, Germany; Olaf Stetzer, Institute for  
Atmospheric and Climate Science, ETH,  
Zurich, Switzerland (p.1178)

**Friday 12:40 PM - 2:00 PM**  
**Lunch (on your own)**

**Friday 2:00 PM - 3:40 PM**  
**Session 15**

**15A Long Range Transport (Platform)**  
Minnesota Ballroom

*Markus Fiebig, S. Kreidenweis, Chairs*

15A1 **A PROBABILISTIC MODEL FOR THE**  
2:00 **RESUSPENSION OF SOIL LEAD INTO THE**  
**BOUNDARY LAYER**, ALLISON HARRIS,  
Cliff Davidson, Carnegie Mellon University,  
Pittsburgh, PA (p.1245)

15A2 **MODELING THE LONG-RANGE**  
2:20 **TRANSPORT OF LARGE, AIRBORNE**  
**PARTICLES USING SIZE-RESOLVED**  
**DEPOSITION AND SUSPENSION**  
**VELOCITIES**, KENNETH E. NOLL and  
Obatosin O. Aluko, Dept. of Chemical and  
Environmental Engineering, Illinois Institute of  
Technology, Chicago, IL (p.1246)

15A3 **A COMPARISON OF THE NAVY AEROSOL**  
2:40 **ANALYSIS AND PREDICTION SYSTEM**  
**(NAAPS) TO IN-SITU AEROSOL**  
**MEASUREMENTS IN THE CONTINENTAL**  
**U.S.: TRANSPORT VS. LOCAL**  
**PRODUCTION OF SOIL DUST AEROSOL**,  
KELLEY C. JOHNSON, Sonia M.  
Kreidenweis, Department of Atmospheric  
Science, Colorado State University, Fort  
Collins, CO; Marcin Witek, Interdisciplinary  
Centre for Mathematical and Computational  
Modeling, Warsaw University, Poland;  
Douglas L. Westphal, Piotr Flatau, Naval  
Research Laboratory, Marine Meteorology  
Division, Monterey, CA (p.1248)

15A4 **TRANSPORT OF MICROORGANISMS TO**  
3:00 **ISRAEL DURING SAHARAN DUST**  
**EVENTS**, Pnina Schlesinger, YAACOV  
MAMANE, Technion, Haifa, Israel; Isabella  
Grishkan, University of Haifa, Haifa, Israel  
(p.1250)

15A5 **THE ATMOSPHERIC COMPOSITION OF**  
3:20 **SUBMICRON AEROSOL MEASURED**  
**USING AN AIRBORNE AEROSOL MASS**  
**SPECTROMETER DURING ITOP**, Hugh  
Coe, Jonathan Crosier, Paul Williams, Keith  
Bower, JAMES ALLAN, University of  
Manchester, UK; Alastair Lewis, James  
Hopkins, University of York, UK; Doug  
Worsnop, John Jayne, Aerodyne Research  
Inc, MA; and Jose Jimenez, University of  
Colorado, CO (p.1252)

**15B VOC/SVOC Aerosols-I (Platform)**

Capitol Ballroom

*K.Max Zhang, Chair*

15B1 **MODELING OF PHASE EQUILIBRIUM AND**  
2:00 **MASS TRANSFER FOR ORGANIC**  
**AEROSOL PARTICLES**, Neal R. Amundson,  
ALEXANDRE CABOUSSAT, Jiwen He,  
Department of Mathematics, University of  
Houston, Houston, TX; John H. Seinfeld,  
Department of Chemical Engineering,  
California Institute of Technology, Pasadena,  
CA (p.1577)

15B2 **GASES, VAPORS, PARTICLES: THE**  
2:20 **CARBON MASS BALANCE IN**  
**SECONDARY ORGANIC AEROSOL**  
**FORMATION**, THOMAS F. MENTEL, Ralf  
Tillmann, Astrid Kiendler-Scharr, Andreas  
Wahner, ICG-II, Forschungszentrum Juelich,  
Juelich, Germany; Harald Saathoff, IMK-AAF,  
Forschungszentrum Karlsruhe, Karlsruhe,  
Germany (p.1579)

15B3 **USING THE SEMI-VOLATILE BASIS SET:**  
2:40 **PRACTICAL APPLICATIONS**, NEIL M.  
DONAHUE, Center for Atmospheric Particle  
Studies, Carnegie Mellon University,  
Pittsburgh, PA (p.1581)

15B4  
3:00 **ATMOSPHERIC SECONDARY ORGANIC AEROSOL YIELDS: PARAMETER ESTIMATION FROM SMOG CHAMBER RESULTS**, CHARLES STANIER, University of Iowa, Iowa City, IA; Neil Donahue, Carnegie Mellon University, Pittsburgh, PA; Spyros Pandis, University of Patras, Patra, Greece (*p.1583*)

### 15C Physics of Nanoparticles (Platform)

Governors 1 & 5

*Brian Henz, Markku Kulmala, Chairs*

15C1  
2:00 **SINTERING KINETICS OF SILICA NANOPARTICLES: COMPARISON OF THEORY AND EXPERIMENT**, Martin J. Kirchhof, HANS-JOACHIM SCHMID, Henning Förster, Wolfgang Peukert, Univ. Erlangen-Nuremberg, Particle Technology Group, Erlangen, Germany (*p.104*)

15C2  
2:20 **PARALLEL MOLECULAR DYNAMICS SIMULATIONS OF AEROSOL GOLD NANOPARTICLES WITH SELF-ASSEMBLED ALKYLTHIOLATE MONOLAYERS**, BRIAN HENZ, U.S. Army Research Laboratory, Aberdeen Proving Ground, MD; Michael Zachariah, University of Maryland, College Park, MD (*p.106*)

15C3  
2:40 **MULTIPLE THERMAL FRAGMENTATION OF NANOPARTICLES: EVOLUTION OF PARTICLE TOTAL NUMBER CONCENTRATION**, DMITRI K. GRAMOTNEV, Galina Gramotnev, Applied Optics Program, School of Physical and Chemical Science, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia (*p.107*)

15C4  
3:00 **EXPERIMENTAL OBSERVATION OF TWO-PHOTON PHOTOEFFECT FROM SILVER NANOPARTICLES**, Alex Lushnikov, MIKKO SIPILÄ, Leonid Khriachtchev, Markku Räsänen, Markku Kulmala (*p.109*)

15C5  
3:20 **COMPARISON OF TWO DIFFERENT METHODS FOR THE DETERMINATION OF THE FRACTAL DIMENSION OF SOOT AGGREGATES: TEM MEASUREMENT AND SERIAL ANALYSIS OF THE AERODYNAMIC AND ELECTRICAL MOBILITY DIAMETERS**, FRANCOIS-XAVIER OUF, Jacques Vendel, Institut de Radioprotection et de Sûreté Nucléaire, Laboratoire de Physique et Métrologie des Aérosols, Gif-sur-Yvette Cedex, France; Alexis Coppalle, Marc-Emmanuel Weill, Jérôme Yon, Complexe de Recherche Interprofessionnelle en Aérothermochimie, UMR 6614, Saint-Etienne du Rouvray Cedex, France (*p.111*)

### 15D Bioaerosol Detection and Identification-I (Platform)

Governors 2 - 4

*Reinhard Nießner, E. James Davis, Chairs*

15D1  
2:00 **BIOAEROSOL AND BIOMOLECULE CHARACTERIZATION BY SURFACE-ENHANCED RAMAN SPECTROSCOPY**, E. JAMES DAVIS, Atanu Sengupta, C. Brant Wilson, Michael Volny, Frantisek Turecek, University of Washington, Seattle, WA (*p.986*)

15D2  
2:20 **AN AEROSOL MASS SPECTROMETER FOR BIOAEROSOLS**, A.L. VAN WUIJCKHUIJSE, Ch.E. Kientz, O. Kievit, TNO Defence, Security and Safety, Rijswijk, The Netherlands; M.A. Stowers, W.A. Kleefsman and J.C.M. Marijnissen, Delft University of Technology, Delft, The Netherlands (*p.988*)

15D3  
2:40 **PERFORMANCE OF AN AEROSOL MASS SPECTROMETER**, INEKE KLEEFSMAN, Michael A. Stowers, Jan .C.M. Marijnissen, Delft University of Technology, Faculty of Applied Physics, Delft, The Netherlands, Arjan L. van Wuijckhuijse, Charles E. Kientz, TNO Prins Maurits Laboratory, Rijswijk, The Netherlands (*p.990*)

15D4  
3:00 **SINGLE PARTICLE FLUORESCENCE AND MASS SPECTROMETRY IN VARIOUS ENVIRONMENTS AS OBSERVED BY BIOLOGICAL AEROSOL MASS SPECTROMETRY (BAMS)**, KEITH R. COFFEE, George R. Farquar, Herbert J. Tobias, David P. Fergenson, Vincent J. Riot, Bruce W. Woods, Paul T. Steele, Matthias Frank, Eric E. Gard, Lawrence Livermore National Laboratory, Livermore Ca, United States (p.991)

### 15E Control Technology-IV (Platform)

Wabasha Suite

*Chung-Te Lee, Meng-dawn Cheng, Chairs*

15E1  
2:00 **EVALUATION OF CHARGING STATE OF RESIN WOOL FILTER BY DEPOSITION OF CHARGED PARTICLES**, Jin-Cheol Kim, Yoshio Otani, University of Kanazawa, Kanazawa city, JAPAN (p.325)

15E2  
2:20 **INFLUENCES ON COLLECTION OF AIRBORNE BACTERIAL SPORES BY CHARGED FILTER MEDIA**, PETER C. RAYNOR, Jo Anne Brock, Monika Vadali, University of Minnesota, Minneapolis, MN (p.326)

15E3  
2:40 **FILTRATION OF PARTICLES WITH DIFFERENT SHAPES ON FIBROUS FILTERS**, IGOR AGRANOVSKI, Lucija Boskovic, Igor S. Altman, Roger D. Braddock, Griffith University, Brisbane, QLD, Australia; Toshihiko Myojo, National Institute of Industrial Health, Kawasaki, Japan; Mansoo Choi, National CRI Center for Nano Particle Control, Seoul, Korea (p.328)

15E4  
3:00 **NUMERICAL DETERMINATION OF COLLISION EFFICIENCIES FOR THE ELECTROSCAVENGING OF AEROSOL PARTICLES BY DROPLETS**, Meng Zhang, THOMAS KUEHN, Particle Technology Laboratory, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN (p.330)

15E5  
3:20 **CFD MODELLING OF NANOPARTICLES REMOVAL IN AN AXIAL FLOW CYCLONE OPERATING IN VACUUM CONDITIONS**, Rafal Przekop, Sheng-Chieh Chen, Chuen-Jinn Tsai, National Chiao Tung University, Hsinchu, Taiwan, ARKADIUSZ MOSKAL, Warsaw University of Technology, Warsaw, Poland (p.332)

### 15F Deposition and Resuspension (Platform)

Kellogg Suite

*Jonathan Allen, Heinz Fissan, Chairs*

15F1  
2:00 **PREDICTION AND VALIDATION OF AEROSOL DEPOSITION FROM TURBULENT FLOWS IN STRAIGHT AND CURVED PIPES USING COMPUTATIONAL FLUID DYNAMICS**, SIMON PARKER, Timothy Foat, Steve Preston, Dstl, Salisbury, United Kingdom (p.762)

15F2  
2:20 **PARTICLE DEPOSITION ON TWO PARALLEL, HORIZONTAL PLATES UNDER THE INFLUENCE OF THERMOPHORESIS AND ELECTROPHORESIS**, CHRISTOF ASBACH, Till van der Zwaag, Thomas Engelke, Institute of Energy and Environmental Technology (IUTA), Se-Jin Yook, University of Minnesota, Jung Hyeun Kim, University of Seoul, Heinz Fissan, Institute of Energy and Environmental Technology (IUTA), David Y.H. Pui, University of Minnesota (p.764)

15F3  
2:40 **DRY DEPOSITION OF FINE PARTICLES TO AN AGRICULTURAL FIELD MEASURED BY EDDY-CORRELATION MASS SPECTROMETRY**, DANIEL A. GONZALES, Jonathan O. Allen, Arizona State University, Tempe, AZ, USA (p.766)

15F4  
3:00 **SINGLE-MICROSPHERE TO MULTI-LAYER AGGLOMERATE DETACHMENT FROM SURFACES**, PATRICK DUNN, University of Notre Dame, Notre Dame, IN; Abdelmaged Ibrahim, Cairo University, Giza, Egypt (p.768)

15F5  
3:20 **AEROSOL RESUSPENSION IN TURBULENT TUBE FLOW - MEASUREMENTS AND MODELING**, ARI S. J. AUVINEN, Teemu Kärkelä, VTT Technical Research Centre of Finland - Fine Particles, Espoo, Finland; Johannes Roine, VTT Technical Research Centre of Finland - Analyser Development, Espoo, Finland; Jorma J.K. Jokiniemi; University of Kuopio, Department of Environmental Sciences, Fine Particle and Aerosol Technology Laboratory, Kuopio, Finland (p.769)

**Friday 3:40 PM - 4:00 PM  
Coffee Break**

Great River Ballroom, Garden Courts East & West

**Friday 4:00 PM - 5:20 PM  
Session 16**

**16A Atmospheric Particle Concentrations & Composition (Platform)**

Minnesota Ballroom

*Anthony Strawa, P. Tsai, Chairs*

16A1  
4:00 **SIZE DISTRIBUTIONS OF WATER-SOLUBLE ORGANIC CARBON AND OXALATE IN AEROSOLS AT A COASTAL URBAN SITE IN CHINA: CHARACTERISTICS, SOURCES AND FORMATION MECHANISMS**, Xiao-Feng Huang, JIAN ZHEN YU, Zibing Yuan, Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong, China; Ling-Yan He, Shenzhen Graduate School, Peking University, Shenzhen, China (p.1254)

16A2  
4:20 **PM10, PM2.5, PM1 AND PARTICLE NUMBER CONCENTRATIONS IN AMBIENT AIR – A COMPARATIVE STUDY FROM LONG TERM PARALLEL MEASUREMENTS AT DIFFERENT SITES IN SWITZERLAND**, ROBERT GEHRIG, Christoph Hüglin, Brigitte Buchmann, Empa Materials Science and Technology, Duebendorf, Switzerland (p.1256)

16A3  
4:40 **ASSESSING AEROSOL CONCENTRATIONS AND TRANSFORMATIONS OVER THE UK USING AIRCRAFT MEASUREMENTS AND A CMAQ MODELS3 MADRID.**, HUGH COE, James Allan, Keith Bower, Michael Bane, Gerard Capes, Jonathan Crosier, Martin Gallagher, Gordon McFiggans, Paul Williams, University of Manchester, Manchester, UK; Eiko Nemitz, Debbie Poulsen, David Fowler. Centre for Ecology and Hydrology, Bush Estate, Edinburgh, UK (p.1258)

16A4  
5:00 **CHARACTERISTICS OF POLYCYCLIC AROMATIC HYDROCARBON (PAH) EMISSIONS FROM A UH-1H HELICOPTER ENGINE**, PERNG-JY TSAI, Yue-Cheng Chen, Department of Environmental and Occupational Health, Medical College, National Cheng Kung University, Taiwan; Shi-Neng Uang, Institute of Occupational Safety and Health, Council of Labor Affairs, Executive Yuan, Taiwan; Wen-Jhy Lee, Department of Environmental Engineering, National Cheng Kung University, Taiwan (p.1260)

**16B VOC/SVOC Aerosols-II (Platform)**

Capitol Ballroom

*Neil Donahue, W. Lee, Chairs*

16B1  
4:00 **COMPARISONS OF POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS IN THE AMBIENT AIR OF AN INDUSTRIALIZED AREA AND TWO AREAS NEAR MUNICIPAL SOLID WASTE INCINERATION PLANTS**, SHUN-I SHIH, Department of Environmental Engineering, Kun Shan University of Technology, Tainan County, Taiwan; Wen-Jhy Lee, Chun-Chi Chen, Hung-Chieh Chen, Department of Environmental Engineering, Sustainable Environment Research Centre, National Cheng Kung University, Tainan City, Taiwan; Lin-Chi Wang, Guo-Ping Chang-Chien, Department of Chemical and Material Engineering, Cheng-Shiu University, Kaohsiung City, Taiwan. (p.1585)

16B2 **SEMI VOLATILE ORGANIC COMPOUNDS  
IN AMBIENT PM<sub>2.5</sub>. SEASONAL TRENDS  
AND DAILY RESOLVED SOURCE  
CONTRIBUTIONS**, JÜRGEN  
SCHNELLE\_KREIS, Martin Sklorz, Jürgen  
Orasche, Matthias Stölzel, Anette Peters,  
Ralf Zimmermann, BlfA GmbH - Bavarian  
Institute of Applied Environmental Research  
and Technology, and GSF – National  
Research Centre for Environment and Health,  
and University of Augsburg, Germany  
(p.1587)

16B3 **REAL TIME ENVIRONMENTAL SVC AND  
CHEMICAL COMPOSITION MONITORING**,  
Thomas Petry, HANS GRIMM, Thomas  
Rettenmoser, Grimm Aerosol Technik GmbH,  
Ainring, Germany, Gerhard Spindler, Leibniz-  
Institut für Troposphärenforschung, Leipzig,  
Germany (p.1589)

16B4 **PHOTOCHEMICAL OXIDATION OF DIESEL  
EXHAUST: SECONDARY ORGANIC  
AEROSOL FORMATION AND CHANGES IN  
AEROSOL COMPOSITION**, ALLEN L.  
ROBINSON, Emily A. Weitkamp, Amy M.  
Sage, Neil M. Donahue, Center for  
Atmospheric Particle Studies, Carnegie  
Mellon University, Pittsburgh, USA (p.1590)

### 16C Chemistry of Carbonaceous and Metal Nanoparticles (Platform)

Governors 1 & 5

*Henry Ajo, Jeffrey Roberts, Chairs*

16C1 **OXIDE THIN FILM GROWTH KINETICS ON  
AEROSOLIZED SILICON NANOPARTICLE  
SURFACES**, JASON HOLM, Jeffrey Roberts,  
University of Minnesota, Minneapolis, MN  
(p.113)

16C2 **QUANTITATIVE LASER-INDUCED  
BREAKDOWN SPECTROSCOPY FOR  
AEROSOLS VIA INTERNAL CALIBRATION:  
APPLICATION TO THE OXIDATIVE  
COATING OF ALUMINUM  
NANOPARTICLES**, DIBYENDU  
MUKHERJEE, Michael R. Zachariah,  
University of Maryland, College Park, MD.  
(p.114)

16C3 **PHOTOINDUCED COATING OF ALUMINUM  
NANOPARTICLES**, BIN ZHANG, Ying-Chih  
Liao, Bo Liu, J. T. Roberts, S. L. Girshick,  
University of Minnesota, Minneapolis, MN  
(p.116)

16C4 **SYNTHESIS OF HOLLOW ALUMINUM  
OXIDE NANOPARTICLES VIA AEROSOL  
ROUTE**, ASHISH RAI, Lei Zhou and Michael  
R. Zachariah, Department of Mechanical  
Engineering and Department of Chemistry  
and Biochemistry, University of Maryland,  
College Park, 20742, USA (p.118)

### 16D Bioaerosol Detection and Identification- II (Platform)

Governors 2 - 4

*A.L. van Wuijckhuijse, Keith Coffee, Chairs*

16D1 **UV LASER INDUCED FLUORESCENCE OF  
INDIVIDUAL BIOAEROSOL PARTICLES**,  
Matti Putkiranta, Albert Manninen, Antti  
Rostedt, Toni Laurila, Jaakko Saarela, Marko  
Marjamäki, JORMA KESKINEN and Rolf  
Hernberg, Tampere University of Technology,  
Tampere, Finland (p.992)

16D2 **COMBINING A LIQUID FLOW CYTOMETER  
WITH AN OPTICAL BIOAEROSOL  
DETECTOR**, HERMES HUANG, Yong-Le  
Pan, Richard K. Chang, Yale University, New  
Haven, CT, Steven C. Hill, Army Research  
Laboratory, Adelphi, MD (p.993)

16D3 **LONG-TERM MONITORING OF RELEASE  
OF AVIAN INFLUENZA VIRUS FROM  
INFECTED BIRDS**, IGOR AGRANOVSKI,  
Griffith University, Brisbane, Australia;  
Alexander Safatov, Sergei Kiselev, Valentina  
Petrshchenko, Maxim Scarnovich, Alexander  
Sergeev, State Research Center of Virology  
and Biotechnology «Vector», Koltsovo,  
Russia; Oleg Pyankov, Griffith University,  
Brisbane, Australia (p.994)

16D4  
5:00 **SINGLE PARTICLE ANALYSIS BY AUTOMATED MICROSCOPY AND PATTERN RECOGNITION: APPLICATION TO ENVIRONMENTAL ALLERGENS**, WOLFGANG KOCH, Wilhelm Dunkhorst, Hubert Lödging, Fraunhofer ITEM; Hannover, Germany, Hans Burkhardt, Olaf Ronneberger, Qing Wang, University of Freiburg, Freiburg, Germany, Eckart Schultz, Ulrich Heimann, Stefan Scharring, German Weather Service, Freiburg, Germany, Albrecht Brandenburg, Markus v. Ehr, Gerd Sulz, Fraunhofer IPM, Freiburg, Germany, Werner Müller, Helmut Hund GmbH, Wetzlar, Germany, Gernot Breitfuss, Breitfuss Messtechnik GmbH, Harpstedt, Germany (p.995)

#### 16E Control Technology-V (Platform)

Wabasha Suite

*Meng-dawn Cheng, Da-Ren Chen, Chairs*

16E1  
4:00 **PRODUCTION OF SMALL PARTICLES BY DETONATION OF ENERGETIC MATERIALS**, Meng-Dawn Cheng, Oak Ridge National Laboratory, Oak Ridge, TN, USA, Charles M. Jenkins, Air Force Research Laboratory, Eglin, FL, USA, Andy W. A. Chang, and Doh-Won Lee, Oak Ridge Institute for Science and Education, Oak Ridge, TN, USA (p.334)

16E2  
4:20 **SUBMICROMETER AND ULTRAFINE PARTICLE CHARGING AND COLLECTION DURING O<sub>2</sub>-CO<sub>2</sub> COAL COMBUSTION**, ACHARIYA SURIYAWONG, Christopher J. Hogan Jr., and Pratim Biswas, Aerosol & Air Quality Research Laboratory, Environmental Engineering Science Program, Washington University, Saint Louis, MO, USA (p.336)

16E3  
4:40 **FILTRATION OF OIL MISTS – REALTIME MEASUREMENT OF FILTER SATURATION AND DRAINAGE**, BENJAMIN J. MULLINS and Gerhard Kasper, Institut fuer Mechanische Verfahrenstechnik und Mechanik, Universitaet Karlsruhe (TH), Karlsruhe, Germany. (p.338)

16E4  
5:00 **SEGREGATION AND COLLECTION OF FINE AND ULTRAFINE ZINC OXIDE POWDER USING MULTI-CYCLONE**, Yu-Du Hsu, HUNGMIN CHEIN, Environmental Health Technology Division, Energy and Environment Research Laboratories, Industrial Technology Research Institute, TW (p.342)

#### 16F Urban and Regional Aerosol-III (Platform)

Kellogg Suite

*Kenneth Noll, Kirk Baker, Chairs*

16F1  
4:00 **CHEMICAL CHARACTERISTICS AND SOURCE APPORTIONMENT OF FINE PARTICULATE ORGANIC CARBON IN HONG KONG DURING LOCAL, REGIONAL AND LONG-RANGE TRANSPORT EPISODES**, YUN-CHUN LI, Jian Zhen Yu, Steven S. H. Ho, Zibing Yuan, Alexis K. H. Lau, The Hong Kong University of Science & Technology, Hong Kong; James J. Schauer, University of Wisconsin, Madison, WI, USA; Peter K. K. Louie, Environment Protection Department, Hong Kong. (p.1837)

16F2  
4:20 **ASSIMILATION OF AEROSOL OPTICAL DEPTH OVER EUROPE IN A REGIONAL CHEMISTRY TRANSPORT MODEL**, MARTIJN SCHAAP, Peter Builtjes, TNO Built Environment and Geosciences, Apeldoorn, The Netherlands; Gerrit de Leeuw, TNO Defence, Security and Safety, The Hague, The Netherlands; Bas Henzing, KNMI, de Bilt, The Netherlands (p.1839)

16F3  
4:40 **PHOTOCHEMICAL MODEL PERFORMANCE FOR PM<sub>2.5</sub> SULFATE, NITRATE, AMMONIUM, AND PRE-CURSOR SPECIES SO<sub>2</sub>, HNO<sub>3</sub>, AND NH<sub>3</sub> AT BACKGROUND MONITOR LOCATIONS IN THE CENTRAL AND EASTERN UNITED STATES**, Kirk R. Baker, Lake Michigan Air Directors Consortium, Des Plaines, Illinois, USA (p.1841)

16F4    **DEVELOPMENT AND APPLICATION OF A  
5:00    COMPUTATIONALLY EFFICIENT  
         APPORTIONMENT ALGORITHM IN A  
         THREE-DIMENSIONAL CHEMICAL  
         TRANSPORT MODEL, KRISTINA  
         WAGSTROM, Spyros Pandis, Carnegie  
         Mellon University, Pittsburgh, PA; Greg  
         Yarwood, Gary Wilson and Ralph Morris,  
         ENVIRON International Corporation, Novato,  
         CA (p.1843)**