

LATE BREAKINGS

POSTER SESSION 1

AEROSOL PHYSICS

LB1

ON THE CAUSALITY BETWEEN MICROPARTICLE DETACHMENT AND BURST-SWEEP EVENTS

Abdelmaged Ibrahim*, Raymond Brach, Patrick Dunn, University of Notre Dame

AEROSOLS AND MATERIALS

LB2

ALLOY NANOPARTICLES PRODUCED FROM LASER ABLATION OF ELEMENTAL MICROPARTICLE AEROSOLS

Daniel O'Brien*, Gokul Malyavanatham, Desiderio Kovar, Michael Becker, John Keto, University of Texas at Austin

LB3

GENERATION OF MONODISPERSE NICKEL NANOPARTICLES AS CATALYST FOR DIAMETER-CONTROLLED CARBON NANOTUBES

Shintaro Sato, Akio Kawabata, Mizuhisa Nihei, Yuji Awano, Fujitsu Limited

LB4

KINETIC MEASUREMENTS OF ALUMINUM NANOPARTICLE OXIDATION USING SINGLE PARTICLE MASS SPECTROMETRY

Kihong Park, Ashish Rai, Department of Mechanical Engineering and Chemistry; University of Minnesota; Dong Geun Lee, School of Mechanical Engineering; Pusan National University; Michael Zachariah, Department of Mechanical Engineering and Chemistry; University of Minnesota

HEALTH-RELATED AEROSOLS

LB5

THE POTENTIAL OF INHALATION METHOD FOR VACCINATION AGAINST INFLUENZA

Vladimir Sigaev, RCT&HRB

LB6

CAPTURE OF VIRAL PARTICLES IN SOFT X-RAY ENHANCED CORONA SYSTEMS: CHARGE DISTRIBUTION AND TRANSPORT CHARACTERISTICS

Pratim Biswas, Washington University in St. Louis; Christopher Hogan*, Cornell University; Myonghwa Lee, Washington Univ. in St. Louis

INSTRUMENTATION AND METHODS

LB7

A CONTINUOUS, LAMINAR FLOW, WATER-BASED CONDENSATION PARTICLE COUNTER

Susanne V. Hering, Mark R. Stolzenburg, Aerosol Dynamics Inc.; Frederick R. Quant, Derek Oberreit, Quant Technologies LLP

LB8

DERIVING CHEMICALLY AND SIZE-RESOLVED NUMBER AND MASS DISTRIBUTIONS FROM SIMULTANEOUS AERODYNE AEROSOL MASS SPECTROMETER AND SMPS AMBIENT DATA

Peter DeCarlo*, Qi Zhang, Jose-Luis Jimenez, University of Colorado

LB9

PM ANALYSIS OF PALAS GENERATED ELEMENTAL CARBON PARTICLES COATED WITH FUELS USING ATOFMS

Matthew Spencer*, Kimberly Prather, University of California San Diego

LB10

INVERTING CASCADE IMPACTOR DATA FOR SIZE-RESOLVED CHARACTERIZATION OF FINE PARTICULATE SOURCE EMISSIONS

Yuanji Dong*, ARCADIS Inc.; Michael Hays, Dean Smith, John Kinsey, U.S. EPA National Risk Management Laboratory

LB11

CRCD-A WEB-BASED COURSE SEQUENCE FOR PARTICLE TRANSPORT, DEPOSITION AND REMOVAL

Goodarz Ahmadi, John McLaughlin, Cetin Cetinkaya, Stephen Doheny-Farina, Jeffrey Taylor, Suresh Dhaniyala, Clarkson University; Fa-Gung Fan, Xerox

LB12

COMPARISON OF AMBIENT AIR QUALITY MEASUREMENTS WITH OBSERVATIONS OF LOCAL EMISSIONS ACTIVITIES

Kiren Bahm, Dana Coe, Lyle Chinkin, Sonoma Technology, Inc.

ATMOSPHERIC AEROSOLS - FIELD AND MODELING RESULTS**LB13**

AMBIENT MEASUREMENTS OF AEROSOL COMPOSITION IN SOUTHERN CALIFORNIA USING A PARTICLE CONCENTRATOR-THERMAL DESORPTION PARTICLE BEAM MASS SPECTROMETER

Kenneth Docherty*, Paul Ziemann, Air Pollution Research Center; University of California, Riverside; Bhabesh Chakrabarti, Chandan Misra, Philip Fine, Constantinos Sioutas, Department of Civil and Environmental Engineering; University of Southern California

LB14

CHARACTERIZATION OF EMISSIONS FROM VEHICLE EXHAUST AND ROAD DUST IN LAKE TAHOE, NV

Ming-Chih (Oliver) Chang, Hampden Kuhns, Judith Chow, John Watson, Nicholas Nussbaum, Desert Research Institute; Chris Damm, Candace Gallery, Sierra Nevada College

LB15

LONG TERM TRENDS AND SHORT TERM SPIKES IN 0.2 – 3 MICROMETER PARTICLES DURING ANARCHE 2002

Deborah Gross, Renee Frontiera*, Margrith Mattmann, Alexandra Schmitt, Carleton College; Eric Edgerton, ARA, Inc

LB16

DRY AND AMBIENT MEASUREMENTS OF AEROSOL PROPERTIES AT THE JUNGFRAUJOCH HIGH ALPINE RESEARCH STATION

Remo Nessler, Nicolas Bukowiecki*, Silvia Henning, Ernest Weingartner, Paul Scherrer Institute; Bertrand Calpini, MeteoSuisse; Urs Baltensperger, Paul Scherrer Institute

LB17

INVESTIGATION OF BIOAEROSOLS RELEASED FROM SWINE FARMS WITH DIFFERENT MANURE TREATMENT AND MANAGEMENT TECHNOLOGIES.

Gwangpyo Ko, University of Texas Health Science Center at Houston; Otto D. Simmons III, Christina A. Likirdopolos, Mark D. Sobsey, University of North Carolina at Chapel Hill

LB18

CHEMICAL COMPOSITION OF SUBMICRON PARTICULATE MATTER AND DEPENDENCE OF SPECIFIC VAPOUR PRESSURES

Jürgen Müller, Umweltbundesamt

AEROSOL CHEMISTRY**LB19**

OXIDATION KINETICS OF SIZE-SELECTED SOOT NANOPARTICLES

Amanda Nienow, Jeffrey Roberts, Michael Zachariah, University of Minnesota

CONTROL TECHNOLOGY - HEALTH**LB20**

EVALUATION OF THE IONIC AIR PURIFICATION EFFICIENCY BY THE ELECTRICAL LOW PRESSURE IMPACTOR (ELPI)

Byung UK Lee*, Mikhail Yermakov, Sergey A. Grinshpun, Center for Health-Related Aerosol Studies, Department of Environmental Health, University of Cincinnati

POSTER SESSION 2**AEROSOL PHYSICS****LB21**

MICROPARTICLE MOTION AFTER DETACHMENT BY FLUID FLOWS

Ibrahim, Abdelmaged H., Brach, Raymond R., Dunn, Patrick, F.

University of Notre Dame, Hessert Center for Aerospace Research

LB22

ANALYTICAL SOLUTION OF DIFFUSIONAL PARTICLE LOSS FROM ISOKINETICALLY SAMPLED AEROSOL FLOW

Corey Tyree, Jonathan Allen, Arizona State University, Chemical and Materials Engineering

LB23

MODELING STUDY OF THE EFFECTS OF NUCLEATION AND COAGULATION ON THE PARTICLE SIZE DISTRIBUTION

Sun Hee Cho, Diane V. Michelangeli, Department of Earth and Atmospheric Science, York University

LB24

THERMIONISATION KINETICS OF METAL AND METAL OXIDE ULTRAFINE PARTICLES

Alfred P. Weber, University of Karlsruhe

INSTRUMENTATION AND METHODS**LB25**

THERMOPHORETIC SAMPLING OF NANOPARTICLES

Anshuman Lall, Rajdip Bandyopadhyaya, Sheldon Friedlander, Department of Chemical Engineering, University of California, Los Angeles

LB26

MODELING AND LABORATORY RESULTS OF A BEAM WIDTH PROBE FOR MEASURING PARTICLE COLLECTION EFFICIENCY IN THE AERODYNE AEROSOL MASS SPECTROMETER

J. Alex Huffman, University of Colorado at Boulder; J.T. Jayne, D.R. Worsnop, Aerodyne Research, Inc.; J.L. Jimenez, University of Colorado at Boulder

LB27

REAL-TIME OPTICAL INSTRUMENT FOR GAS TURBINE AND DIESEL SOOT
CONCENTRATION AND MEAN SIZE MEASUREMENT
Don Holve, Process Metrix, LLC

LB28

A NEW AEROSOL CHAMBER AT THE ADVANCED LIGHT SOURCE FOR VUV LIGHT
SCATTERING AND ORGANIC PHOTOIONIZATION MASS SPECTROMETRY
Jinian Shu*, Musa Ahmed, Darcy Peterka, Christophe Nicolas, Stephen R. Leone, Lawrence Berkeley
laboratory

LB29

EFFECT OF PREHEATING QUARTZ FILTERS ON THE AEROSOL ORGANIC CARBON POSITIVE
SAMPLING ARTIFACT
Thomas Kirchstetter, Lawrence Berkeley National Laboratory

LB30

FLUORESCENCE PRESELECTION OF BACTERIA FOR AEROSOL MASS SPECTROMETRY
Michael A. Stowers, Delft University of Technology

LB31

THE USE OF 3-OH FATTY ACIDS AS MARKER IN ASSESSING THE AIRBORNE ALLERGENIC
GRAM –VE BACTERIA
K. Y. Lee,* Department of Chemical Engineering, Hong Kong University; P. S. Lau, Institute for
Environment and Sustainable Development, Hong Kong University of Science and Technology; Chak K.
Chan, Department of Chemical Engineering, Hong Kong University of Science and Technology

LB32

CALIBRATION AND QUANTIFICATION OF AN AERODYNE AEROSOL MASS SPECTROMETER
Philip Mortimer*, John Jayne, Manjula Canagratna, Hacene Boudries, Timothy Onasch, Leah Williams,
Douglas Worsnop, Aerodyne Research, Inc.

LB33

PHYSICO-CHEMICAL CHARACTERIZATION OF HARVARD ULTRAFINE PARTICLE
CONCENTRATOR USING A SERIES OF REAL-TIME AEROSOL SIZE AND CHEMICAL
COMPOSITION MEASURING INSTRUMENTS
Tarun Gupta*, Environmental Science and Engineering Program, Harvard University; Yongxuan Su, M.
Sipin, Department of Chemistry and Biochemistry, University of
California, San Diego; C. Jeong, Department of Chemical Engineering, Clarkson University; X. Qin,
Department of Chemistry and Biochemistry, University of California,
San Diego; P. Hopke, Department of Chemical Engineering, Clarkson University; P. Demokritou, P.
Koutrakis, Environmental Science and Engineering Program, Harvard
University School of Public Health; K. Prather, Department of Chemistry and Biochemistry, University of
California, San Diego

ATMOSPHERIC AEROSOLS**LB34**

DIURNAL TRENDS IN WATER-SOLUBLE ORGANIC CARBON AND ORGANIC AND
ELEMENTAL CARBON IN ST. LOUIS USING NEAR-REAL TIME AEROSOL MONITORS
Amy Sullivan*, Georgia Institute of Technology; Andrea Clements, Jay Turner, Environmental
Engineering Program; Washington University, St. Louis, MO;
Minsuk Bae, James Schauer, University of Wisconsin-Madison

LB35

TEMPORAL EVOLUTION OF SINGLE PARTICLES EMITTED FROM MIYAKEJIMA VOLCANO, JAPAN

John Holecek*, Scripps Institution of Oceanography, U. Calif. San Diego;
Sergio Guazzotti, David Sodeman, Kimberly Prather, Dept. Chemistry and Biochemistry U. Calif. San Diego

LB36

MODELING THE EQUILIBRIUM PARTITIONING OF NITRATE WITH HIGH-TIME RESOLUTION MEASUREMENTS

Satoshi Takahama*, Beth Wittig, Carnegie Mellon University; Dimitris Vayenas, University of Ioannina; Cliff I. Davidson, Spyros N. Pandis, Carnegie Mellon University

LB37

SEASONAL VARIATION OF VOLATILE AND SEMI-VOLATILE SUBMICRON AEROSOLS IN TOKYO MEASURED USING THE AERODYNE AEROSOL MASS SPECTROMETER

Nobuyuki Takegawa *, Yutaka Kondo, Takuma Miyakawa, Yuzo Miyazaki, Yuichi Komazaki, University of Tokyo; John Jayne, Aerodyne Research Incorporated; Jose Jimenez, University of Colorado; Douglas Worsnop, Aerodyne Research Incorporated

LB38

EFFECT OF FIELD FORMULATION ON GAS/SOLID PARTITIONING OF HERBICIDES

Wenli Yang, Britt Holmen*, University of Connecticut

HEALTH-RELATED AEROSOLS**LB39**

SHORT-TERM AND SEASONAL BEHAVIOR OF PM_{2.5}, NITRATE, SULFATE, AND EC/OC AT THE BALTIMORE SUPERSITE IN 2002

Seungshik Park, John Ondov, David Harrison, Narayanan Nair, University of Maryland, College Park, Maryland

LB40

AIR BORNE ENDOTOXIN INSIDE AND OUTSIDE HOMES IN THE FRESNO (CA) ASTHMATIC CHILDREN'S ENVIRONMENT STUDY (FACES)

Katherine Hammond, University of California, Berkeley, School of Public Health

POSTER SESSION 3**AEROSOL PHYSICS****LB41**

MEASUREMENTS OF AIR JET INDUCED RELEASE RATES OF SPHERICAL PARTICLES FROM CLOTH AND PLANAR SURFACES

Robert Fletcher, NIST; E. Ferguson, Clemson University; E. Windsor, NIST

AEROSOLS AND MATERIALS**LB42**

A SIMPLE ARC PLASMA SOURCE TO PRODUCE SILICON NANOPARTICLES

Junhong Chen, Department of Mechanical Engineering, University of Wisconsin-Milwaukee; and Richard Flagan, Department of Chemical Engineering, California Institute of Technology

INSTRUMENTATION AND METHODS

LB43

VALIDATION OF PSCF METHOD USING THE 2002 QUEBEC FIRE EPISODE

Philip K. Hopke, Clarkson University; Bilkis Ara Begum, Atomic Energy Centre; Eugene Kim, Cheol-Heon Jeong, Doh-Won Lee, Clarkson University

LB44

PERFORMANCE EVALUATION OF COMMONLY USED IMPACTION SUBSTRATES UNDER VARIOUS LOADING CONDITIONS

Seung Joo Lee, Philip Demokritou, Petros Koutrakis, Harvard University

LB45

CHARACTERIZATION OF A COARSE PARTICLE CONCENTRATOR USED FOR HUMAN EXPOSURE STUDIES USING AEROSOL TIME OF FLIGHT MASS SPECTROMETRY

R. C. Moffet, L. G. Shields, J. H. Berntsen, R. B. Devlin, K. A. Prather

LB46

EVALUATION OF FULL-SCIENCE AND ONE-ATMOSPHERE PM MODULES IN CAMX VERSION 4

Bonyoung Koo,* Greg Yarwood, Ralph Morris, ENVIRON International Corporation, Novato, CA

ATMOSPHERIC AEROSOLS**LB47**

SOOT AEROSOL REACTIVITY AS A FUNCTION OF PARTICLE AGE

Kyle M. Backstrand, Department of Chemistry, Viterbo University, La Crosse, WI

LB48

PARTICULATE MATTER ION MEASUREMENTS BY THE PARTICLE-INTO-LIQUID SAMPLER (PILS) AT THE ST. LOUIS - MIDWEST SUPERSITE

Andrea C. Clements, Megan N.S. Yu, Jay R. Turner,* Environmental Engineering Program, Washington University, St. Louis, MO; Rodney J. Weber, School of Earth & Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA

LB49

CHEMICAL COMPOSITION OF SUBMICRON PARTICULATE MATTER IN DEPENDENCE OF SPECIFIC VAPOUR PRESSURES

Jürgen Müller, Umweltbundesamt, Paul-Ehrlich-Str. 29, 63225 Langen

INDOOR AEROSOLS**LB50**

A STUDY OF COLOR TONER SEPARATION FOR RECYCLING

Anahita Ahmadi Williamson, Brendan H. Williamson, Thomas Theis, Susan Powers and Gregory Campbell, Clarkson University

COMBUSTION**LB51**

POLLUTANT MEASUREMENT IN A SHOCK TUBE FACILITY FOR ENGINE-RELEVANT CONDITIONS

Timothy X. Wang, Jian Huang, Gregory D. Sullivan, Steven N. Rogak,* Timothy X. Wang, Department of Mechanical Engineering, University of British Columbia, Vancouver, B.C.

HEALTH-RELATED AEROSOLS

LB52

**PRENATAL EXPOSURE TO INHALED MANGANESE ALTERS BRAIN DEVELOPMENT AND
SUSCEPTIBILITY TO POSTNATAL METHAMPHETAMINE NEUROTOXICITY**

Amber L. Rinderknecht, Syed F. Ali, Richard Kinyamu, Bhumiika Kapadia, Jonathan E. Ericson, and Michael T. Kleinman, Department of Environmental, Health, Science and Policy, Department of Anatomy and Neurobiology, Department of Community and Environmental Medicine, University of California, Irvine. Division of Neurotoxicology, National Center for Toxicological Research, Food and Drug Administration, Jefferson, Arkansas