AAAR Annual Conference Overview

Monday, October 20, 2003

8:00 AM - 9:40 AM **Tutorial Session 1**

1. Introduction to Aerosol Mechanics I, *Dr. William C. Hinds*
2. Particle Control Techniques, *Dr. David Leith*
3. Aerosol Nucleation, *Dr. Barbara Wyslouzil*
4. Bioaerosols: Extending Non-Culture Based Methods for Characterizing Microorganisms in Air, *Dr. Mark Hernandez*

10:00 AM - 11:40 AM **Tutorial Session 2**

5. Introduction to Aerosol Mechanics II, *Dr. William C. Hinds*
6. Indoor Aerosols, *Dr. William W. Nazaroff*
7. An Intuitive Approach to Light Scattering from Single Particles and Aggregates, *Dr. Chris Sorensen*
8. Filter-Based Aerosol Sampling and Analysis, *Dr. Judith Chow*

1:00 PM - 2:40 PM **Tutorial Session 3**

9. Particle Transport Modeling, *Dr. Daniel J. Rader*
10. Analytical Methods for Source Apportionment *Dr. James J. Schauer*
11. Secondary Aerosol Formation, *Dr. Paul J. Ziemann*
12. Aerosols and the Respiratory Tract: A Primer, *Dr. Maura J. Sheehan*

3:00 PM - 4:40 PM **Tutorial Session 4**

13. Modeling Atmospheric Aerosols, *Dr. Spyros Pandis*
14. Chemical Mass Balance Receptor Modeling, *Dr. John G. Watson*
15. Photochemistry of Atmospheric Particles and Aqueous Drops, *Dr. Cort Anastasio*
16. Physiological Responses to Inhaled Particles, *Dr. Owen R. Moss*

Tuesday, October 21, 2003

8:00 AM - 9:00 AM **Plenary #1**

Observations of New Particle Formation and Growth Rates in the Atmosphere, *Dr. Peter H. McMurry*

Presentation of the Liu Award

9:30 AM - 10:45 AM **Platform Session #1**

1A Fundamental Aerosol Physics
1B Marine Aerosols
1C Nucleation and Ultrafine Aerosol
1D Size-Resolved Sampling
1E Materials Synthesis and Aerosol Analysis

11:00 AM - 12:35 PM **Platform Session #2**

2A Nanoparticles I
2B Climate/Remote Sensing/Free Troposphere
2C Rural Aerosols
2D Aerosol Chemistry I
2E Control Technology I

12:35 PM - 2:00 PM Lunch on your own

2:00 PM - 3:15 PM **Platform Session #3**

3A Particle Transport
3B Long-Range Transport
3C Source Apportionment I
3D Aerosol Instrumentation
3E Combustion and Envionmental Aerosol Formation I

3:45 PM - 5:00 PM **Platform Session #4**

4A Indoor Aerosols I
4B Filtration
4C Source Apportionment II
4D Long-Range Transport
4E Sampling Inlets

5:00 PM **AAAR Annual Business Meeting**

6:00 PM - 8:30 PM **Poster Session #1 and Exhibitor's Reception**

AAAR Annual Conference Overview

Wednesday, October 22, 2003

8:00 AM - 9:00 AM	**Plenary #2** Emissions-to-Intake Relationships for Air Pollution Sources, *Dr. William W. Nazaroff* Presentation of the Friedlander Award
9:30 AM - 10:45 AM	**Platform Session #5** 5A Indoor Aerosols II 5B Toxics & Plume Chemistry 5C Emissions I 5D Control Technology II 5E Soot and Inorganic Particle Formation
11:00 AM - 12:35 PM	**Platform Session #6** 6A Exposure Assessment I 6B California Regional Particulate Air Quality Study 6C Aerosol Chemistry II 6D Urban Aerosol 6E Condensation
12:35 PM - 2:40 PM	**Poster Session #2 and Exhibits , Lunch Provided**
2:40 PM - 4:35 PM	**Platform Session #7** 7A Exposure Assissment I 7B California Regional Particulate Air Quality Study 7C Heterogeneous Aerosol Chemistry I 7D Urban/Regional Aerosol 7E Emissions II
5:00 PM	**Working Group Meetings**
	Alumni Dinner Night (self organized)

Thursday, October 23, 2003

8:00 AM - 9:00 AM	**Plenary #3** Electrospray Wings for Molecular Elephants, *Dr. John Fenn* Presentation of the Whitby Award
9:30 AM - 10:45 AM	**Platform Session #8** 8A Chemical and Biological Agent Detection 1 8B Deposition: Modeling 8C Clouds & Fog 8D Bioaerosols & Biomass Burning 8E Combustion and Environmental Aerosol Formation II
11:00 AM - 12:35 PM	**Platform Session #9** 9A Heterogeneous Aerosol Chemistry II 9B Deposition: Experimental 9C Carbonaceous Aerosol 9D Numerical Modeling of Regional Aerosols I 9E Field Instrumentation
12:35 PM - 2:10 PM	Lunch on your own
2:10 PM - 4:25 PM	**Platform Session #10** 10A Heterogeneous Aerosol Chemistry III 10B Chemical and Biological Agent Detection 10C Carbonaceous Aerosol 10D Analytical Techniques & Methods Intercomparison 10E Mass Spectrometry
4:30 PM - 6:30 PM	**Poster Session #3 and Exhibits, Refreshments**
6:30 PM	**AAAR 2004 Planning Meeting**

AAAR Annual Conference Overview

Friday, October 24, 2003

8:00 AM - 9:00 AM	**Plenary #4** Understanding the Health Effects of Air Pollution: An Epidemiologist's Quagmire, *Dr. Paige E. Tolbert* Presentation of the Sinclair Award, announcement of the Mercer Award
9:30 AM - 10:50 AM	**Platform Session #11** 11A Health-Related Aerosols and Related Instrumentation 11B Clouds & Fog 11C Numerical Modeling of Regional Aerosols II 11D Particle Synthesis and Diagnostics I 11E Composition Measurement
11:10 AM - 12:30 PM	**Platform Session #12** 12A Atmospheric Aerosol Advances 12B Clouds & Fog 12C Numerical Modeling of Regional Aerosols III 12D Particle Synthesis and Diagnostics 12E Nanopartices II
12:30	**Conference Ends**

Tuesday, October 21, 2003
8:00 AM - 9:00 AM

Plenary #1
Pacific Ballroom A/B

8:00 AM	WELCOME *Barbara Turpin, Conference Chair,* *Rutgers University*
8:10 AM	OBSERVATIONS OF NEW PARTICLE FORMATION AND GROWTH RATES IN THE ATMOSPHERE *Dr. Peter H. McMurry* *Professor and Head of Mechanical Engineering, University of Minnesota, Minneapolis, Minnesota, USA*
8:55 AM	PRESENTATION OF THE LIU AWARD *Lynn Hildemann*

Tuesday, October 21, 2003 **Platform Session #1**

9:30 AM - 10:45 AM

1A **Fundamental Aerosol Physics** *Laguna A/B*

Chair: Christopher Sorensen, Co-chair: Tom Peters *9:30 AM - 10:45 AM*

1A1 9:30 AM	THERMOPHORETIC FORCE ON FREE-MOLECULAR PARTICLES *DANIEL RADER, Michael Gallis, John Torczynski, Sandia National Laboratories, Albuquerque, NM*
1A2 9:50 AM	AGGREGATION OF PARTICLES IN MAGNETIC FIELDS *PRATIM BISWAS, Prakash Kumar, Washington University, St. Louis, MO*
1A3 10:10 AM	SHELL MODEL INTERPRETATION FOR MIE SCATTERING BY SPHERES *CHRISTOPHER SORENSEN, Kansas State University, Manhattan, KS*
10:30 AM	POSTER PREVIEW *This session ends with a brief presentation of posters 1PA4-1PA12 (1 min each).*

1B **Marine Aerosols** *Avila A/B*

Chair: Rebecca Barthelmie, Co-chair: Francis Binkowski *9:30 AM - 10:45 AM*

1B1 9:30 AM	EVALUATION OF THE "CLAW" HYPOTHESIS USING A GLOBAL MODEL OF AEROSOL MICROPHYSICS *PETER ADAMS, Carnegie Mellon University, Pittsburgh, PA*
1B2 9:50 AM	SEA-SALT PRODUCTION AND FLUXES FROM NANOMETER SIZES AND LARGER: MEASUREMENTS AND IMPLICATIONS *ANTONY CLARKE, Steven Owens, Yohei Shinozuka, University of Hawaii, Honolulu, HI*
1B3 10:10 AM	AEROSOL PHYSICAL PROPERTIES IN THE COASTAL ZONE NEAR THE URBAN AREA IN THE SOUTHERN BALTIC SEA *TYMON ZIELINSKI, Andrzej Zielinski, Institute of Oceanology, Polish Academy of Sciences, Sopot, Poland*
10:30 AM	POSTER PREVIEW *This session ends with a brief presentation of posters 1PB4-1PB10 (1 min each).*

1C **Nucleation and Ultrafine Aerosol** *El Capitan A/B*

Chair: John Jayne, Co-chair: Anthony Wexler *9:30 AM - 10:45 AM*

1C1
9:30 AM
SYNTHESIS OF RESEARCH ON IN-SITU PARTICLE NUCLEATION IN WESTERN PENNSYLVANIA: WHICH HYPOTHESES FOR NUCLEI FORMATION AND GROWTH ARE CONSISTENT WITH FIELD OBSERVATIONS, MASS SPECTROMETRY, AND MODELING?
CHARLES STANIER, Timothy Gaydos, Andrey Khlystov, Carnegie Mellon University, Pittsburgh, PA; Qi Zhang, University of Colorado, Boulder, CO; Manjula Caragaratna, John Jayne, Douglas Worsnop, Aerodyne Research Inc., Billerica, MA; Jose-Luis Jimenez, University of Colorado, Boulder, CO; Dylan Millet, Allen Goldstein, University of California, Berkeley, CA; Keith Bein, Yongjing Zhao, Anthony Wexler, University of California, Davis, CA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA

1C2
9:50 AM
CHEMICAL COMPOSITION OF SUB-20 NANOMETER ATMOSPHERIC AEROSOL IN BOULDER, COLORADO
KATHARINE MOORE, James Smith, Fred Eisele, National Center for Atmospheric Research, Boulder, CO; Ajaya Ghimire, Peter McMurry, University of Minnesota, Minneapolis, MN

1C3
10:10 AM
MEASUREMENTS OF FINE PARTICLE COMPOSITION DURING QUEST 2 IN THE BOREAL FOREST, FINLAND USING AN AERODYNE AEROSOL MASS SPECTROMETER.
JAMES ALLAN, Rami Alfarra, Keith Bower, Hugh Coe, UMIST, Manchester, UK; John Jayne, Douglas Worsnop, Aerodyne Research Inc., Billerica; MA; Pasi Aalto, Markku Kulmala, University of Helsinki, Finland; Ari Laaksonen, University of Kuopio, Finland

10:30 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 1PC4-1PC10 (1 min each).

1D **Size-Resolved Sampling** *Huntington A/B/C*

Chair: Jon Volkwein, Co-chair: David Fergenson *9:30 AM - 10:45 AM*

1D1
9:30 AM
CONCENTRATION MEASUREMENT AND COUNTING EFFICIENCY OF THE AERODYNAMIC PARTICLE SIZER 3321
THOMAS PETERS, David Leith, University of North Carolina, Chapel Hill, NC

1D2
9:50 AM
IMPROVED PARTICLE SIZE DISTRIBUTION MEASUREMENT IN CALM AIR OR SLOWLY-MOVING AIR SITUATIONS
YI-HSUAN WU, James Vincent, University of Michigan, Ann Arbor, MI

1D3
10:10 AM
SAMPLING AND ANALYSIS OF AIRBONE FUNGAL SPORES
BEAN T. CHEN, Greg Feather, Jyoti Keswani, CDC/NIOSH, USA NIOSH

10:30 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 1PD4-1PD11 (1 min each).

1E **Materials Synthesis and Aerosol Analysis** *Palos Verdes A/B*

Chair: Ian Kennedy, Co-chair: Toivo Kodas *9:30 AM - 10:45 AM*

1E1 9:30 AM	DYNAMICS OF NANOPARTICLE CHAIN AGGREGATES: ROLE OF REINFORCING FILLERS *WEIZHI RONG, Rajdip Bandyopadhyaya, Sheldon Friedlander, University of California, Los Angeles, CA*
1E2 9:50 AM	AERO-SOL-GEL SYNTHESIS OF POROUS IRON-OXIDE NANOPARTICLES FOR ENERGETIC MATERIALS APPLICATIONS *ANAND PRAKASH, Alon V. McCormick, Michael R. Zachariah, University of Minnesota, Minneapolis, MN*
1E3 10:10 AM	COMBINATORIAL AEROSOL MATERIALS *TOIVO KODAS, Mark Hampden-Smith, Paolina Atanassova, David Dericotte, SMP, Albuquerque, NM*
10:30 AM	POSTER PREVIEW *This session ends with a brief presentation of posters 1PE4-1PE11 (1 min each).*

Tuesday, October 21, 2003 **Platform Session #2**

11:00 AM - 12:35 PM

2A **Nanoparticles I** *Laguna A/B*

Chair: Richard Flagan, Co-chair: Richard McClurg *11:00 AM - 12:35 PM*

2A1
11:00 AM
NANOPARTICLE FORMATION BY AEROSOL PROCESSES: EFFECT OF QUENCH RATE
ANSHUMAN LALL, Rajdip Bandyopadhyaya, Sheldon Friedlander, University of California, Los Angeles, CA

2A2
11:20 AM
SINTERING AND RESTRUCTURING OF NANOPARTICLE AGGLOMERATES
MARTIN SEIPENBUSCH, Institut fŸr Mechanische Verfahrenstechnik und Mechanik, Karlsruhe, Germany

2A3
11:40 AM
A MOLECULAR DYNAMICS STUDY OF THE ROLE OF THE GROWTH OF HYDROGEN PASSIVATION SURFACE ON SILICON NANOPARTICLES
TAKUMI HAWA, Michael R. Zachariah, Department of Mechanical Engineering and Chemistry, University of Minnesota, Minneapolis, MN

2A4
12:00 PM
INVESTIGATION OF THRESHOLD ENERGY FOR NANOPARTICLE GENERATION DURING THE LASER ABLATION DECONTAMINATION
DOH-WON LEE, Meng-Dawn Cheng, Oak Ridge National Laboratory, Oak Ridge, TN

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 2PA5-2PA12 (1 min each).

2B **Climate/Remote Sensing/Free Troposphere** *Avila A/B*

Chair: Cynthia Towhy, Co-chair: Tymon Zielinski *11:00 AM - 12:35 PM*

2B1
11:00 AM
RELATIONSHIPS AMONG SURFACE, AIRBORNE, AND SATELLITE MULTI-ANGLE AEROSOL OBSERVATIONS DURING THE ACE-ASIA FIELD CAMPAIGN
RALPH KAHN, Jet Propulsion Lab/California Institute of Technology, Pasadena, CA

2B2
11:20 AM
A SPRING-TIME MODEL OF THE VERTICAL STRUCTURE OF AEROSOL IN THE ASIAN REGION BASED ON CLOSURE STUDIES IN ACE-ASIA, 2001: IMPACT ON THE VERTICAL STRUCTURE OF AEROSOL-INDUCED FLUX CHANGES AND HEATING RATES
JENS REDEMANN, BAERI, Ventura, CA; Sarah J. Masonis, Univ. of Washington; Beat Schmid, BAERI, Ventura, CA; Theodore L. Anderson, Univ. of Washington; Philip B. Russell, NASA Ames Research Center; John M. Livingston, SRI International; Antony D. Clarke, Univ. of Hawaii

2B3
11:40 AM
AIRBORNE IN-SITU MEASUREMENT OF AEROSOL EXTINCTION AND SCATTERING OVER MONTEREY, CA AND THE DOE SGP SITE
ANTHONY STRAWA, NASA-ARC, Moffett Field, CA

2B4
12:00 PM
DEPLOYMENT OF AN AEROSOL MASS SPECTROMETER ON THE G1 AIRCRAFT DURING THE NEW ENGLAND AIR QUALITY STUDY 2002
John Jayne, TIM ONASCH, Scott Herndon, Manjula Canagaratna, Aerodyne Research, Inc., Billerica, MA; Alex Laskin, Pacific Northwest Nationl Laboratory, US Department of Energy, Richland, WA; Doug Worsnop, Aerodyne Research, Inc., Billerica, MA

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 2PB5-2PB12 (1 min each).

2C **Rural Aerosols** *El Capitan A/B*

Chair: David Simpson, Co-chair: Ed Edney *11:00 AM - 12:35 PM*

2C1
11:00 AM
AN ANALYSIS OF THE TIME SCALES ASSOCIATED WITH AEROSOL PROCESSES DURING DRY DEPOSITION
FRANCIS S. BINKOWSKI, University of North Carolina, Chapel Hill, NC; Sara C. Pryor, Indiana University, Bloomington, IN

2C2
11:20 AM
REAL-TIME OBSERVATIONS OF NITRIC ACID, AMMONIA, PARTICULATE NO3 AND PARTICULATE NH4 AT A RURAL SITE IN NORTH GA, USA
BENJAMIN HARTSELL, Eric Edgerton, Callie Waid, ARA Inc. Plano, TX; .John Jansen, Southern Company, Birmingham, AL; Alan Hansen, EPRI, Palo Alto, CA

2C3
11:40 AM
MICROMETEOROLOGICAL MEASUREMENTS OF SURFACE / ATMOSPHERE EXCHANGE FLUXES OF AEROSOL COMPONENTS USING AN AEROSOL MASS SPECTROMETER
DAVID ANDERSON, Atmospheric Sciences Division, Centre for Ecology and Hydrology (CEH), Edinburgh, U.K.; Eiko Nemitz, Atmospheric Sciences Division, Centre for Ecology and Hydrology (CEH), Edinburgh, U.K./ Atmospheric Chemistry Division (ACD), National Center for Atmospheric Research (NCAR), Boulder, CO; Jose-Luis Jimenez, Alex Huffman, CIRES/University of Colorado, Boulder, CO; Manjula Canagaratna, Doug Worsnop, Aerodyne Research Inc., Billerica, MA; John Neil Cape, David Fowler, Atmospheric Sciences Division, Centre for Ecology and Hydrology (CEH), Edinburgh, U.K.

2C4
12:00 PM
REAL-TIME MEASUREMENT OF WATER-INSOLUBLE AEROSOL IN THE CHAMONIX AND MAURIENNE VALLEYS OF ALPINE FRANCE
ROBY GREENWALD, M.H. Bergin, Georgia Institute of Technology, Atlanta, Georgia; Jean-luc Jaffrezo, Laboratoire de Glaciologie et GŽophysique de l'Environnement, UniversitŽ de Joseph Fourier, Cedex, France

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 2PC5-2PC11 (1 min each).

2D **Aerosol Chemistry I** *Huntington A/B/C*

Chair: James Smith, Co-chair: Cort Anastasio *11:00 AM - 12:35 PM*

2D1
11:00 AM
FORMATION OF INORGANIC NITROGEN FROM ILLUMINATION OF BULK ORGANIC NITROGEN IN ATMOSPHERIC FINE PARTICLES AND FOG DROPS
CORT ANASTASIO, University of California, Davis; Qi Zhang, University of Colorado, Boulder

2D2
11:20 AM
CONSIDERATION OF THE FORMATION OF SECONDARY ORGANIC PARTICULATE MATTER BY ADDITION REACTIONS OF RELATIVELY VOLATILE OXIDATION PRODUCTS AND OTHER ATMOSPHERIC COMPOUNDS
KELLEY C. BARSANTI, James F. Pankow, OGI School of Science and Engineering at OHSU, Beaverton, OR

2D3
11:40 AM
KINETICS OF SOOT OXIDATION BY OZONE AND MOLECULAR OXYGEN
JEFFREY ROBERTS, Amanda Wensmann, Michael Zachariah, University of Minnesota, Minneapolis, MN

2D4
12:00 PM
BASIC STUDY OF DYNAMICS AND PATHWAYS OF CHEMICAL CONVERSION OF ALDEHYDES VAPOR INTO NANOPARTICLES THANKS TO UV LIGHT ACTION.
GALINA SKUBNEVSKAYA, Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk; RUSSIA; Wing Tsang, National Instutute of Standards and Technology, Gaithersburg, Maryland,; Sergei Dubtsov, Galina Dultseva, Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk; RUSSIA

2E **Control Technology I** *Palos Verdes A/B*

Chair: Alfredo Armendariz, Co-chair: Peter Raynor *11:00 AM - 12:35 PM*

2E1
11:00 AM
EFFECTIVENESS OF PAPER TOWELS AS A MAKESHIFT RESPIRATOR
DAVID LEITH, University of North Carolina, Chapel Hill, NC

2E2
11:20 AM
INFLUENCE OF FIBER MATERIAL ON MIST FILTER PERFORMANCE
PETER RAYNOR, Gina Letts, University of Minnesota; Division of Environmental and Occupational Health, Minneapolis, MN

2E3
11:40 AM
SIZE-SEGREGATED PM EMISSIONS FROM DIESEL WITH AFTER-TREATMENT AND FROM CNG-FUELED TRANSIT BUSES
Norman Y. Kado, ABERTO AYALA, Robert A. Okamoto, California Environmental Protection Agency, Air Resources, Sacramento, CA , El Monte, CA and Davis, CA

2E4
12:00 PM
AN EVALUATION OF EXHAUST AFTER TREATMENT CONTROL TECHNOLOGIES FOR DIESEL PARTICULATE MATTER FROM BACK-UP UTILITY GENERATORS (BUGS): FOCUS ON ORGANIC/ELEMENTAL CARBON
SANDIP SHAH, David Cocker, Kent Johnson, Wayne Miller, Joseph Norbeck, CE-CERT/UC Riverside, Riverside CA

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 2PE5-2PE10 (1 min each).

Tuesday, October 21, 2003 **Platform Session #3**

2:00 PM - 3:15 PM

3A **Particle Transport** *Laguna A/B*

Chair: Abdelmaged Hafez Ibrahim, Co-chair: Chuen-Jinn Tsai *2:00 PM - 3:15 PM*

3A1
2:00 PM
MICROPARTICLE DETACHMENT FROM SURFACES EXPOSED TO TURBULENT AIR FLOW: EFFECTS OF FLOW ACCELERATION, RELATIVE HUMIDITY AND NUMBER DENSITY
ABDELMAGED IBRAHIM, Patrick Dunn, Raymond Brach, University of Notre Dame, Notre Dame, IN

3A2
2:20 PM
PARTICLE DEPOSITION IN INDUSTRIAL BENDS
THOMAS PETERS, David Leith, Univ. of NC, Chapel Hill, NC

3A3
2:40 PM
SUPPRESSING PARTICLE DEPOSITION BY THERMOPHORETIC FORCE IN THE PIPE FLOW
JYH-SHYAN LIN, Chuen-jinn Tsai, National Chiao Tung University, Hsin Chu, Taiwan

3:00 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 3PA4-3PA11 (1 min each).

3B **Long-Range Transport** *Avila A/B*

Chair: Antony Clarke, Co-chair: Paul Makar *2:00 PM - 3:15 PM*

3B1
2:00 PM
WATER SOLUBLE AEROSOLS IN MARINE ENVIRONMENT AT CABO DA ROCA
LILIANA QUINTÃO, M. João Nunes, A. Rita Moreira, M. Filomena Camões, CECUL-DQB, Faculty of Sciences, University of Lisbon, Lisbon, Portugal

3B2
2:20 PM
THE ASIAN CONTINENTAL AEROSOL PLUME DOMINATES THE "BACKGROUND" TROPOSPHERIC AEROSOL OVER NORTH AMERICA
RICHARD VANCUREN, California Air Resources Board, Sacramento, CA; Steven Cliff, DELTA Group, Dept. of Applied Sciences, UC Davis, Davis, CA; Kevin Perry, Dept. of Meteorology, University of Utah, Salt Lake City, UT; Michael Jimenez-Cruz, DELTA Group, Dept. of Applied Sciences, UC Davis, Davis, CA

3B3
2:40 PM
PROPERTIES AND EFFECTS OF ASIAN AEROSOLS OVER THE CENTRAL CALIFORNIA COAST DURING THE ADAM-2003 (ASIAN DUST ABOVE MONTEREY-2003) FIELD STUDY
ANTHONY BUCHOLTZ, Jeffrey H. Bowles, Naval Research Laboratory, Monterey, CA ; Christian M. Carrico, Colorado State University, Fort Collins, CO ; Wei Chen, Naval Research Laboratory, Don Collins, Texas A&M University, College Station, Texas; Curtiss O. Davis, Naval Research Laboratory; Jim Eilers, NASA Ames Research Center, Moffett Field, CA; Piotr Flatau, Naval Research Laboratory; Haflidi Jonsson, Naval Postgraduate School - CIRPAS, Marina, CA; Dan Korwan, Naval Research Laboratory; Sonia M. Kreidenweis, Colorado State University; John M. Livingston, NASA Ames Research Center; Marcos Montes, Naval Research Laboratory; Bob Provencal, Picarro; Elizabeth A. Reid, Jeffrey S. Reid, Naval Research Laboratory; Jens Redemann, Beat Schmid, NASA Ames Research Center; William Snyder, Naval Research Laboratory; Anthony Strawa, NASA Ames Research Center; Annette L. Walker, Douglas L. Westphal, Naval Research Laboratory; Marcin Witek,

3:00 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 3PB4-3PB11 (1 min each).

3C **Source Apportionment I** *El Capitan A/B*

Chair: Eric Fujita, Co-chair: David Cocker *2:00 PM - 3:15 PM*

3C1
2:00 PM
A SENSITIVITY ANALYSIS OF MOLECULAR MARKER CHEMICAL MASS BALANCE MODELS FOR THE APPORTIONMENT OF GASOLINE AND DIESEL ENGINE SOURCE CONTRIBUTIONS
JAMES SCHAUER, University of Wisconsin-Madison, Madison, WI

3C2
2:20 PM
SIZE-RESOLVED CHEMICAL CLASSIFICATION OF DUAL POLARITY SINGLE-ULTRAFINE-PARTICLE MASS SPECTROMETRY DATA COLLECTED DURING THE PITTSBURGH SUPERSITE EXPERIMENT
KEITH BEIN, Yongjing Zhao, Anthony Wexler, University of California, Davis; Murray Johnston, University of Delaware, Newark, Delaware

3C3
2:40 PM
SINGLE PARTICLE SPECIATION OF URBAN ULTRAFINE AND FINE PARTICULATE MATTER IN THE WESTERN AND EASTERN UNITED STATES
MICHELE F. SIPIN, Yongxuan Su, David A. Sodeman, Stephen M. Toner, Kimberly A. Prather, University of California, San Diego, La Jolla, CA ; Robert Gelein, Mark J. Utell, Gunther Oberdorster, University of Rochester School of Medicine and Dentistry, Rochester, NY

3:00 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 3PC4-3PC11 (1 min each).

3D **Aerosol Instrumentation** *Huntington A/B/C*

Chair: George Mulholland, Co-chair: Virgil Marple *2:00 PM - 3:15 PM*

3D1
2:00 PM
EFFECT OF OXIDATION OF METAL SPHERES ON SURFACE LIGHT SCATTERING
JUNG HYEUN KIM, University of Maryland, Gaithersburg, MD; Thomas Germer, George Mulholland, National Institute of Standards and Technolgoy, Gaithersburg, MD; Sheryl Ehrman, University of Maryland, College Park MD

3D2
2:20 PM
DESIGN OF AN ION TRAP-BASED TRANSPORTABLE REAL-TIME INDIVIDUAL PARTICLE ANALYZE
PETER T. A. REILLY, William A. Harris, William B. Whitten, J. Michael Ramsey, Oak Ridge National Laboratory, Oak Ridge, TN

3D3
2:40 PM
INVESTIGATION OF A SINGLE WIRE CORONA CHARGER
GEORGE BISKOS, Nick Collings, Cambridge University Engineering Department, Cambridge, UK

3:00 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 3PD4-3PD11 (1 min each).

3E **Combustion and Envionmental Aerosol Formation I** *Palos Verdes A/B*

Chair: Kimberly Prather, Co-chair: Glenn England *2:00 PM - 3:15 PM*

3E1
2:00 PM
THE POTENTIAL FOR USING AEROSOL TIME-OF-FLIGHT MASS SPECTROMETRY (ATOFMS) FOR SOURCE APPORTIONMENT
KIMBERLY PRATHER, Sergio Guazzotti, Michele Sipin, David Sodeman, Yongxuan Su, University of California, San Diego, La Jolla, CA; David Suess, UC Riverside, Riverside, CA

3E2
2:20 PM
OXYGENATED ORGANIC COMPOUNDS PRESENT IN MOTOR VEHICLE EMISSIONS
CHRIS JAKOBER, Hugo Destaillats, Peter Green, University of California, Davis; M. Judith Charles, University of California, Davis

3E3
2:40 PM
SPECIATION OF PARTICLE-PHASE EMISSIONS FROM THE COMBUSTION OF RESIDUAL AGRICULTURAL BIOMASS OF THE WESTERN UNITED STATES
MICHAEL HAYS, US EPA, Research Triangle Park; NC; Philip Fine, USC, Los Angeles, CA; Michael Kleeman, University of California Davis; N. Dean Smith, Christopher Geron, Brian Gullett, US EPA, Research Triangle Park; NC

3:00 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 3PE4-3PE11 (1 min each).

Tuesday, October 21, 2003 **Platform Session #4**

3:45 PM - 5:00 PM

4A **Indoor Aerosols I** *Laguna A/B*

Chair: Antonio Miguel, Co-chair: Andrea Ferro *3:45 PM - 5:00 PM*

4A1
3:45 PM
"IN-CABIN" MEASUREMENTS OF ULTRAFINE & NANOPARTICLES IN A PASSENGER CAR EQUIPPED WITH A HEPA/ACTIVATED CARBON FILTER SYSTEM: LOS ANGELES FREEWAYS AND SURFACE STREETS
ANTONIO MIGUEL, University of California, Los Angeles, CA; Dane Westerdahl, California Air Resources Board, Sacramento, CA; Constantinos Sioutas, University of Southern California, Los Angeles, CA

4A2
4:05 PM
INDOOR/OUTDOOR PARTICULATE CARBON AND GAS/PARTICLE PARTITIONING IN SEATTLE
LARA GUNDEL, Yanbo Pang, Lawrence Berkeley National Laboratory, Berkeley, CA; L. J. (Sally) Liu, University of Washington, Seattle, WA; Candis Claiborn, Washington State University, Pullman, WA

4A3
4:25 PM
COMPARISON OF LASER PARTICLE COUNTER, NEPHELOMETER AND GRAVIMETRIC MEASUREMENTS IN AN INDOOR AIR INFILTRATION EXPERIMENT.
ROYAL KOPPERUD, Department of Civil and Environmental Engineering, Stanford University, Stanford, CA; Andrea Ferro, Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY; Lynn Hildemann, Department of Civil and Environmental Engineering, Stanford University, Stanford CA

4:45 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 4PA4-4PA7 (1 min each).

4B **Filtration** *Avila A/B*

Chair: Tom Peters, Co-chair: John Volckens *3:45 PM - 5:00 PM*

4B1
3:45 PM
EFFECT OF BREATHING AIRFLOW PATTERN ON AEROSOL FILTRATION EFFICIENCY OF COMMERCIAL RESPIRATOR FILTERS
KENT C. HOFACRE, Aaron W. Richardson, Battelle, Columbus, OH

4B2
4:05 PM
FEEDBACKS IN PARTICLE DEPOSITION IN FIBROUS FILTERS
CHARLES CLEMENT, Enviros-QuantiSci, Wantage;Oxon U.K.; Sarah Dunnett, Loughborough University, Loughborough; Leics, U.K.

4B3
4:25 PM
A PARAMETRIC STUDY OF TRANSPORT OF AEROSOL PARTICLES IN A HETEROGENEOUS SHREDDED POROUS MEDIA
Mohammad S. Saidi, Philip Morris USA, Richmond, VA (on sabbatical leave from Isfahan University); PETER J. LIPOWICZ, Ken H. Shafer, Philip Morris USA, Richmond, VA

4:45 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 4PB4-4PB9 (1 min each).

4C **Source Apportionment II** *El Capitan A/B*

Chair: James Schauer, Co-chair: Beverly Cohen *3:45 PM - 5:00 PM*

4C1
3:45 PM
SOURCE APPORTIONMENT OF PRIMARY ORGANIC PM2.5 IN THE PITTSBURGH REGION
ALLEN ROBINSON, R. Subramanian, Department of Mechanical Engineering, Carnegie Mellon University, Pittsbugh, PA; Juan Cabada, Spyros Pandis, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA; Anna Bernardo-Bicker, Wolfgang Rogge, Department of Civil & Environmental Engineering; Florida International University, Miami, FL

4C2
4:05 PM
ORGANIC COMPOUND TRACERS OF PRIMARY AND SECONDARY SOURCES OF FINE AND ULTRAFINE PM IN THE LOS ANGELES BASIN
PHILIP M. FINE, Bhabesh Chakrabarti, University of Southern California, CA; Meg Krudysz, University of California, Los Angeles, CA; James J. Schauer, University of Wisconsin, Madison, WI; Constantinos Sioutas, University of Southern California, Los Angeles, CA

4C3
4:25 PM
COMPOSITION, SIZE DISTRIBUTION AND SOURCES OF AEROSOLS IN SOUTH ASIA
LIAQUAT HUSAIN, Abdul J. Khan, Wadsworth Center, Albany, New York; Jianjun Li, Dept. of Environmental Health and Toxicology, SUNY, Albany, New York ; Adil R. Khan, Rudolf Addink, Wadsworth Center, Albany, NY

4:45 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 4PC4-4PC12 (1 min each).

4D **Long-Range Transport** *Huntington A/B/C*

Chair: Tymon Zielinski, Co-chair: Sara Pryor *3:45 PM - 5:00 PM*

4D1
3:45 PM
ORGANIC CARBON CONTENT OF SUBMICRON ATMOSPHERIC AEROSOLS OF REMOTE CONTINENTAL AREAS.
PETER KUTSENOGIY , Valeri Makarov, Institute of Chemical Kinetics and Combustion, Novosibirsk, Russia

4D2
4:05 PM
LIDAR OBSERVATIONS OF SAHARAN DUST AND REGIONAL POLLUTION EVENTS OVER THE NORTHEASTERN IBERIAN PENINSULA IN THE FRAME OF EARLINET
Carlos Perez, Pedro Jimenez, Laboratory of Environmental Modeling. UPC, Barcelona, Spain; Francesc Rocadenbosch, Department of Signal Theory and Communications. UPC, Barcelona, Spain; JOSE M. BALDASANO, Laboratory of Environmental Modeling. UPC, Barcelona, Spain

4D3
4:25 PM
DUST STORM FORECASTING USING MM5 WEATHER DATA AND THE CARMA DUST MODEL
BEN BARNUM, Nathaniel Winstead, Johns Hopkins University, Applied Physics Laboratory, Laurel, MD; Paul Ginoux, Peter Colarco, NASA GSFC, Goddard Space Flight Center, Greenbelt, MD; Jeremy Wesely, Gordon Brooks, Amy Hakola, United States Air Force Weather Agency, Omaha, NB; Owen Toon, University of Colorado PAOS Group, Boulder, CO

4:45 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 4PD4-4PD11 (1 min each).

4E **Sampling Inlets** *Palos Verdes A/B*

Chair: Paul Baron, Co-chair: Heinz Fissan *3:45 PM - 5:00 PM*

4E1
3:45 PM
DEVELOPMENT AND EVALUATION OF A HIGHLY EFFICIENT ELECTROSTATIC GAS PARTICLE SEPARATOR WITH MINIMAL EFFECT ON THE GAS PHASE
HEINZ FISSAN, Christof Asbach, University Duisburg-Essen, Duisburg; Germany; Thomas Kuhlbusch, Instiut fuer Energie- und Umwelttechnik, IUTA e.V, Duisburg; Germany

4E2
4:05 PM
OPTIMAL CAPILLARY GEOMETRIES FOR PARTICLE SELECTION AND FOCUSING
PRACHI MIDDHA, University of Delaware, Newark,DE; Anthony Wexler, University of California, Davis

4E3
4:25 PM
A NEW TWO-STAGE DIFFUSER AEROSOL INLET SYSTEM FOR RESEARCH AIRCRAFT
FRED BRECHTEL, Brechtel Mfg. Inc., Hayward, CA; Markus Hermann, Institute for Tropospheric Research, Leipzig; Germany; Alexander Laskin, Martin Iedema, Pacific Northwest National Laboratory, Richland, WA

4:45 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 4PE4-4PE11 (1 min each).

Tuesday, October 21, 2003
5:00 PM - 6:00 PM

AAAR Annual Business Meeting
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All AAAR members are invited to attend.

Tuesday, October 21, 2003 **Poster Session #1, Exhibits and Exhibits Reception**
6:00 PM - 8:30 PM *Pacific Ballroom D*

1PA **Fundamental Aerosol Physics** *Pacific Ballroom D*
6:30 PM - 7:30 PM

1PA4 GENERALIZED DRAG FORCE LAW OF SPHERICAL PARTICLES AND ON THE LIMITATION OF STOKES-CUNNINGHAM FORMULA
ZHIGANG LI, Hai Wang, University of Delaware, Newark, DE

1PA5 MEASUREMENT OF GRAVITATIONAL SETTLING VELOCITY OF BIOLOGICAL PARTICLES USING PARTICLE IMAGE VELOCIMETRY
CARSIE HALL, Sreechakradhar Masabattula, Kazim Akyuzlu, University of New Orleans, New Orleans, LA; Maren Klich, US Department of Agriculture, New Orleans, LA

1PA6 DEVELOPMENT AND ASSESSMENT OF AN INTEGRATED AEROSOL PROGRAM FOR UNDERGRADUATE EDUCATION
PRATIM BISWAS, Prakash Kumar, Washington University, Saint Louis, MO; Anne Donnelly, Heath Wintz, Chang-Yu Wu, Robert Roberg, Priscilla Chapman, Anne L. Allen, University of Florida, Gainesville, FL

1PA7 ESTABLISHMENT AND MAINTENANCE OF A DATABASE SYSTEM ON THE PROFICIENCY OF STACK SAMPLING
CHIH-CHIEH CHEN, Tzu-Ting Yang, Chia-Wei Hsu, Yu-Huei Doong, Fu-Tien Jeng, National Taiwan University, Taipei, Taiwan; Sheng-Hsiu Huang, Chun-Wan Chen, Institute of Occupational Safety and Health, Taipei, Taiwan

1PA8 PARTICLE CHARGING BY ION COLLISION IN THE TRANSITION REGIME
EVA M. CRESPO, Da-Ren Chen, Washington University, St. Louis, MO

1PA9 EFFECTS OF THE EXTERNAL ELECTRIC FIELD ON THE ELECTROSPRAY CHARACTERISTICS
KYOUNGTAE KIM, Hyungho Park, Sangsoo Kim, Korea Advanced Institude of Science and Technology, Daejeon, Korea

1PA10 COAGULATION SIMULATION AND INFERENCE OF INITIAL PARTICLE SIZE DISTRIBUTIONS
PENGZHI JIANG, Joann Lighty, Adel Sarofim, Eric Eddings, University of Utah, Salt Lake City; UT

1PA11 AN EXPERIMENTAL STUDY ON TURBULENT AND BROWNIAN COAGULATION
DAE SEONG KIM, Ken W. Lee, Kwangju Institute of Science and Technology, Gwangju, Korea

1PA12 ON BUBBLE MOTIONS IN SIMPLE SHEAR FLOW
WEI CHEN, Goodarz Ahmadi, Jeffrey A. Taylor, Clarkson University, Potsdam, NY

1PB **Marine Aerosols**

Pacific Ballroom D
6:30 PM - 7:30 PM

1PB4 PARTITIONING AND FLUXES OF OXIDIZED NITROGEN IN THE MARINE BOUNDARY LAYER.
SARA PRYOR, Indiana University, Bloomington; IN; Lise Lotte Soerenson, Risoe National Laboratory, Roskilde, Denmark

1PB5 CHARACTERIZATION OF AEROSOL OVER THE NORTH PACIFIC
LISA PHINNEY, Dalhousie University, Halifax, NS, Canada; Richard Leaitch, Meteorological Service of Canada, Toronto, ON, Canada; Ulrike Lohmann, Dalhousie University, Halifax, NS, Canada; Hacene Boudries, Aerodyne Research Inc., Billerica MA; Desiree Toom-Sauntry, Meteorological Service of Canada, Toronto, ON, Canada

1PB6 OPTICAL PROPERTIES OF AEROSOL PARTICLES OVER THE NORTHEAST PACIFIC
JULIA MARSHALL, Ulrike Lohmann, Dalhousie University, Halifax, NS, Canada; Richard Leaitch, Atmospheric Environment Service, Downsview, ON, Canada

1PB7 MARINE AEROSOLS OVER THE NORTH ATLANTIC OCEAN - NORTH AMERICAN AND EUROPEAN INFLUENCES
M. JOÃO NUNES, M. Filomena Camões, University of Lisbon, Lisbon, Portugal; Francis McGovern, Environmental Protection Agency, Dublin, Wexford, Ireland; Sebastião Santos, Frank Raes, EU Commission/JRC, Institute for Environment and Sustainability, Ispra (Varese), Italy

1PB8 TRACE METALS IN MARINE AEROSOL COMPOSITION OVER PORTUGUESE COASTAL AREA FROM FEBRUARY TO MARCH 2000
A. RITA MOREIRA, M. Jo‹o Nunes, Liliana Quint‹o, M. Filomena Cam›es, CECUL/DQB, University of Lisbon, Lisbon, Portugal

1PB9 ORGANIC ENRICHMENT IN SEA SPRAY AEROSOL GENERATED IN AN OCEAN BIOME
COREY A. TYREE, Olga A. Alexandrova, Jonathan O. Allen, Arizona State University, Tempe, AZ

1PB10 OBSERVATION OF NUCLEATION EVENTS IN REMOTE COASTAL ENVIRONMENT IN NORTHERN CALIFORNIA
JIAN WEN, Anthony S. Wexler, University of California, Davis, CA

1PC **Nucleation and Ultrafine Aerosol**

Pacific Ballroom D

6:30 PM - 7:30 PM

1PC4 CHARACTERISTICS OF NUCLEATION AND GROWTH EVENTS OF ULTRAFINE PARTICLES MEASURED IN ROCHESTER, NY: EFFECT OF SO2 AND WIND DIRECTION.
CHEOL-HEON JEONG, Philip K. Hopke, Clarkson University, Potsdam, NY; David Chalupa, Mark Utell, University of Rochester Medical Center, Rochester, NY; Henry Felton, New York State Department of Environmental Conservation, Albany, NY

1PC5 URBAN AEROSOL MEASUREMENTS IN NEW DELHI, INDIA
PETTERI MšNKKšNEN, Ismo K. Koponen, University of Helsinki, Finland; R. Uma, Energy and Resources Institute , New Delhi, India; Kari E.J. Lehtinen, Kaarle HŠmeri, Markku Kulmala, University of Helsinki, Finland

1PC6 SEASONAL AND SPATIAL VARIABILITY OF THE SIZE-RESOLVED CHEMICAL COMPOSITION OF ULTRAFINE AND FINE PM IN THE LOS ANGELES BASIN
SATYA BRATA SARDAR, Michael D. Geller, Philip M. Fine, Constantinos Sioutas, University of Southern California, Los Angeles, CA; Paul Mayo, University of California, Los Angeles, CA

1PC7 MODELING OF REGIONAL NUCLEATION EVENTS OCCURRING DURING PAQS
TIMOTHY M. GAYDOS, Charlie O. Stanier, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA

1PC8 MEASUREMENT OF MEXICO CITY ULTRAFINE AEROSOL SIZE DISTRIBUTIONS: OBSERVATIONS OF NEW PARTICLE FORMATION AND GROWTH
JAMES N. SMITH, National Center for Atmospheric Research, Boulder, CO; Matthew Dunn, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Hiromu Sakurai, Ajaya Ghimire, Peter H. McMurry, University of Minnesota, Minneapolis, MN; Fred L. Eisele, National Center for Atmospheric Research, Boulder, CO; Telma Castro, Darrel Baumgardner, Universidad Nacional Aut—noma de MŽxico, Mexico City, Mexico

1PC9 CONTINUOUS MEASUREMENT OF THE ATMOSPHERIC AEROSOL SIZE DISTRIBUTIONS IN ST. LOUIS, MO.
QIAN SHI, Hiromu Sakurai, Xiaoliang Wang, Peter H. McMurry, University of Minnesota, Minneapolis, MN

1PC10 HYGROSCOPICITY AND VOLATILITY OF ATMOSPHERIC ULTRAFINE PARTICLES DURING NUCLEATION EVENTS IN ATLANTA, GEORGIA
HIROMU SAKURAI, Ajaya Ghimire, Melissa Fink, Peter McMurry, University of Minnesota, Minneapolis, MN; James Smith, Lee Mauldin, Katharine Moore, Fred Eisele, National Center for Atmospheric Research, Boulder, CO; Didier Voisin, Universit'e de Provence, Aix-en-Provence, France

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1PD **Size-Resolved Sampling**

Pacific Ballroom D

6:30 PM - 7:30 PM

1PD4 EVALUATION OF SOURCES FOR POTENTIAL CONTAMINATION OF QUARTZ FILTERS USED FOR DETERMINATION OF ORGANIC AND ELEMENTAL CARBON AEROSOL
DAVID F. SMITH, Robert A. Cary, Sunset Laboratory Inc., Hillsborough, NC; Jon J. Bowser, MACTEC Inc., Gainsville, FL

1PD6 REAL-TIME ANALYSIS OF ORGANIC COMPONENTS IN ULTRAFINE PARTICLES WITH AN AEROSOL MASS SPECTROMETER
BERK OKTEM, Michael Tolocka, Murray Johnston, University of Delaware, Newark, DE

1PD7 ANNULAR AQUEOUS DENUDER FOR SHORT TERM FILTER MEASUREMENTS IN SATURATED ENVIRONMENTS
JON VOLKWEIN, Steve Mischler, Robert Vinson, CDC NIOSH, Pittsburgh, PA ; Peter Hall, Eric Crookston, SKC Inc., Eighty Four, PA

1PD8 CHARACTERIZING CALIBRATION FACTORS USED IN ESTIMATING MASS CONCENTRATIONS OF AMBIENT AEROSOLS IN AERODYNE AEROSOL MASS SPECTROMETER (AMS)
ROYA BAHREINI, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

1PD9 MINIATURIZED SYSTEMS FOR PARTICLE EXPOSURE ASSESSMENT
LARA GUNDEL, Michael Apte, Anthony Hansen, Douglas Black, Lawrence Berkeley National Laboratory, Berkeley, CA

1PD10 P-CONSEP (TM): DESIGN OF A NOVEL PARTICLE CONCENTRATOR
LISA GRAHAM, Environment Canada, Ottawa, ON, Canada; Gordon Johnston, Ben Etkin, AERCOL, Ottawa, ON, Canada

1PD11 DEVELOPMENT OF A PORTABLE NANOMETER AEROSOL SIZE ANALYZER (NASA)
NALIN PERERA, Daren Chen, Washington University, St. Louis, MO

1PE **Materials Synthesis and Aerosol Analysis**

Pacific Ballroom D
6:30 PM - 7:30 PM

1PE4 MONTE CARLO SIMULATION OF AEROSOLS WITH MOVING BINS
ZHEN SUN, Rich Axelbaum, Washington University, St. Louis, MO

1PE5 INTRAPARTICLE REACTION ROUTES FOR MANUFACTURE OF METAL-CONTAINING MICRO- TO NANO-MATERIALS
TOIVO KODAS, Mark Hampden-Smith, Superior MicroPowders, Albuquerque, NM

1PE6 STRUCTURAL PROPERTIES OF DIESEL PARTICLES MEASURED USING TRANSMISSION ELECTRON MICROSCOPE: RELATIONSHIPS TO PARTICLE MOBILITY AND MASS
KIHONG PARK, David Kittelson, Peter McMurry, University of Minnesota, Minneapolis, MN

1PE7 SINGLE PARTICLE ANALYSIS OF A MINUTEMAN SR19 II ROCKET MOTOR EXHAUST PLUME USING AEROSOL TIME-OF-FLIGHT MASS SPECTROMETRY
STEPHEN TONER, David Sodeman, Kimberly Prather, University of California San Diego, La Jolla, CA

1PE8 DESIGN AND VERIFICATION OF A DIRECT EXHAUST HOOKUP MOBILE EMISSIONS LABORATORY FOR ON-ROAD HEAVY-DUTY DIESEL VEHICLES
DAVID COCKER, Sandip Shah, Kent Johnson, Wayne Miller, Joseph Norbeck, CE-CERT/University of California, Riverside, CA

1PE9 STACK SAMPLING WITH DILUTION FOR FINE PARTICLE MEASUREMENT
PIRITA MIKKANEN, Erkki Lamminen, Johanna Ojanen, Dekati Ltd., Tampere, Finland

1PE10 PARTICLE SPECIATION AND EMISSION PROFILES OF SMALL 2-STROKE ENGINES
JOHN VOLCKENS, US EPA, Research Triangle Park, NC

1PE11 PARTICLE FORMATION AND ITS EFFECT ON SILICON WAFER CONTAMINATION DURING THIN FILM PREPARATION USING TEOS/OXYGEN PLASMA
Manabu Shimada, Heru Setyawan, Yutaka Hayashi, Nobuki Kashihara, Kikuo Okuyama, Hiroshima University, Hiroshima, Japan

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2PA **Nanoparticles I**

Pacific Ballroom D
6:30 PM - 7:30 PM

2PA5 AEROSOL PHASE OXIDE COATED SILICON NANOPARTICLE PRODUCTION FOR 300 MM MEMORY DEVICE PROCESSES
DEAN HOLUNGA, R. C. Flagan, Caltech, Pasadena, CA

2PA6 MORPHOLOGY OF NANOSTRUCTURED DEPOSITS: SIMULATION USING BROWNIAN DYNAMICS
PRATIM BISWAS, Pramod Kulkarni, Washington University in St. Louis

2PA7 IN-SITU DEPOSITION OF SI-TI-N FILMS USING NANOPARTICLES SYNTHESIZED IN A THERMAL PLASMA PROCESS.
JAMI HAFIZ, Xiaoliang Wang, Thierry Renault, Rajesh Mukherjee, Ashok Gidwani, Dept. of Mechanical Engineering, University of Minnesota, Minneapolis, MN; William Mook, Christopher Perrey, C. Barry Carter, William Gerberich, Dept. of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN; Joachim Heberlein, Peter McMurry, Steven Girshick, Dept. of Mechanical Engineering, University of Minnesota, Minneapolis, MN

2PA8 MECHANICAL PROPERTIES OF COPPER NANOPARTICLE CHAIN AGGREGATES UNDER STRAIN - A MOLECULAR DYNAMICS STUDY
ADAMOS DALIS, Sheldon Friedlander, UCLA, Los Angeles, CA

2PA9 MODELING OF NANOPARTICLE DEPOSITION IN STAGNATION FLOW ON A FINITE PLATE WITHIN A TUBULAR AEROSOL REACTOR
QUYNH NGUYEN, Sheryl Ehrman, University of Maryland, College Park MD

2PA10 MICROMIXING OF DROPLETS IN ROTATING POROUS MATERIALS
JUNYA NUMURA, Yoshio Otani, Norikazu Namiki, Kanazawa University, Japan

2PA11 SPECIFICS OF INTERACTION OF CLUSTER NANOPARTICLES (CNPS) WITH METALLIC SURFACE
ANATOLIY SUSLOV, UCSB, Goleta CA

2PA12 BONDING ENERGY OF CLUSTER NANOPARTICLES (CNPS)
ANATOLIY SUSLOV, UCSB, Goleta, CA

2PB **Climate/Remote Sensing/Free Troposphere** *Pacific Ballroom D*

6:30 PM - 7:30 PM

2PB5 IN SITU AEROSOL SIZE DISTRIBUTIONS AND RADIATIVE CLOSURE STUDY DURING AEROSOL INTENSIVE OPERATION PERIOD (ARM-IOP)
JIAN WANG, Yin-nan Lee, Linda Nunnermacker, Brookhaven National Laboratory, Upton, NY; Zhiguang Song, Guangzhou Institute of Geochemistry, Guangzhou, China

2PB6 MASS SPECTROMETRIC AEROSOL COMPOSITION MEASUREMENTS IN THE TROPOPAUSE REGION
JOHANNES SCHNEIDER, Max Planck Institute for Chemistry, Cloud Physics and Chemistry Department, Mainz;Germany; Joachim Curtius, Frank Drewnick, University of Mainz, Institute for Atmospheric Physics, Mainz; Germany; Silke Henseler, Nele Hock, Silke Weimer, Max Planck Institute for Chemistry, Cloud Physics and Chemistry Department, Mainz;Germany; Stephan Borrmann, University of Mainz, Institute for Atmospheric Physics, Mainz;Germany

2PB7 CHARACTERIZATION OF TROPICAL WINTER HAZE AEROSOLS AND PRE-CURSOR GASES DURING 1998-2003 USING GROUND-BASED SOLAR RADIOMETRY
DEVARA PANUGANTI, S.M. Sonbawne, S.K. Saha, A.K. Srivastava, R.S. Maheskumar, G. Pandithurai, K.K. Dani and P. E. Raj; Indian Institute of Tropical Meteorology, Pune, India

2PB8 AEROSOL OPTICAL THICKNESS DETERMINATION USING SEAWIFS OVER GOSAN, KOREA DURING THE 2001 ACE-ASIA IOP
Kwon Ho Lee, Young Joon Kim, Wolfgang Hoyningen-Huene, K-JIST, Gwangju, Korea

2PB9 AEROSOL SPECTRAL OPTICAL DEPTHS AND SIZE CHARACTERISTICS AT A COASTAL INDUSTRIAL LOCATION IN INDIA- EFFECT OF SYNOPTIC AND MESOSCALE WEATHER
NIRANJAN KANDULA, Andhra University, Visakhapatnam, INDIA

2PB10 SATELLITE AND IN SITU MEASUREMENTS OF AEROSOLS AVAILABLE FROM THE NASA LANGLEY ATMOSPHERIC SCIENCES DATA CENTER
LINDA HUNT, Jim Hoell, Kathleen Morris, Nancy Ritchey, R. K. Seals, NASA LaRC Atmospheric Sciences Data Center/SAIC, Hampton, VA

2PB11 MEASUREMENT OF THE OPTICAL EXTINCTION OF AEROSOL WITH THE CAVITY RING-DOWN TECHNIQUE
ANDERS PETTERSSON, Ned Lovejoy, Chuck Brock, Steve Brown, A. R. Ravishankara, NOAA Aeronomy Laboratory, Boulder, Colorado

2PB12 VERTICALLY RESOLVED AEROSOL OPTICAL PROPERTIES OVER THE ARM SGP SITE
BEAT SCHMID, BAER Inst. Sonoma, CA; Haflidi Jonsson, CIRPAS; Anthony Strawa, NASA Ames, Moffett Field, CA; Robert Provenal, Picarro Inc. Sunnyvale, CA; David Covert, Univ. of Wahington, Seattle, WA; W. Patrick Arnott, DRI, Reno, NV; Anthony Bucholtz, NRL, Monterey, CA; Peter Pilewskie, NASA Ames, Moffett Field, CA; John Pommier, BAER Inst. Sonoma, CA; Tracey Rissman, Tim Vanrecken, John Seinfeld, Richard Flagan, Caltech, Pasadena, CA; Jens Redemnann, BAER Inst. Sonoma, CA; James Eilers, NASA Ames, Moffett Field, CA; Jian Wang, Brookhaven National Lab, Upton, NY

2PC **Rural Aerosols**

Pacific Ballroom D
6:30 PM - 7:30 PM

2PC5 AEROSOL LIGHT SCATTERING MEASUREMENTS AS A FUNCTION OF RELATIVE HUMIDITY AT YOSEMITE NATIONAL PARK
DEREK DAY, Colorado State Univ., Fort Collins, CO; William Malm, National Park Service, Fort Collins, CO

2PC6 ON THE SPECIATION AND MEASUREMENT OF AEROSOL NITRATE IN REGIONAL AEROSOLS
JEFFREY COLLETT, Colorado State University, Fort Collins, CO; Taehyoung Lee, Xiao-ying Yu, Sonia Kreidenweis, CSU; William Malm, National Park Service

2PC7 SPATIAL AND TEMPORAL CHARCTERIZATION OF PARTICULATE MATTER IN CALIFORNIA
NEHZAT MOTALLEBI, California Air Resources Board

2PC8 AMBIENT PARTICULATE MATTER MEASUREMENTS AT TWO RURAL SITES IN THE MIDWESTERN UNITED STATES
Neil D. Deardorff, JAY R. TURNER, Washington University, St. Louis, MO

2PC9 CHARACTERIZATION OF AMBIENT AEROSOLS AT EGBERT, ONTARIO USING AERODYNE AEROSOL MASS SPECTROMETER
MAHESWAR RUPAKHETI, Ulrike Lohmann, Department of Physics and Amospheric Sciences, Dalhousie University, Halifax, NS, Canada; Shao-meng Li, W. Richard Leith, Air Quality Research Branch, Toronto, ON, Canada; Douglas R. Worsnop, Aerodyne Research Incorporated, Billerica, MA

2PC10 COMPARISON OF SPECIATED PM10 AND PM2.5 SAMPLES AT SELECTED IMPROVE SAMPLING SITES
LOWELL ASHBAUGH, Charles McDade, University of California, Davis

2PC11 SPECIATED FINE PARTICLE DEPOSITION VELOCITIES OVER A FOREST CANOPY MEASURED BY EDDY-CORRELATION MASS SPECTROMETRY
DANIEL A. GONZALES, Jonathan O. Allen, Arizona State University, Tempe, AZ; Alice E. Delia, Jose L. Jimenez, University of Colorado at Boulder; Kenneth A. Smith, Massachusetts Institute of Technology, Cambridge, MA; John T. Jayne, Manjula R. Canagaratna, Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA

2PD **Aerosol Chemistry I**

Pacific Ballroom D

7:30 PM - 8:30 PM

2PD5 CHARACTERIZATION OF SECONDARY ORGANIC AEROSOL FORMATION AT ULTRA-LOW NOX AND HYDROCARBON LOADINGS IN A NEW ENVIRONMENTAL CHAMBER FACILITY
CHEN SONG, David Cocker, Kwangsam Na, CE-CERT/UC Riverside, Riverside, CA

2PD6 A COMPOSITIONAL STUDY OF SECONDARY ORGANIC AEROSOLS FORMED IN SOME CYCLOALKENE-OZONE AND TERPENE-OZONE SYSTEMS
SONG GAO, Melita Keywood, Varuntida Varutbangkul, Roya Bahreini, Richard Flagan, John Seinfeld, California Institute of Technology, Pasadena, CA

2PD7 HETEROGENEOUS INTERACTIONS OF ACETALDEHYDE AND SULFURIC ACID
REBECCA R. MICHELSEN, Samantha F. M. Ashbourn, Laura T. Iraci, NASA Ames Research Center, Moffett Field, CA

2PD8 DESIGN AND MEASUREMENT CAPABILITIES OF A NEXT-GENERATION INDOOR ENVIRONMENTAL CHAMBER FACILITY FOR THE STUDY OF SECONDARY ORGANIC AEROSOL FORMATION
DAVID COCKER, Dennis Fitz, William Carter, CE-CERT/UC Riverside, Riverside, CA

2PD9 OBSERVATION OF OLIGOMERIC SPECIES IN SECONDARY ORGANIC AEROSOLS
MICHAEL TOLOCKA, University of Delaware, Newark, DE; Myoseon Jang, University of North Carolina, Chapel Hill, NC; Joy Ginter, Frederick Cox, University of Delaware, Newark, DE; Richard Kamens, University of North Carolina, Chapel Hill, NC; Murray Johnston, University of Delaware, Newark, DE

2PD10 ATMOSPHERIC TRANSFORMATIONS OF ULTRAFINE TRANSITION METAL PARTICLES.
MICHELLE WERNER, Cort Anastasio, University of California, Davis, CA; Peter Nico, California State University Stanislaus, Turlock, CA; Bing Guo, Ian Kennedy, University of California, Davis, CA

2PD11 QUANTITATIVE ASSESSMENT OF METAL-BEARING DIESEL NANOPARTICLES USING SINGLE PARTICLE MASS SPECTROMETRY
DONGGEUN LEE, Pusan National Univerisity, Busan, South Korea; Art Miller, David Kittelson, Michael R. Zachariah, University of Minnesota, Minneapolis, MN

2PD12 INTERNAL LIGHT INTENSITY DISTRIBUTIONS AND ENHANCED PHOTOLYSIS IN AEROSOL DROPLETS
CHRISTOPHER KNOX, University of California, Irvine; Leon Phillips, University of Canterbury, New Zealand

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2PE **Control Technology I**

Pacific Ballroom D

7:30 PM - 8:30 PM

2PE5 FILTRATION OF SEMIVOLATILE AEROSOLS
DAVID KANE, Philip Morris USA, Richmond, VA; Ramin Mortazavi, Timothy Cameron, Virginia Commonwealth University, Richmond, VA ; Peter Lipowicz, Philip Morris USA, Richmond, VA

2PE6 EMISSIONS OF TOXIC POLLUTANTS FROM COMPRESSED NATURAL GAS AND ULTRA-LOW SULFUR DIESEL-FUELED TRANSIT BUSES WITH AND WITHOUT AFTER-TREATMENT DEVICES
NORMAN Y. KADO , Robert A. Okamoto, Paul A. Kuzmicky, Reiko Kobayashi, Alberto Ayala, Michael E. Gebel, Paul L. Rieger, Christine Maddox, Leo Zafonte, California Environmental Protection Agency, Air Resources Board, Sacramento, CA and El Monte, CA and Davis, CA

2PE7 THE EFFECT OF PARTICLE SIZE DISTRIBUTION ON THE PRESSURE DROP OF FABLIC FILTERS
CHANG BYUNG SONG, Kwangju Institute of Science and Technology, Gwangju, Korea

2PE8 MEASUREMENT OF ELECTRICAL CHARGE DENSITY OF MELT-BLOWN TYPE ELECTRET FILTER
MYONGHWA LEE, Washington University in St. Louis, MO; Pratim Biswas, Washington University in St.Louis, MO; Yoshio Otani, Norikazu Namiki, Kanazawa University, Japan

2PE9 ENHANCED NANOPARTICLE FILTER PERFORMANCE BY AN IMPROVED NANOFIBER COMPOSITE
YU-DU HSU, Center for Environmental, Safety and Health Technology Development, Industrial Technology Research Institute, Chutung, Hsinchu, Taiwan ; Hung-min Chein, Center for Environmental, Safety and Health Technology Devel, Chutung, Hsinchu, Taiwan, Da-ren Chen, Department of Mechanical Engineering, Washington University in St. Louis,

2PE10 REMOVAL OF AIRBORNE FINE AND ULTRAFINE PARTICLES WITH A GRANULAR BED FILTER
FETHIYE OZIS, University of Southern California, Los Angeles, CA; Manisha Singh, Joseph Devinny, Constantinos Sioutas, University of Southern California, Los Angeles, CA

3PA **Particle Transport**

Pacific Ballroom D

7:30 PM - 8:30 PM

3PA4 COMPRESSIBLE FLOW THROUGH AERODYNAMIC LENSES
RAVI CHAVALI, Clarkson University, Potsdam;NY

3PA5 AIRFLOW AND POLLUTANT TRANSPORT
KAMBIZ NAZRIDOUST, Goodarz Ahmadi, Clarkson University, Potsdam, NY

3PA6 DIRECT NUMERICAL SIMULATION OF TURBULENT AEROSOL TRANSPORT IN A STRAIGHT SQUARE DUCT
GAURAV SHARMA, Denis Phares, Texas A&M University, College Station, TX

3PA7 CRCD-A WEB-BASED COURSE SEQUENCE FOR PARTICLE TRANSPORT, DEPOSITION AND REMOVAL
GOODARZ AHMADI, John McLaughlin, Cetin Cetinkaya, Stephen Doheny-Farina, Jeff Taylor, Suresh Dhaniyala, Clarkson University, Potsdam, NY; Fa-gung Fan, Xeox, Webster, NY

3PA8 THREE-PHASE TURBULENT FLOWS IN A BUBBLE COLUMN
XINYU ZHANG, Goodarz Ahmadi, Clarkson University, Potsdam, NY

3PA9 MODELING THERMOPHORETICALLY AUGMENTED PARTICLE-VAPOR DEPOSITION.
ANDREY FILIPPOV, Jia Liu, Corning Inc., Wilmington, NC

3PA10 NUMERICAL SIMULATION OF ELECTROHYDRODYNAMICS AND PARTICLE TRANSPORT IN A COROTRON
PARSA ZAMANKHAN, Goodarz Ahmadi, Clarkson University, Potsdam, NY; Fa-gung Fan, Xerox Corporation, Webster, NY

3PA11 BEHAVIOR OF RU IN HIGH TEMPERATURE OXIDISING CONDITIONS
ULRIKA BACKMAN , Ari Auvinen, Jorma Jokiniemi, VTT Processes, Finland

3PB **Long-Range Transport** *Pacific Ballroom D*

7:30 PM - 8:30 PM

3PB4 IMPACTS OF ASIAN CONTINENTAL CRUSTAL AEROSOLS OBSERVED AT SAKAI, OSAKA, JAPAN
TOSHIHIKO YOSHIDA, Akira Mizohata, Norio Ito, Research Institute for Advanced Science and Technology, Osaka Prefecture University, Osaka, Japan

3PB5 CORRELATED LEVELS OF PARTICULATE MATTER AND OZONE IN THE WESTERN MEDITERRANEAN BASIN: AIR QUALITY AND LIDAR MEASUREMENTS
Pedro Jimenez, Carlos Perez, Laboratory of Environmental Modeling. UPC, Barcelona, Spain; Alejandro Rodriguez, Department of Signal Theory and Communications. UPC, Barcelona, Spain; JOSE M. BALDASANO, Laboratory of Environmental Modeling. UPC, Barcelona, Spain

3PB6 THE INFLUENCE OF URBAN AEROSOL TRANSPORT ON LIGHT ABSORPTION AND SCATTERING IN THE SUPERSTITION WILDERNESS
CHARITY COURY, Ann Dillner, Arizona State University, Tempe, AZ

3PB7 OPTICAL PROPERTIES OF ATMOSPHERIC AEROSOL DURING DUST OUTBREAK, BIOMASS BURNING AND URBAN POLLUTION EPISODES IN KWANGJU, KOREA.
KEHINDE O. OGUNJOBI, Young J. Kim, Zhuanshi He, Kwangju Institute of Science and Technology, Kwangju, South Korea.

3PB8 WAVELET STRUCTURE OF ATMOSPHERIC TOTAL PROTEIN ON-GROUND CONCENTRATION IN THE VICINITY OF NOVOSIBIRSK CITY
ALEXANDER I. BORODULIN, Alexander S. Safatov, State Research Center of Virology and Biotechnology Vector, Koltsovo, Novosibirsk Region, Russia; Olga G. Khutorova, Kazan State University, Kazan, Russia; Konstantin P. Koutzenogii , Valerii I. Makarov, Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia

3PB9 AEROSOL CHEMISTRY DURING A SAHARAN DUST EPISODE IN AN ALPINE VALLEY
Gilles Aymoz, JEAN-LUC JAFFREZO, Laboratoire de Glaciologie et de GŽophysique de l'Environnem, Université Joseph Fourier, Cedex, France

3PB10 INFLUENCE OF THE SAHARIAN DUST ON AIRBORNE PARTICULATE MATTER LEVELS AT EASTERN OF SPAIN
VICENTE ESTEVE, Amparo Aparici, Francisco Ramos, Juana Maria Delgado, Gabriel Peris, University Jaume I, Castellon;Spain; Jose Maria Amigo, Universidad de Valencia, Valencia; Spain

3PB11 SIZE - RESOLVED CHEMICAL COMPOSITION AND OPTICAL PROPERTIES IN BEIJING, SPRING 2001
XIA SU, Ann Dillner, Arizona State University, Tempe, AZ; James Schauer, University of Wisconsin, Madison, WI; Michael Bergin, Georgia Institute of Technology, Atlanta, GA

3PC **Source Apportionment I**

Pacific Ballroom D
7:30 PM - 8:30 PM

3PC4 SOURCE-RECEPTOR RELATIONS OF PM MASS FRACTIONS AND PARTICLE NUMBER CONCENTRATION
HELGER HAUCK, University of Vienna, Wien, Austria; Bostjan Gomiscek, Austrian Academy of Sciences; Hans Puxbaum, Vienna University for Technology; Silke Stopper, Othmar Preining, Austrian Academy of Sciences

3PC5 ADVANCED FACTOR ANALYSIS FOR AEROSOL COMPOSITION DATA WITH VARIOUS TEMPORAL RESOLUTIONS
LIMING ZHOU, Philip Hopke, Clarkson University, Potsdam, NY; Pentti Paatero, University of Helsinki, Finland

3PC6 COMPARISON OF THREE BACK TRAJECTORY BASED MODELS--PSCF, SQTBA, RESIDENCE-TIME WEIGHTED CONCENTRATION MODEL FOR IDENTIFYING PARTICLE SOURCES FOR POTSDAM AND STOCKTON, NEW YORK
LIMING ZHOU, Philip Hopke, Wei Liu, Clarkson University, Potsdam, NY

3PC7 SOURCES OF PM2.5 IN WASHINGTON, DC
EUGENE KIM, Philip Hopke, Clarkson University, Potsdam, NY

3PC8 COMPARISON OF POSITIVE MATRIX FACTORIZATION AND MULTILINEAR ENGINE FOR THE SOURCE APPORTIONMENT OF PM2.5 IN SEATTLE
EUGENE KIM, Philip Hopke, Clarkson University, Potsdam, NY; Timothy Larson, University of Washington, Seattle, WA; Joellen Lewtas, US EPA, Port Orchaard, WA; Naydene Maykut, Puget Sound Clean Air Agency, Seattle, WA

3PC9 SOURCES IDENTIFICATION OF AIRBORNE FINE PARTICLES AT MULTIPLE SITES
EUGENE KIM, Philip Hopke, Clarkson University, Potsdam, NY

3PC10 SOURCE IDENTIFICATION FOR THE AMBIENT AEROSOLS AT 3 IMPROVE SITES IN CANADA
WEIXIANG ZHAO, Philip Hopke, Clarkson University, Potsdam, NY

3PC11 SEASONNAL VARIATIONS OF PARTICULATE ORGANIC MATTER COMPOSITION
Nicolas Marchand, Jean-luc Besombes, Pierre Masclet, Laboratoire de Chimie MolŽculaire et Environnement, Université de Savoie/ESIGEC, France; Gilles Aymoz, JEAN-LUC JAFFREZO, Laboratoire de Glaciologie et de GŽophysique de l'Environnement, Université Joseph Fourier, Saint Martin d'hères, France

3PD **Aerosol Instrumentation**

Pacific Ballroom D

7:30 PM - 8:30 PM

3PD4 AN IMPROVED DATA INVERSION PROGRAM FOR OBTAINING AEROSOL SIZE DISTRIBUTIONS FROM SCANNING DIFFERENTIAL MOBILITY ANALYZER DATA
SUDDHA S. TALUKDAR, University at Buffalo (SUNY), Buffalo, NY; Peter S. K. Liu, University of Wyoming, Laramie, WY; Mark T. Swihart, University at Buffalo (SUNY), Buffalo, NY

3PD5 NUMERICAL MODELING OF A NANOPARTICLE VIRTUAL IMPACTOR.
Poshin Lee, University of Minnesota, Minneapolis, MN; GEORG PINGEN, Da-ren Chen, Washington University, St. Louis, MO

3PD6 PERFORMANCE AND ACCURACY OF THE INNOVATIVE FOUR-SENSOR TECHNIQUE IN MEASUREMENT OF SIZE AND OPTICAL PROPERTIES OF AEROSOLS
ATTILA NAGY, Research Institute for Solid State Physics and Optics, Budapest, Hungary; Wladyslaw Szymanski, Institute for Experimental Physics, University of Vienna, Vienna, Austria; Alad‡r Czitrovszky, Research Institute for Solid State Physics and Optics, Budapest, Hungary

3PD7 AN ELECTROSTATIC COLLECTOR FOR PM-2.5
ELIZABETH HOWARD, U.S. EPA ORD, Research Triangle Park, NC

3PD8 A UNIVERSAL CALIBRATION CURVE FOR THE TSI AERODYNAMIC PARTICLE SIZER
SHENG-CHIEH CHEN, Chuen-jinn Tsai, National Chiao Tung University, Hsin Chu, Taiwan; Cheng-hsiung Huang, Yuanpei University of Science and Techology, Hsinchu, Taiwan; Da-ren Chen, Washinton University in St. Louis, St. Louis, MO

3PD9 PARTICLE COLLECTION EFFICIENCIES OF THE ALPHA CONTINUOUS AIR MONITORS (CAMS)
YUE ZHOU, Yung-sung Cheng, Thomas Holmes, Lovelace Respiratory Research Institute, Albuquerque; NM; Jun Gao, University of New Mexico, NM

3PD10 CAUSES OF CONCENTRATION DIFFERENCES BETWEEN A SCANNING MOBILITY PARTICLE SIZER AND A CONDENSATION PARTICLE COUNTER
PETER LIU, Terry Deshler, Department of Atmospheric Science, University of Wyoming, Laramie, WY

3PD11 AN AIRBORNE PARTICLE ANALYSIS PACKAGE FOR AN ION TRAP MASS SPECTROMETER
WILLIAM A. HARRIS, Peter T. A. Reilly, William B. Whitten, J. Michael Ramsey, Oak Ridge National Laboratory, Oak Ridge, TN

3PE **Combustion and Envionmental Aerosol Formation I** *Pacific Ballroom D*

7:30 PM - 8:30 PM

3PE4 COMPARISON OF STATIONARY SOURCE DILUTION AND NON-DILUTION SAMPLING TECHNIQUES FOR FINE AND ULTRAFINE PARTICLE MEASUREMENTS ON A BACKUP GENERATOR DIESEL ENGINE
GLENN ENGLAND, Stephanie Wien, Oliver Chang, Aaron Mcgushion, GE EER Corporation, Irvine, CA;; Kent Johnson, William Welch, Wayne Miller, University of California at Riverside; Marla Mueller, California Energy Commission, Sacramento, CA; Barry Liebowitz, New York State Energy Research and Development Authority, Albany, NY; John Watson, Desert Research Institute, Reno, NV; Paul Drayton, Gas Technology Institute, Des Plaines, IL

3PE5 SIZE DISTRIBUTION DATA FROM THE 2002 YOSEMITE VISIBILITY STUDY
GAVIN MCMEEKING, Christian Carrico, Sonia Kreidenweis, Jeffrey Collett, Jr., Colorado State University, Ft. Collins, CO

3PE6 COMPARISON OF HIGH TEMPERATURE MECHANISMS FOR SCAVENGING OF SODIUM, LEAD AND CADMIUM IN COMBUSTION FLUE GASES
JOST WENDT, University of Arizona, Tucson, AZ; Thomas Gale, Southern Research Institute, Birmingham, AL

3PE7 EFFECTS OF DILUTION RATIO AND RESIDENCE TIME ON PRIMARY CARBON PARTICULATE EMISSIONS FROM A WOOD STOVE AND DIESEL ENGINE
ERIC LIPKSY, Department of Mechanical Engineering; Carnegie Mellon University, Pittsburgh, PA ; Emily Weitkamp, Allen Robinson, Department of Mechanical Engineering; Carnegie Mellon University, Pittsburgh, PA

3PE8 REAL-TIME SIMULTANEOUS MEASUREMENTS OF SIZE, DENSITY, AND COMPOSITION OF SINGLE ULTRAFINE DIESEL TAILPIPE PARTICLES
ALLA ZELENYUK/IMRE, Dan Imre, Pacific Northwest National Laboratory, Richland, WA; Jian Wang, Gunnar Senum, Brookhaven National Laboratory, Upton, NY; John Storey, Shean Huff, Dean Edwards, Sam Lewis, Oak Ridge National Laboratory, Oak Ridge, TN

3PE9 CHARACTERIZATION OF GAS AND AEROSOL EMISSION FROM SMOLDERING INCENSES
CHIH-CHIEH CHEN, Tzu-ting Yang, Jia-ming Lin, National Taiwan University, Taipei, Taiwan; Rong-fung Huang, National Taiwan University of Science and Technology, Taipei, Taiwan

3PE10 CHARACTERIZATION OF FINE PARTICULATE EMISSIONS FROM WASTE INCINERATORS BY REAL-TIME MONITORING OF SIZE-RESOLVED MASS AND CHEMICAL COMPOSITION
HACENE BOUDRIES, Xufeng Zhang, Massachusetts Institute of Technology, Cambridge, MA; Timothy Onasch, Aerodyne Research, Inc., Billerica, MA; Kenneth Smith, Massachusetts Institute of Technology, Cambridge, MA; Douglas Worsnop, Aerodyne Research, Inc., Billerica, MA

3PE11 A COMPARISON OF POLYCYCLIC AROMATIC HYDROCARBONS IN FLAMES, IN DIESEL FUELS AND IN DIESEL EMISSIONS
ROBERT FLETCHER, National Institute of Standards and Technology, Gaithersburg, MD; Richard Dobbins, Brown University, Providence, RI; Bruce Benner, National Institute of Standards and Technology, Gaithersburg, MD

Wednesday, October 22, 2003
8:00 AM - 9:00 AM

Plenary #2
Pacific Ballroom A/B

8:05 AM

EMISSIONS-TO-INTAKE RELATIONSHIPS FOR AIR POLLUTION SOURCES
Dr. William W. Nazaroff
Professor of Environmental Engineering, Department of Civil and Environmental Engineering, University of California, Berkeley, California, USA

8:50AM

PRESENTATION OF THE FRIEDLANDER AWARD
Lynn Hildemann

Wednesday, October 22, 2003 **Platform Session #5**

9:30 AM - 10:45 AM

5A **Indoor Aerosols II** *Laguna A/B*

Chair: Tina Reponen, Co-chair: Mark Sippola *9:30 AM - 10:45 AM*

5A1
9:30 AM
AEROSOLIZATION OF ASPERGILLUS VERSICOLOR SPORES FROM DIFFERENT BUILDING MATERIALS
SERGEY GRINSHPUN, Satheesh Sivasubramani, Tiina Reponen, University of Cincinnati, Cincinnati, OH

5A2
9:50 AM
CHARACTERIZING FUNGAL SOURCE CONTRIBUTIONS IN FORTY FOUR HOMES
MICHAEL RIZZO, US EPA Region 5, Chicago, IL; Peter Scheff, Richard Wadden, Luke Curtis, University of Illinois, Chicago, IL

5A3
10:10 AM
PRESCRIBED BURNS AND WILDFIRES IN COLORADO: IMPACTS OF MITIGATION MEASURES ON INDOOR AIR PM2.5
David Henderson, Jana B. Milford, SHELLY L. MILLER, University of Colorado, Boulder, CO

10:30 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 5PA4-5PA8 (1 min each).

5B **Toxics & Plume Chemistry** *Avila A/B*

Chair: Beverly Cohen, Co-chair: David Cocker *9:30 AM - 10:45 AM*

5B1
9:30 AM
SOURCE APPORTIONMENT OF PAHS AND TRACE METALS ALONG THE CANADIAN GREAT LAKES USING INTEGRATED ATMOSPHERIC DEPOSITION NETWORK DATA: REGIONAL AND LOCAL RESULTS
BERNARD CRIMMINS, University of Maryland Center for Environmental Science, Solomons, MD; Larsen Randolph, St. Mary's College of Maryland, St. Mary's City, MD; Joel Baker, University of Maryland Center for Environmental Science, Solomons, MD; Raymond Hoff, University of Maryland Baltimore County, Baltimore, MD

5B2
9:50 AM
IDENTIFICATION OF SOURCE LOCATIONS USING HYBRID RECEPTOR MODELING ; VAPOR PHASE MERCURY
YOUNG-JI HAN, Thomas Holsen, Soon-Onn Lai, Keun-Wook Lee, Philip Hopke, Clarkson University, Potsdam, NY; Michael Millligan, Christopher Andolina, State University of New York, Fredonia, NY; Seung-Muk Yi, Seoul National University, Seoul, Korea; Wei Liu, Clarkson University, Potsdam, NY

5B3
10:10 AM
OXIDATION OF SO2 AND NO2 OXIDATION RATES IN COAL FIRED POWER PLANT PLUMES
ERIC EDGERTON, ARA Inc., Cary, NC; Benjamin Hartsell, Callie Waid, ARA Inc., Plano, TX; .John Jansen, Southern Company, Birmingham, AL; Alan Hansen, EPRI, Palo Alto, CA

10:30 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 5PB4-5PB11 (1 min each).

5C **Emissions I** *El Capitan A/B*

Chair: Eric Fujita, Co-chair: Anthony Wexler *9:30 AM - 10:45 AM*

5C1
9:30 AM
SEPARATING THE CONTRIBUTION OF GASOLINE AND DIESEL VEHICLE EMISSIONS TO AMBIENT PM: VERIFICATION OF RECEPTOR MODEL CALCULATIONS
M. P. FRASER, Z. W. Yue, B. Buzcu, Rice University, Houston, TX; G. R. McGaughey, N. R. Desai, D. T. Allen, University of Texas; R. L. Seila, W. A. Lonneman, US EPA, Research Triangle Park, NC; A. Harley, University of California, Berkeley, CA

5C2
9:50 AM
CHEMICAL COMPOSITION OF RIO DE JANEIRO AMBIENT PM10 AND OF VEHICLE EMISSIONS IN BRAZIL
DANIEL GROSJEAN, DGA Inc., Ventura, CA; Barbara Zielinska, Desert Research Institute, Reno, NV; Eric Grosjean, DGA Inc., Ventura, CA; Lino F. R. Moreira, Andrea Moreira, CENPES, PETROBRAS, Rio de Janeiro, Brazil

5C3
10:10 AM
ULTRAFINE PARTICULATE MATTER SIZE DISTRIBUTIONS INSIDE VEHICLES AND ON ROADWAYS IN LOS ANGELES
DANE WESTERDAHL, Scott Fruin, California Air Resources Board, Sacramento, CA; Constantinos Sioutas, University of Southern California, Los Angeles, CA

10:30 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 5PC4-5PC8 (1 min each).

5D **Control Technology II** *Huntington A/B/C*

Chair: Jonathan Thornburg, Co-chair: Chuen-Jinn Tsai *9:30 AM - 10:45 AM*

5D1
9:30 AM
MECHANISM OF SORBENT INJECTION TECHNIQUE TO CONTROL VANADIUM EMISSION IN COMBUSTION SYSTEM
SANG-RIN LEE, Chang-yu Wu, University of Florida, Gainesville, FL

5D2
9:50 AM
TRACE GAS ADSORPTION WITHIN GAS-POWDERED SORBENT SUSPENSIONS: RELATIVE INFLUENCE OF FREESTREAM TURBULENCE VS. TURBULENT MIXING OF INJECTION
HEREK CLACK, Uttam Narasimhan, Illinois Institute of Technology, Chicago, IL

5D3
10:10 AM
AN AXIAL FLOW CYCLONE FOR NANOPARTICLE CONTROL IN VACUUM CONDITONS
CHUEN-JINN TSAI, National Chiao Tung University, Hsinchu, Taiwan; Da-Ren Chen, Washington University, St. Louis, MO; Hungmin Chein, Y. D. Hsu, Industrial Technology Research Institute, Hsinchu, Taiwan; Pratim Biswas, Weiling Li, Washington University, St. Louis, MO

10:30 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 5PD4-5PD9 (1 min each).

5E **Soot and Inorganic Particle Formation** *Palos Verdes A/B*

Chair: Christopher Sorensen, Co-chair: Anthony Zimmer *9:30 AM - 10:45 AM*

5E1 9:30 AM	NEW UNIVERSAL STAGES OF SOOT GROWTH AND MORPHOLOGY IN HEAVILY SOOTING FLAMES *CHRISTOPHER SORENSEN, Wongyo Kim, Dan Fry, Amit Chakrabarti, Kansas State University, Manhattan, KS*
5E2 9:50 AM	SOOTING LIMITS OF DIFFUSION FLAMES WITH OXYGEN-ENRICHED AIR AND DILUTED FUEL *RICHARD L. AXELBAUM, Washington University, St. Louis, MO; Peter B. Sunderland, NCMR/NASA Glenn, Cleveland, OH; David L. Urban, Dennis P. Stocker, NASA Glenn, Cleveland, OH; Beei-Huan Chao, University of Hawaii at Manoa, Honolulu, HI*
5E3 10:10 AM	SIMULATION OF THE SOOT AGGLOMERATE FRAGMENTATION DUE TO OXIDATION IN A FLAME *PENGZHI JIANG, Joann Lighty, Adel Sarofim, Eric Eddings, University of Utah, Salt Lake City, UT*
10:30 AM	POSTER PREVIEW *This session ends with a brief presentation of posters 5PE4-5PE11 (1 min each).*

Wednesday, October 22, 2003 **Platform Session #6**

11:00 AM - 12:35 PM

6A **Exposure Assessment I** *Laguna A/B*

Chair: Gediminas Mainelis, Co-chair: Barbara Turpin *11:00 AM - 12:35 PM*

6A1
11:00 AM

SOURCE AND FATE CHARACTERIZATION OF MICROORGANISMS AEROSOLIZED DURING WASTEWATER REUSE

Tania Paez-Rubio, Emily Viau, JORDAN PECCIA, Arizona State University, Tempe, AZ

6A2
11:20 AM

HEALTH EFFECTS OF HIGHLY VARIABLE LOCAL POLLUTION EMISSIONS: IMPLICATIONS FOR SINGLE MONITOR STUDIES OF POLLUTION'S IMPACTS?

THOMAS GRAHAME, US Department of Energy, Washington, DC

6A3
11:40 AM

CAN URINARY METABOLITES PREDICT EXPOSURES TO PYRENE, B[A]P, AND OTHER PAHS?

JUNFENG (JIM) ZHANG, Environmental and Occupational Health Sciences Institute, University of Medicine and Dentistry of New Jersey, and Rutgers University, Piscataway, NJ; Fusheng Wei, CNEMC, Beijing, China; Lin Zhang, University of Medicine and Dentistry of New Jersey, Piscataway, NJ; Hongbiao Yang, Anshan Environmental Monitoring Center, Anshan City, China; Xiaoli Duan, CNEMC, Beijing, China; Weili Liu, Rutgers University, New Brunswick, NJ; In-kyu Han, University of Medicine and Dentistry of New Jersey, Piscataway, NJ; George Rhoads, Environmental and Occupational Health Sciences Institute, University of Medicine and Dentistry of New Jersey, and Rutgers University, Piscataway, NJ

6A4
12:00 PM

SPECIATED PM2.5 EXPOSURES PROVIDE INSIGHTS INTO PM EPIDEMIOLOGY AND PUBLIC HEALTH PROTECTION

BARBARA TURPIN, Qing Yu Meng, Gavin Lau, Andrea Polidori, Adam Reff, Robert Porcja, Yelena Namova, John Offenberg, Steven Eisenreich, Rutgers University, New Brunswick, NJ; Clifford Weisel, Environmental and Occupational Health Sciences Institute, Piscataway, NJ; Helen Suh, Harvard School of Public Health, Boston, MA; Maria Morandi, Thomas Stock, University of Texas, Houston, TX; Steven Colome, Integrated Environmental Sciences, Irvine, CA; Arthur Winer, University of California, Los Angeles, CA

12:20 PM

POSTER PREVIEW

This session ends with a brief presentation of posters 6PA5-6PA13 (1 min each).

6B **California Regional Particulate Air Quality Study** *Avila A/B*

Chair: John Watson, Co-chair: Mike Kleeman *11:00 AM - 12:35 PM*

6B1
11:00 AM
EQUIVALENCE AND COMPARABILITY AMONG DIFFERENT PM2.5 MASS MEASUREMENTS IN CENTRAL CALIFORNIA
JOHN WATSON, Judith Chow, L. W. Antony Chen, Desert Research Institute, Reno, NV; Karen Magliano, Peter Ouchida, California Air Resources Board, Sacramento, CA; Don Lehrman, Technical and Business Systems Inc., Santa Rosa, CA; L. Willard Richards, Sonoma Technology Inc., Petaluma, CA

6B2
11:20 AM
SPATIAL AND TEMPORAL VARIATIONS OF PM2.5, PM10, AND THEIR CHEMICAL COMPONENTS DURING THE CALIFORNIA REGIONAL PARTICULATE AIR QUALITY STUDY.
KASIA TURKIEWICZ, Richard Hackney, Karen Magliano, Theresa Najita, Patricia Velasco, California Air Resources Board, Sacramento, CA

6B3
11:40 AM
CHARACTERIZATION OF SAN JOAQUIN VALLEY SAMPLES USING SCANNING ELECTRON MICROSCOPY (SEM) TECHNIQUES
GARY CASUCCIO, Traci Lersch, RJ Lee Group Inc., Monroeville, PA; Karen Magliano, California Air Resources Board, Sacramento, CA; John Watson, Desert Research Institute, Reno, NV

6B4
12:00 PM
CHARACTERIZATION OF ATMOSPHERIC NANO-FINE PARTICLES AT BAKERSFIELD CALIFORNIA
Michael Kleeman, JORN HERNER, University of California, Davis, CA

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 6PB5-6PB10 (1 min each).

6C **Aerosol Chemistry II** *El Capitan A/B*

Chair: E. James Davis, Co-chair: Sulekha Chattopadhyay *11:00 AM - 12:35 PM*

6C1
11:00 AM
MICROSCOPIC STRUCTURE OF AN INDIVIDUAL SEA SALT PARTICLE: HOW DOES IT LOOK LIKE?
ALEXANDER LASKIN, PNNL, Richland, WA

6C2
11:20 AM
EVAPORATION AND GROWTH OF LAYERED DROPLETS
ASIT RAY, Haohua Tu, University of Kentucky, Lexington, KY

6C3
11:40 AM
SIZE DEPENDENT HYGROSCOPIC GROWTH OF AMBIENT AEROSOL DURING PITTSBURGH AIR QUALITY STUDY
A. KHLYSTOV, C. Stanier, S. N. Pandis, Carnegie Mellon University, Pittsburgh, PA

6C4
12:00 PM
THE REACTION BETWEEN CO2 AND HYDRATED LIME AEROSOL PARTICLES
JAMES DAVIS, B. H. Chen, M. L. Laucks, A. Sengupta, University of Washington, Seattle, WA

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 6PC5-6PC11 (1 min each).

6D **Urban Aerosol** *Huntington A/B/C*

Chair: Tymon Zielinski, Co-chair: Paul Fraser *11:00 AM - 12:35 PM*

6D1 11:00 AM
DETERIORATION OF A TALL BUILDING BY AIRBORNE PARTICLES AND RAINFALL: NUMERICAL MODELING AND FIELD MEASUREMENTS
WEI TANG, Cliff Davidson, Carnegie Mellon University, Pittsburgh, PA

6D2 11:20 AM
SPATIAL AND TEMPORAL PATTERNS OF BLACK CARBON SOOT AS AN INDICATOR OF LOCAL MOBILE SOURCE AEROSOL GRADIENTS IN GREATER BOSTON
GEORGE A. ALLEN, Philip R. S. Johnson, NESCAUM, Boston, MA

6D3 11:40 AM
NUMBER CONCENTRATIONS OF PARTICLES CONTAINING SPECIFIC CHEMICAL SPECIES IN URBAN AEROSOLS
MICHAEL TOLOCKA, Derek Lake, Murray Johnston, University of Delaware, Newark, DE; Anthony Wexler, University of California, Davis, CA

6D4 12:00 PM
FUNCTIONAL GROUP COMPOSITION BY SIZE AND POLARITY IN PITTSBURGH, PA AND INSIGHTS INTO AEROSOL PROCESSING.
JOHN OFFENBERG, Robert Porcja, Andrea Polidori, Barbara Turpin, Rutgers University, New Brunswick, NJ

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 6PD5-6PD12 (1 min each).

6E **Condensation** *Palos Verdes A/B*

Chair: Barbara Wyslouszil, Co-chair: Charles Clement *11:00 AM - 12:35 PM*

6E1 11:00 AM
FORMATION OF ORGANIC COATING ON SUBMICRON-NANOSIZED SILVER PARTICLES USING A GAS PHASE PROCESS
LU ZHANG, James Gentry, University of Maryland, College Park, MD; M. B. Ranade, Particle Technology, Chantilly, VA

6E2 11:20 AM
REGRESSION OF MEASURED ULTRAFINE PARTICLE SIZE DISTRIBUTIONS USING THE NZTM
RICHARD MCCLURG, University of Minnesota, Minneapolis, MN

6E3 11:40 AM
HOMOGENEOUS NUCLEATION RATES FOR WATER
BARBARA WYSLOUZIL, Worcester Polytechnic Institute, Worcester, MA; Judith Wšlk, Reinhard Strey, Institut fŸr Physikalische Chemie, Kšln, Germany

6E4 12:00 PM
A MOLECULAR DYNAMICS/AB INITIO STUDY OF WATER NUCLEATION
YI MING, Douglas Doren, University of Delaware, Newark, DE

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 6PE5-6PE11 (1 min each).

Wednesday, October 22, 2003 **Poster Session #2 and Exhibits. Lunch provided.**
12:35 PM - 2:40 PM *Pacific Ballroom D*

4PA Indoor Aerosols I *Pacific Ballroom D*
12:40 PM - 1:40 PM

4PA4 PM2.5 IN A SEMI-URBAN ENVIRONMENT: INDOOR/OUTDOOR RELATIONSHIPS
ANIKET SAWANT, Kwangsam Na, Chen Song, Xiaona Zhu, Kathalena Cocker, David Cocker, CE-CERT/UC Riverside, Riverside, CA

4PA5 SIZE RESOLVED INDOOR/OUTDOOR -RATIO OF FINE PARTICLES IN AN URBAN ENVIRONMENT
KAARLE HŠMERI, University of Helsinki, Finland; Tareq Hussein, Finnish Institute of Occupational Health, Helsinki, Finland; Markku Kulmala, University of Helsinki, Finland

4PA6 PARTICLE DEPOSITION ON HVAC HEAT EXCHANGERS
JEFFREY SIEGEL, The University of Texas at Austin, Department of Civil Engineering

4PA7 CHARACTERISTICS OF AIR POLLUTANTS EMITTED FROM INCENSE AND MOSQUITO INCENSE BURNING
YU-CHUN CHIANG, Chih-feng Hou, Yu-chuan Chan, Yuan Ze University, Taoyuan,Taiwan

4PB Filtration *Pacific Ballroom D*
12:40 PM - 1:40 PM

4PB4 MATHEMATICAL MODELING OF TRANSPORT OF AEROSOL PARTICLES IN A HETEROGENEOUS SHREDDED POROUS MEDIA
MOHAMMAD S. SAIDI, Philip Morris USA, Richmond, VA (on sabbatical leave from Isfahan University); Ken H. Shafer, Peter J. Lipowicz, Philip Morris USA , Richmond, VA

4PB5 AEROSOL PENETRATION THROUGH N-SERIES ELECTROSTATIC FILTERING FACEPIECE RESPIRATOR WITH THE OIL AEROSOL
HSIAO-LIN HUANG, Graduate Institute of Environmental Engineering, National Taiwan University, Taipei, 106, Taiwan, R.O.C.; TaYi-chin Huang, Graduate Institute of Environmental Engineering, National Taiwan University, Taipei, 106, Taiwan, R.O.C.

4PB6 MULTIPHASE FLUID FLOW SIMULATIONS THROUGH POROUS MEDIA
ALI R. MAZAHERI, Clarkson University, U.S. Department of Energy, Potsdam, NY; Goodarz Ahmadi, Clarkson University, Potsdam, NY; Duane H. Smith, U.S. Department of Energy, Clarkson University, Potsdam, NY

4PB7 HYSTERESIS AND DYNAMICS EFFECTS IN TWO-PHASE FLOWS IN POROUS MEDIA
ALI R. MAZAHERI, Clarkson University; U.S. Department of Energy, Potsdam, NY; Goodarz Ahmadi, Clarkson University, Potsdam, NY; Duane H. Smith, U.S. Department of Energy, Morgantown, WV

4PB8 EVAPOLATION PROPERTIES OF SEMI-VOLTILE COMPONENTS IN CIGARETTE SMOKE
KAZUHIKO KATAYAMA, Masato Onishi, Japan Tobacco Inc. Kanagawa, Japan; Manabu Shimada, Kikuo Okuyama, Hiroshima University, Hiroshima, Japan

4PB9 PARTICLE DRIFT IN A RESONANCE TUBE - APPLICATION TO AEROSOL AGGLOMERATION
CHAIM GUTFINGER, Alexander Alexeev, Laboratory for Aerosol Research, Faculty of Mechanical Engineering, Technion - Israel Institute of Technology, Haifa, Israel

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4PC **Source Apportionment II** *Pacific Ballroom D*

12:40 PM - 1:40 PM

4PC4 SIZE RESOLVED NITRO-PAHS AS SOURCE MARKERS IN THE BALTIMORE ATMOSPHERE
BERNARD CRIMMINS, Joel Baker, University of Maryland Center for Environmental Science, Solomons, MD

4PC5 PARTICULATE MATTER CONCENTRATION AND SOURCE APPORTIONMENT FOR DIFFERENT SEASONS IN THE BANGKOK METROPOLITAN REGION OF THAILAND
NGUYEN THI KIM OANH, Research Associates, Asian Institute of Technology, Thailand; Peter Wahlin, National Environmental Research Institute, Roskilde, Denmark

4PC6 SOURCE ATTRIBUTION USING CONTINUOUS AMBIENT GAS AND PARTICLE SIZE MEASUREMENTS
ASHLEY WILLIAMSON, Southern Research Institute, Birmingham, AL; Davyda Hammond, University of Alabama at Birmingham, Birmingham, AL

4PC7 TOTAL SOURCE APPORTIONMENT OF VISIBILITY IN SOUTHERN CALIFORNIA USING A THREE DIMENSION SOURCE-ORIENTED AIR QUALITY MODEL
Michael Kleeman, QI YING, Mitchell Mysliwiec, UC Davis, D avis, CA

4PC8 IN-STATE/OUT-STATE SOURCES OF PM2.5IN NEW YORK STATE
SOON-ONN LAI, Wei Liu, Young-ji Han, Keun-wook Lee, Clarkson University, Potsdam, NY; Chris Antolina, SUNY, Fredonia, NY; Thomas Holsen, Philip Hopke, Clarkson University, Potsdam, NY; Michael Milligan, SUNY, Fredonia, NY

4PC9 CHEMICAL MASS BALANCE FOR SOURCE APPORTIONMENT OF SOIL DUST
JOHN VERANTH, Raed Labban, University of Utah, Salt Lake City, UT; John Watson, Judy Chow, Vic Etyemezian, Desert Research Institute

4PC10 EXPLOITING HIGH TIME RESOLUTION MEASUREMENTS FOR INSIGHTS INTO AEROSOL CLIMATOLOGY
JASON S. HILL , Jay R. Turner, Washington University, St. Louis, MO

4PC11 TRACE ELEMENTS IN PM10 AND PM2.5 IN PITTSBURGH
NATALIE ANDERSON-PEKNEY, Cliff Davidson, Spyros Pandis, Allen Robinson, Andrey Khlystov, Carnegie Mellon University, Pittsburgh, PA

4PC12 IDENTIFICATION OF REGIONAL AIR POLLUTANT SOURCES BY POSITIVE MATRIX FACTORIZATION
Kateryna Lapina, Kurtis Paterson, Michigan Technological University, Houghton, MI

4PD **Long-Range Transport** *Pacific Ballroom D*

12:40 PM - 1:40 PM

4PD4 ASIAN AEROSOLS IN NORTH AMERICA: EXTRACTING THE CHEMICAL COMPOSITION AND MASS CONCENTRATION OF THE ASIAN CONTINENTAL AEROSOL PLUME FROM LONG TERM AEROSOL RECORDS IN THE WESTERN UNITED STATES
RICHARD VANCUREN, Research Division, California Air Resources Board, Sacramento, CA

4PD5 BLACK CARBON AND DUST AEROSOL IN ASIAN OUTFLOW: PHYSIO-CHEMISTRY, OPTICAL PROPERTIES, AND IMPLICATIONS FOR CCN
ANTONY CLARKE, Yohei Shinozuka, Vladimir Kapustin, Steven Howell, University of Hawaii, Honolulu, HI

4PD6 LONG RANGE TRANSPORT TO THE ARCTIC - OBSERVED AND SIMULATED ASIAN DUST SIGNATURES AT BARROW, ALASKA
ELISABETH ANDREWS, Robert Stone, NOAA/CMDL, Boulder, CO; Gail Anderson, AFRL/Space Vehicles Directorate (VS), Boulder, CO; Joyce Harris, NOAA/CMDL, Boulder, CO; Eric Shettle, NRL, Remote Sensing Division, Washington, DC; John Ogren, NOAA/CMDL, Boulder, CO

4PD7 AEROSOL MIXING STATE INFERRED FROM TRACE-P P3B FLIGHT 0 AEROSOL DATA MEASURED BY PILS-IC: DO AEROSOL PARTICLES EXIST AS AN INTERNAL MIXTURE OR AN EXTERNAL MIXTURE?
CHUL SONG, Georgia Institute of Technology, Atlanta, GA

4PD8 SOURCE SIGNATURES OF CARBON MONOXIDE AND ORGANIC FUNCTIONAL GROUPS IN ACE-ASIA SUBMICRON AEROSOL TYPES
STEVEN F. MARIA, Lynn M. Russell, Princeton University, Princeton, NJ; Barbara J. Turpin, Robert J. Porcja, Rutgers University, New Brunswick, NJ; Teresa L. Campos, National Center for Atmospheric Research, Boulder, CO; Rodney J. Weber, Georgia Institute of Technology, Atlanta, GA; Barry J. Huebert, University of Hawaii, Honolulu, HI

4PD9 AEROSOL MEASUREMENTS BY AMS AT FUKUE, JAPAN IN SPRING
AKINORI TAKAMI, Takao Miyoshi, National Institute for Enionmental Studies, Tsukuba, Japan; Akio Shimono, Sanyu Plant Service Co. Ltd., Kanagawa, Japan; Shiro Hatakeyama, National Institute for Environmental Studies, Kanagawa, Japan

4PD10 MODEL OF THE LONG - PERIOD VARIATIONS OF THE AEROSOLS SPACE DISRTRIBUTION IN THE MIDDLE ATMOSPHERE DUE TO THE NON-LINEAR INTERACTION BETWEEN THE DAILY OSCILLATIONS AND THE SEASONAL VARIATIONS OF THE ATMOSPHERE
ROBERT FAKHRTDINOV, Lubov Morozova, Kazan State University, Kazan, Russia

4PD11 WATER-SOLUBLE ORGANIC CARBON IN PM2.5 AEROSOLS IN HONG KONG: SEASONAL AND SPATIAL VARIATION
JIAN ZHEN YU, Jinhui Xu, Wai Shing Wu, Chun Hong Wan, Hong Kong University of Science & Technology, Kowloon, Hong Kong

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4PE **Sampling Inlets**

Pacific Ballroom D

12:40 PM - 1:40 PM

4PE4 MEASUREMENTS OF "LARGE" CCN
JAMES HUDSON, Desert Research Institute, Reno, NV

4PE5 PERFORMANCE OF NANO-DMA OPERATED UNDER DIFFERENT SHEATH AND CARRIER GAS COMBINATION
WEILING LI, Da-Ren Chen, Washington University, St. Louis, MO

4PE6 EVALUATION AND APPLICARION OF AN IMPROVED PARTICEL SIZE MAGNIFIER (PSM) FOR NANOPARTICLE DETECTION
CHAN SOO KIM, Kikuo Okuyama, Hiroshima University, Hiroshima, Japan; Juan Fernandez De La Mora, Yale University, New Haven, CT

4PE7 PERCENT TRANSMISSION OF AMMONIUM NITRATE AND AMMONIUM SULFATE PARTICLES AS A FUNCTION OF RELATIVE HUMIDITY FOR AN AERODYNE AEROSOL MASS SPECTROMETER
BRENDAN MATTHEW, Ann Middlebrook, NOAA Aeronomy Laboratory, Boulder, CO

4PE8 DROPLET DISTORTION EFFECTS IN AERODYNAMIC PARTICLE SIZING INSTRUMENTS
PAUL BARON, Anthony Martinez, Erica Jones, National Institute for Occupational Safety and Health, Cincinnati, OH

4PE9 IMPULSE SPECTROMETER FOR NANOPARTICLES MEASUREMENTS
ANATOLIY SUSLOV, University of California, Santa Barbara, CA

4PE10 ENHANCED ELECTRICAL FILTER STAGE DATA REDUCTION FOR ELPI
MIKKO MOISIO, Henna Tuomenoja, Ville NiemelŠ, Dekati Ltd., Tampere, Finland

4PE11 MIXING EFFECT ON THE ACCELERATED MEASUREMENT TECHNIQUE USING DMA AND CPC
YOUNSOO LEE, KAIST, Daijon, Korea; Kang-Ho Ahn, Hanyang University, Kyeonggido, Korea; Sangsoo Kim, KAIST, Daijon, Korea

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5PA **Indoor Aerosols II** *Pacific Ballroom D*

12:40 PM - 1:40 PM

5PA4 COMPARISON OF THE PROXIMITY, COMPARTMENT AND RESUSPENSION EFFECTS AND THEIR CONTRIBUTIONS TO THE PERSONAL CLOUD
ANDREA R. FERRO, Clarkson University, Potsdam, NY; Lynn M. Hildemann, Stanford University, Stanford, CA

5PA5 TRACKING AND RESUSPENSION OF DEPOSITED PARTICLES BY FOOT TRAFFIC
MARK SIPPOLA, Tracy Thatcher, Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, CA

5PA6 INVESTIGATING INDOOR AIRBORNE ENDOTOXIN LEVELS IN BOULDER, COLORADO HOMES
ELMIRA KUJUNDZIC, Mark T. Hernandez, Shelly L. Miller, University of Colorado, Boulder, CO

5PA7 SIZE DISTRIBUTION OF FUNGAL FRAGMENTS RELEASED FROM CONTAMINATED SURFACES
TIINA REPONEN, Seung-Hyun Cho, Mikhail Yermakov, Sergey Grinshpun, University of Cincinnati, Cincinnati, OH

5PA8 PERFORMANCE EVALUATION OF INDOOR AIR CLEANERS
CHIH-CHIEH CHEN, Tsung-Shi Lin, Ro-Ting Lin, National Taiwan University, Taipei, Taiwan; Yu-Mei Kuo, Chung Hwa College of Medical Technology, Tainan, Taiwan; Huang Sheng-Hsiu, Institute of Occupational Safety and Health, Taipei, Taiwan

5PB **Toxics & Plume Chemistry** *Pacific Ballroom D*

12:40 PM - 1:40 PM

5PB4 MODELING AIR QUALITY IMPACTS OF DISTRIBUTED GENERATION IN THE SOUTH COAST AIR BASIN OF CALIFORNIA
MARC CARRERAS, G. Scott Samuelsen, Jack Brouwer, Marc Medrano, Donald Dabdub, University of California, Irvine, CA

5PB5 GAS/PARTICLE PARTITIONING OF PAHS AT IADN SITES
ELISABETH GALARNEAU, Pierrette Blanchard, Terry F. Bidleman, Meteorological Service of Canada, Toronto, ON, Canada

5PB6 PARTICULATE POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) AT GOSAN, KOREA
JI YI LEE, Yong Pyo Kim, Ewha Womans University, Seoul, Korea; Chang Hee Kang, Cheju National University, Cheju, Korea; Young Sung Ghim, Korea Institute of Science and Technology, Seoul, Korea

5PB7 DISPERSION OF HEAVY METALS CARRIED WITH AEROSOLS FROM TWO MUNICIPAL SOLID WASTE DUMPSITE ON SOILS , ALEXANDRIA ,EGYPT.
ELSAYED SHALABY, University of Alexandria, Alexandria, Egypt

5PB8 DEPOSITION AND AMBIENT CONCENTRATIONS OF PBTS (HG, PCBS, DDE, MIREX, HCB AND DIOXIN/FURANS) IN THE LAKE ONTARIO REGION
KEUN-WOOK LEE, Youngji Han, Soon-Onn Lai, Thomas M. Holsen, Phillip K. Hopke, Clarkson University, Potsdam, NY; James J. Pagano, Lauren Falanga, State University of New York, Oswego, NY; Chris Andolina, Michael S. Milligan, State University of New York, Fredonia, NY; Seung Muk Yi, Seoul National University, Seoul, Korea

5PB9 THE EFFECTS OF PARTICLE MATRIX ON SINGLE-PARTICLE MASS SPECTRA OF

5PB10 SOURCES OF PLOYCHORINATED BIPHENYLS TO THE ATMOSPHERE IN CHICAGO

SANDHYA TOKATI, Thomas Holsen, Clarkson University, Potsdam, NY; Ying-kuang Hsu, California Air Resources Board, Sacramento, CA

5PB11 OBSERVATIONS OF 10-32 NM POLYCYCLIC AROMATIC HYDROCARBON PARTICLE MODES IN LOS ANGELES AEROSOL?
ANTONIO MIGUEL, Arantzazu Eiguren-Fernandez, Paul Mayo, University of California, Los Angeles, CA; Philip Fine, Michael Geller, Constantinos Sioutas, University of Southern California, Los Angeles, CA

5PC Emissions I

Pacific Ballroom D

1:40 PM - 2:40 PM

5PC4 SIZE RESOLVED CHARACTERIZATION OF LIGHT-DUTY VEHICLE EMISSIONS: INORGANIC AND ORGANIC INCLUDING ORGANIC TRACER COMPOUNDS
Michael Kleeman, MICHAEL ROBERT, University of California, Davis, CA; Michael Hannigan, University of Colorado, Boulder, CO; James Schauer, University of Wisconsin, Madison, WI

5PC5 CHARACTERIZATION AND SPECIATION OF BIOAEROSOLS AND VEHICULAR FUEL COMBUSTION EMISSIONS USING ELECTRON MICROSCOPY
GARY CASUCCIO, Traci Lersch, Steve Schlaegle, RJ Lee Group Inc., Monroeville, PA; Richard Westberg, RJ Lee Group Inc./Columbia Basin College, Pasco, WA; Allen Robinson, Emily Weitkamp, Carnegie Mellon University, Pittsburgh, PA; Hal Westberg, Candis Claiborn, Brian Lamb, Washington State University, Pullman, WA

5PC6 IN-VEHICLE AND ROADWAY CONCENTRATIONS OF ULTRAFINE PARTICULATE MATTER IN LOS ANGELES
SCOTT FRUIN, Dane Westerdahl, California Air Resources Board, Sacramento, CA; Constantinos Sioutas, University of Southern California, Los Angleles, CA

5PC7 THE DEVELOPMENT AND DEPLOYMENT OF AN ADVANCED MOBILE AIR MONITORING PLATFORM IN LOS ANGELES
Dane Westerdahl, Scott Fruin, California Air Resources Board, Sacramento, CA; Phillip Fine, Ken Bowers, Steve Mara, Constantinos Sioutas, University of Southern California, Los Angeles, CA

5PC8 PM-10 AND PM-2.5 MASS CONCENTRATIONS AND SOIL PARAMETERS FROM SAN JOAQUIN VALLEY
KRYSTYNA TRZEPLA-NABAGLO, Omar Carvacho, Lowell Ashbaugh, Robert Flocchini, University of California, Davis, CA

5PD **Control Technology II** *Pacific Ballroom D*
1:40 PM - 2:40 PM

5PD4 A STUDY ON TURBO CYCLONE TYPE PARTICLE SEPARATOR
YONGJIN KIM, Korea Institute of Machinery and Materials, Daejon, Korea

5PD5 COLLECTION EFFICIENCY OF A DOUBLE CYCLONE WITH ELECTRIC FIELD
KYOUNGSOO LIM, Hyunsoo Kim, Kyoowon Lee, Kwangju Institute of Science and Technology, Kwangju, Korea

5PD6 MICROCONTAMINATION CONTROL DURING SLIDER FABRICATION PROCESS IN HARD DISK DRIVE MANUFACTURING
TAESUNG KIM, Lance Stover, Seagate Technology, Bloomington, MN

5PD7 PLASMA REACTOR: NEW CANDIDATE TO PRODUCE MONODISPERSE NANOPARTICLES
KYO-SEON KIM, Dong-joo Kim, Kangwon National University, Kangwon-Do, Korea; Qian-qiu Zhao, Lu Zhang, DuPont Central Research and Development, Wilmington, DE

5PD8 DEVELOPMENT AND PERFORMANCE CHARACTERIZATION OF LOW-VOLUME PM2.5 IMPACTOR
DAE SEONG KIM, Sang Bum Hong, Ken W. Lee, Jai Hun Lee, Kwangju Institute of Science and Technology, Kwangju, Korea

5PD9 AN INVESTIGATION OF NANOSTRUCTURED TITANIA/VANADIA/TUNGSTEN OXIDE CATALYSTS FOR THE CONTROL OF ORGANIC POLLUTANTS
CATHERINE ALMQUIST, Vipul Kumar, Sachin Kumar, Miami University, Oxford, OH

5PE **Soot and Inorganic Particle Formation** *Pacific Ballroom D*
1:40 PM - 2:40 PM

5PE4 MEASUREMENT OF THE OPTICAL EXTINCTION COEFFICIENTS OF FLAME-GENERATED AGGLOMERATES
JIANN C. YANG, NIST, Gaithersburg, MD; John F. Widmann, Fluent Inc., Lebanon, NH; Jason Duchez, Samuel L. Manzello, George W. Mulholland, NIST, Gaithersburg, MD

5PE5 NOVEL TECHNIQUE TO SAMPLE HIGH-TEMPERATURE, COMBUSTION AEROSOLS
ANTHONY ZIMMER, National Institute for Occupational Safety and Health, Cincinnati, OH

5PE6 MORPHOLOGY AND CHEMISTRY OF OIL COMBUSTION PARTICLES REVEALED BY A COMBINATION OF SINGLE PARTICLE ANALYSIS AND BULK ANALYTICAL METHODS
RALF KAEGI, Swiss Federal Laboratories for Materials Testing and Research, Duebendorf, Switzerland; Denis Mavrocordatos, Swiss Federal Institute for Environmental Science and Technology, Duebendorf, Switzerland; Volker Schmatloch, Paul Hug, Roland Hauert, Stefan Reimann, Swiss Federal Laboratories for Materials Testing and Research, Duebendorf, Switzerland

5PE7 COUPLED RADIATION AND THERMOPHORETIC EFFECTS ON THE DYNAMICS OF SOOT PARTICLES IN FLAMES
DANIEL MACKOWSKI, Auburn University, Auburn, AL; Vedha Nayagam, Peter Sunderland, National Center for Microgravity Research, Cleveland, OH

5PE8 FINE PARTICLE EMISSIONS FROM CO-COMBUSTION OF BIOMASS, SLUDGE, WASTE AND PEAT IN FLUIDIZED BEDS
JORMA JOKINIEMI, Jouni Hokkinen, Terttaliisa Lind, VTT Processes, Finland; Minna Aurela

5PE9 NANOSTRUCTURED SORBENTS FOR CONTROL OF HEAVY METAL EMISSIONS IN DEACTIVATION WASTE INCINERATORS
MYONGHWA LEE, Kuk Cho, Pratim Biswas, Washington University, St. Louis, MO

5PE10 SEMI-EMPIRICAL COAGULATION MODEL OF THE INITIAL STAGE OF AEROSOL CLOUD FORMATION UPON GROUND TESTS FIRING OF LARGE BOOSTERS
SERGEI E. PASHENKO, A. E. Osochenko, V. E. Zarko, Institute of Chemical Kinetics and Combustion, Novosibirsk, Russia; K. Hori, Institute of Space and Aeronautical Science, Sagamihara, Japan

5PE11 SEMIEMPIRICAL MODEL OF AEROSOL FORMATION IN COAGULATION MODE UPON FAST THERMAL DECOMPOSITION OF SODIUM AZIDE
SERGEI E. PASHENKO, A. E. Osochenko, V. E. Zarko, Institute of Chemical Kinetics and Combustion, Novosibirsk, Russia; Ronald Van Den Berg, TNO

6PA Exposure Assessment I

Pacific Ballroom D
1:40 PM - 2:40 PM

6PA5 PARTICLE SIZE DISTRIBUTION AND ACUTE TOXICITY ASSESSMENT OF INCENSE EMISSIONS
TA-CHANG LIN, Chi-Ru Yang, Yung-Chang Hsieh, National Cheng Kung University, Tainan, Taiwan.

6PA6 RED TIDE AEROSOL: CHARACTERIZATION AND INHALED HEALTH EFFECTS
Yung Sung Cheng, YUE ZHOU, Lovelace Respiratory Research Institute, Albuquerque, NM; Richard Pierce, Mote Marine Laboratory, Sarasota, FL; Jerome University of North Carolina, Wilmington, NC

6PA7 COMPREHENSIVE CHARACTERIZATION OF AIRBORNE MICROORGANISMS IN SINGAPORE
RAJASEKHAR BALASUBRAMANIAN, National University of Singapore, Singapore

6PA8 APPLICATION OF MODIS AEROSOL RETRIEVALS ON THE AIR QUALITY STUDIES
JUN WANG, Sundar A Christopher, University of Alabama, Huntsville, AL

6PA9 AEROSOL PARTICULATES OF FEEDYARDS ON THE SOUTHERN HIGH PLAINS
CHARLES PURDY, William Rice, USDA-ARS, Bushland, TX; David Straus, Texas Tech University, Lubbock, TX

6PA10 STUDY OF IN-VITRO TOXICOLOGICAL EFFECTS OF EXHAUSTS FROM ADVANCED ENGINES
M.D. CHENG, Boyd Malone, T. Dam, J. M. E. Storey, Oak Ridge National Laboratory, Oak Ridge, TN

6PA11 RESPONSES OF LUNG CELLS TO SOIL AND COMBUSTION PARTICLES
JOHN VERANTH, Martha Veranth, Chris Reilly, Garold Yost, University of Utah, Salt Lake City, UT

6PA12 CONCURRENT DETERMINATION OF CULTURABLE AND TOTAL AIRBORNE MICROORGANISMS
GEDIMINAS MAINELIS, Hey Reoun An, Maosheng Yao, Rutgers University, New Brunswick, NJ; Paul Lioy, Environmental and Occupational Health Sciences Institute, Piscataway, NJ; Mary J. Lioy, NU Horizon Enterprises, Cranford, NJ

6PA13 RISK ASSESSMENT OF ENVIRONMENTAL POLLUTION TO HUMAN HEALTH IN ARMENIA
LUIZA GHARIBYAN, Meryl Karol, Yerevan State Medical University, Yerevan, Armenia

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6PB **California Regional Particulate Air Quality Study** *Pacific Ballroom D*

1:40 PM - 2:40 PM

6PB5 RELATIONSHIP BETWEEN PM2.5 AND PM10 DURING THE CALIFORNIA REQIONAL PARTICULATE AIR QUALITY STUDY
THERESA NAJITA, Kasia Turkiewicz, Richard Hackney, Karen Magliano, California Air Resources Board, Sacramento, CA

6PB6 COMPARISONS BETWEEN CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY (CRPAQS) PARTICLE LIGHT SCATTERING AND FINE PARTICLE MASS DATA
SIANA ALCORN, L. Willard Richards, Theresa O'Brien, Sonoma Technology Inc., Petaluma, CA; Don Lehrman, Technical and Business Systems, Santa Rosa, CA

6PB7 DIURNAL VARIATIONS IN PM2.5, PM10, CHEMICAL COMPONENTS, GASEOUS PRECURSORS, AND CO-POLLUTANTS DURING THE CALIFORNIA REGIONAL PARTICULATE AIR QUALITY STUDY
PATRICIA VELASCO, Katarzyna Turkiewicz, Richard Hackney, Theresa Najita, Karen Magliano, California Air Resources Board, Sacramento, CA

6PB8 SPATIAL AND TEMPORAL VARIATIONS IN PM2.5 CHEMICAL COMPOSITION DURING WINTER, 2000/2001 EPISODES IN CENTRAL CALIFORNIA
JUDITH CHOW, John Watson, L. W. Antony Chen, Desert Research Institute, Reno, NV; Karen Magliano, Peter Ouchida, California Air Resources Board, Sacramento, CA

6PB9 COMPARISON BETWEEN PARTICULATE MATTER SAMPLED AT URBAN AND RURAL LOCATIONS IN THE SAN JOAQUIN VALLEY: CONTINUOUS MEASUREMENT OF SINGLE PARTICLE SIZE AND COMPOSITION
XUEYING QIN, Stephen Toner, University of California, San Diego, La Jolla, CA; Prakash Bhave, California Institute of Technology, Pasadena, CA; Kimberly Prather, University of California, San Diego, La Jolla, CA

6PB10 TEMPORAL ANS SPATIAL DISTRIBUTION OF FINE PARTICLE NITRATE AND BLACK CARBON IN THE SAN JOAQUIN VALLEY OF CALIFORNIA, USA
SUSANNE HERING, Nathan Kreisberg, Aerosol Dynamics Inc., Berkeley, CA; Judy Chow, John Watson, Desert Research Institute, Reno, NV; L. Williard Richards, Sonoma Technology Inc., Petaluma, CA

6PC **Aerosol Chemistry II**

Pacific Ballroom D

1:40 PM - 2:40 PM

6PC5 VAPOR PRESSURES OF ORGANIC AEROSOL COMPOUNDS MEASURED USING A THERMAL DESORPTION PARTICLE BEAM MASS SPECTROMETER
SULEKHA CHATTOPADHYAY, Paul Ziemann, University of California, Riverside, CA

6PC6 THE USE OF SEM AND EDX FOR CHARACTERISATION OF PARTICULATES AND PARTICULATE SOURCES
DAVID SHOOTER, University of Auckland, Auckland, New Zealand; Janine Clemons, Landcare Research, Lincoln, New Zealand

6PC7 MOLECULAR DYNAMICS MODEL WITH INTERNAL MOLECULAR TEMPERATURE: AN APPROACH TO MODELING THE LASER ABLATION OF ORGANIC PARTICLES
DENIS PHARES, Arun Srinivasa, Texas A&M University, College Station, TX

6PC8 RELATIVE KINETICS FOR MULTICHENNEL NUCLEATION
MICHAEL ANISIMOV, Vladimir Akimov, Aerosol Nucleation Laboratory, Kemerovo, Russia

6PC9 ION MOBILITY AND MASS SPECTROMETRY STUDY OF ION-INDUCED NUCLEATION
KENKICHI NAGATO, Kochi National College of Technology, Nankoku, Japan; Chan S. Kim, Hiroshima University, Hiroshima, Japan; Motoaki Adachi, Osaka Prefecture University, Sakai, Japan; Kikuo Okuyama, Hiroshima University,Hiroshima, Japan

6PC10 DETERMINATION OF TOTAL PARTICLE MASS FROM SINGLE PARTICLE MASS SPECTROMETRY
DONGGEUN LEE, Pusan National University, Busan, South Korea; Kihong Park, Michael R. Zachariah, University of Minnesota, Minneapolis, MN

6PC11 A NEW COMPUTATIONALLY EFFICIENT AEROSOL CHEMISTRY MODEL
RAHUL ZAVERI, Richard Easter, Jerome Fast, Leonard Peters, Pacific Northwest National Laboratory, Richland, WA

6PD **Urban Aerosol**

Pacific Ballroom D

1:40 PM - 2:40 PM

6PD5 AEROSOL COMPOSITION OF PM10 AND PM2.5 IN VI„A DEL MAR CHILE
OMAR F. CARVACHO, Krystyna Trzepla-Nabaglo, Lowell L. Ashbaugh, Robert G. Flocchini, University of California, Davis, CA

6PD6 AIR QUALITY AND ENVIRONMENTAL POLICY IN SAN SALVADOR, EL SALVADOR
CARLOS RESTREPO, Institute for Civil Infrastructure Systems (ICIS), New York, NY

6PD7 SEASONAL AND SHORTER-TERM VARIATIONS IN ATMOSPHERIC NITRATE IN BALTIMORE
SEUNGSHIK PARK, David Harrison, John Ondov, University of Maryland, College Park, MD

6PD8 DIURNAL VARIATIONS OF ULTRA-FINE PARTICLES IN PITTSBURGH MEASURED BY A RAPID SINGLE-PARTICLE MASS SPECTROMETER
YONGJING ZHAO, Keith Bein, Anthony S. Wexler, University of California, Davis, CA; Murray V. Johnston, University of Delaware, Newark, DE

6PD9 ION BALANCES OF SIZE-DIFFERENTIATED AEROSOLS DURING THE 2003 GAS-PARTICLE PARTITIONING (GPP) STUDY IN MEXICO CITY
MIREYA MOYA, Michel Grutter, Telma Castro, Armando Baez, Centro de Ciencias de la Atmosfera, UNAM, Mexico City, Mexico

6PD10 ESTIMATION OF SECONDARY ORGANIC CARBON AT A SEMI-URBAN SITE IN THE SOUTH COAST AIR BASIN
KWANGSAM NA, Chen Song, Aniket Sawant, Kathalena Cocker, David Cocker III, CE-CERT/University of California, Riverside, CA

6PD11 CHEMICAL AND MINERALOGICAL COMPOSITION OF SIZE-SEGREGATED ATMOSPHERIC AEROSOL IN A SEMI-RURAL AREA AT CASTELLON (SPAIN)
VICENTE ESTEVE, Francisco Ramos, Amparo Aparici, Juana Maria Delgado, Gabriel Peris, Universidad Jaume I, Castellon, Spain; Jose Maria Amigo, Universidad de Valencia, Valencia, Spain

6PD12 METEOPARAMETERS INFLUENCE ON AEROSOL MASS CONCENTRATION
ANDREI JOURAVLEV, Olga Khiutorova, Guerman Teptin, Kazan State University, Kazan, Russia

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6PE **Condensation**

Pacific Ballroom D

1:40 PM - 2:40 PM

6PE5 THE EFFECT OF LATENT HEAT ON DROPLET GROWTH IN THE LIMIT OF VANISHING SUPERSATURATION
ADAM OLSEN, Richard Flagan, California Institute of Technology, Pasadena, CA

6PE6 MEAN FIELD THEORY FOR VAPOUR CONCENTRATION DURING CONDENSATION ON AEROSOLS
CHARLES CLEMENT, Enviros-QuantiSci, Wantage, Oxfordshire, UK

6PE7 DIRECT MIXING RATIO AND TEMPERATURE MEASUREMENTS IN A SUPERSONIC NOZZLE
Barbara Wyslouzil, YURY ZVINEVICH, Murad Gharibeh, Worcester Polytechnic Institute, Worcester, MA; Mark Zahniser, Joanne Shorter, David Nelson, Barry Mcmanus, Aerodyne Research Inc., Billerica, MA

6PE8 SIZE DIFFUSION IN THE GROWTH OF NEW AEROSOL BY CONDENSATION OF VOLATILES
CHARLES CLEMENT, Enviros-QuantiSci, Wantage, Oxfordshire, UK; Kari Lehtinen, Markku Kulmala, University of Helsinki, Helsinki, Finland

6PE9 ELECTRODYNAMIC FOCUSING OF CHARGED PARTICLES USING THE QUADRUPOLE ELECTRIC FIELD
JIN-YOUNG CHOI, Korea Advanced Institute of Science and Technology, Daejon, Korea; Seok-Joo Park, Korea Institute of Energy Research, Daejon, Korea; Sang Soo Kim, Korea Advanced Institute of Science and Technology, Daejon, Korea

6PE10 OZONE MEASUREMENTS IN SOUTH CAROLINA USING PASSIVE METHODS
CHRISTOS CHRISTOFOROU, Anna Franklin, Clemson University, Anderson, SC

6PE11 MEASUREMENT OF DILUTION CHARACTERISTICS FOR TAILPIPE EMISSIONS FROM VEHICLES
WEI-CHUNG CHANG, Stanford University, Stanford, CA; Cheng-Hsin Chang, Kuang-Jung Cheng, Tamkang University, Taipei, Taiwan; Lynn M. Hildemann, Stanford University, Stanford, CA

Wednesday, October 22, 2003 **Platform Session #7**

2:40 PM - 4:35 PM

7A **Exposure Assissment I** *Laguna A/B*

Chair: Risa Robinson, Co-chair: Perng-Jy Tsai *2:40 PM - 4:35 PM*

7A1
2:40 PM

PRELIMINARY STUDIES OF GENERATION, EXPOSURE, AND TOXICITY OF CARBON NANOTUBES

PAUL BARON, Andrew Maynard, National Institute for Occupational Safety and Health, Cincinnati, OH; Anna Shvedova, Elena Kisin, Ashley Murray, National Institute for Occupational Safety and Health, Morgantown, WV; Vadim Gandelsman, Science Applications International Corporation, Houston, TX; Michael Foley, Comprehensive Health Services, Houston, TX; Vincent Castranova, National Institute for Occupational Safety and Health, Morgantown, WV

7A2
3:00 PM

ESTIMATING AEROSOL SURFACE-AREA EXPOSURE FROM COOKING-RELATED AEROSOL IN INDIA: A COMPARISON OF SURFACE-AREA ESTIMATES USING DIFFUSION CHARGING, AND REAL-TIME NUMBER AND MASS CONCENTRATION MEASUREMENTS.

ANDREW MAYNARD, NIOSH, Cincinnati, OH; Pramod Pai, University of Mysore, Mysore, India; Penny Andresen, University of Minnesota, Minneapolis, MN; Belagur Prasad, University of Mysore, Mysore, India; Gurumurthy Ramachandran, University of Minnesota, Minneapolis, MN

7A3
3:20 PM

SAMPLING AND ANALYSIS OF DIESEL PARTICULATE MATTERS IN AN UNDERGROUND LIME STONE MINE

MINGMING LU, Zifei Liu, Fuyan Liang, University of Cincinnati, Cincinnati, OH

7A4
3:40 PM

OCCURRENCE OF PRIMARY BIOLOGICAL MATERIALS IN THE ATMOSPHERE: PROTEIN, CARBOHYDRATE AND ENDOTOXIN ASSOCIATIONS WITH PARTICULATE MATTER IN TEMPERATE REGION URBAN AEROSOLS

Largus Angenent, Washington University, St. Louis, MO; Lisa Clarke, University of Colorado, Boulder, CO; Allen Robinson, Carnegie Mellon University, Pittsburgh, PA; MARK HERNANDEZ, University of Colorado, Boulder, CO

7A5
4:00 PM

ASSESSING FREE SILICA EXPOSURES FOR INCINERATOR DEMOLITION WORKERS

PERNG-JY TSAI, Lu Pao-Yin, National Chen Kung University, Tainan, Taiwan; Tang Da-Toung, Institute of Occupational Safety and Health, Taipei, Taiwan

4:20 PM

POSTER PREVIEW

This session ends with a brief presentation of posters 7PA6-7PA13 (1 min each).

7B **California Regional Particulate Air Quality Study** *Avila A/B*

Chair: Jeff Collett, Co-chair: Karen Magliano *2:40 PM - 4:35 PM*

7B1 2:40 PM
FOG PROCESSING OF ATMOSPHERIC ORGANIC COMPOUNDS DURING THE CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY (CRPAQS)
PIERRE HERCKES, Taehyoung Lee, Laurie Trenary, Gongunn Kang, Jeffrey L. Collett, Colorado State University, Fort Collins, CO

7B2 3:00 PM
FUGITIVE DUST CONCENTRATIONS IN THE SAN JOAQUIN VALLEY
RICHARD COUNTESS, Susan Countess, Countess Environmental, Westlake Village, CA

7B3 3:20 PM
EVALUATION OF TRANSPORT OF PARTICULATE MATTER AND ITS PRECURSORS INTO AND OUT OF THE SAN JOAQUIN VALLEY, CALIFORNIA, USING TWO APPROACHES
CLINTON MACDONALD, Mark Lilly, Paul Roberts, Sonoma Technology, Inc.,Petaluma, CA; Don Lehrman, Technical and Business Systems, Santa Rosa, CA

7B4 3:40 PM
SIMULATING AIR QUALITY IN THE SAN JOAQUIN VALLEY WITH A SOURCE-ORIENTED EXTERNALLY MIXED AIRSHED MODEL; EVALUATION OF MODEL PERFORMANCE AND CONTROL STRATEGY EFFECTIVENESS
Michael Kleeman, ANTHONY HELD, University of California, Davis, CA; Ajith Kaduwela, California Air Resources Board, Sacramento, CA

7B5 4:00 PM
CONTRIBUTIONS OF CHEMICAL CONSTITUENTS TO VISIBILITY REDUCTION DURING THE CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY
STEVEN HEISLER, ENSR International, Camarillo, CA

4:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 7PB6-7PB12 (1 min each).

7C **Heterogeneous Aerosol Chemistry I** *El Capitan A/B*

Chair: James Smith, Co-chair: Jose-Luis Jimenez *2:40 PM - 4:35 PM*

7C1 2:40 PM
REACTIONS OF OXIDES OF NITROGEN IN THIN FILMS OF WATER ON SURFACES
BARBARA FINLAYSON-PITTS, Ann Louise Sumner, Erik J. Menke, Reginald M. Penner, Dennis L. Syomin, Kevin A. Ramazan, Lisa M. Wingen, University of California, Irvine, CA

7C2 3:00 PM
THE HETEROGENEOUS CHEMISTRY OF N2O5 AND HO2 ON ORGANIC AEROSOLS
JONATHAN ABBATT, Joel Thornton, Christine Braban, University of Toronto, Toronto, ON, Canada

7C3 3:20 PM
THE INTERACTION OF NH3 WITH PARTICLES
DAVE HANSON, NCAR, Boulder, CO

7C4 3:40 PM
COMPARISON OF N2O5 HYDROLYSIS USING GAS PHASE OR HETEROGENEOUS KINETICS IN SEVERAL AIR QUALITY MODELING STUDIES
GAIL TONNESEN, University of California, Riverside, CA

7C5 4:00 PM
INORGANIC PARTICLE FORMATION IN POLLUTED COASTAL REGIONS: COMPARISONS BETWEEN MEASUREMENTS AND MODELS DURING PACIFIC2001.
PAUL MAKAR, Environment Canada, Downsview, ON, Canada; Sara Pryor, Indiana University, Bloomington, IN; Hacene Boudries, Aerodyne Research Inc., Billerica, MA; Katherine Hayden, Kurt Anlauf, Environment Canada, Downsview, ON, Canada

4:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 7PC6-7PC12 (1 min each).

7D **Urban/Regional Aerosol** *Huntington A/B/C*

Chair: Lynn Russell, Co-chair: Paul Fraser *2:40 PM - 4:35 PM*

7D1 2:40 PM
SHORT-TERM AND SEASONAL BEHAVIOR OF PM2.5, NITRATE, SULFATE, AND EC/OC AT THE BALTIMORE SUPERSITE IN 2002
SEUNGSHIK PARK, John Ondov, David Harrison, Narayanan Nair, University of Maryland, College Park, MD

7D2 3:00 PM
MEASUREMENT OF PM2.5 SEMI-VOLATILE MATERIAL WITH THE FDMS TEOM MONITOR
Brett D. Grover, Michael Kleinman, Norman L. Eatough, DELBERT J. EATOUGH, Brigham Young University, Provo, UT

7D3 3:20 PM
DYNAMIC DATA CLASSIFICATION USING A COMPONENT-WEIGHTED SIMILARITY ALGORITHM
KEITH BEIN, Yongjing Zhao, Anthony Wexler, University of California, Davis, CA

7D4 3:40 PM
SULFATE IN SINGLE PARTICLES AT THE BALTIMORE SUPERSITE
MURRAY JOHNSTON, Derek Lake, Michael Tolocka, University of Delaware, Newark, DE; Anthony Wexler, University of California, Davis, CA

7D5 4:00 PM
OVERVIEW OF FOG STUDIES DURING THE CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY (CRPAQS)
JEFFREY L. COLLETT, Taehyoung Lee, Hui Chang, Pierre Herckes, Colorado State University, Fort Collins, CO

4:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 7PD6-7PD15 (1 min each).

7E **Emissions II** *Palos Verdes A/B*

Chair: Micheal Kleeman, Co-chair: Barbara Zielinska *2:40 PM - 4:35 PM*

7E1 2:40 PM
AIR CONTAMINANTS FROM LAGUARDIA AIRPORT, QUEENS, NY
BEVERLY COHEN, Maire Heikkinen, Arthur Nádas, New York University School of Medicine, Tuxedo, NY

7E2 3:00 PM
A SEASONALLY AND GEOGRAPHICALLY RESOLVED NATIONAL INVENTORY OF AMMONIA EMISSIONS FROM DAIRY FARMS: MODEL DEVELOPMENT AND COMPARISON WITH AMBIENT MEASUREMENTS
ROBERT PINDER, Natalie Anderson, Ross Strader, Cliff Davidson, Peter Adams, Carnegie Mellon University, Pittsburgh, PA

7E3 3:20 PM
USE OF A MOBILE LABORATORY TO CHARACTERIZE IN-USE VEHICLE AND OTHER EMISSIONS IN MEXICO CITY AREA
JOHN JAYNE, Scott Herndon, Aerodyne Research Inc., Billerica, MA; Berk Knighton, Montana State University, Bozeman, MT; Tim Onasch, Phil Mortimer, Manujula Canagartna, Aerodyne Research Inc., Billerica, MA; Ed Dunlea, Linsey Marr, Massachusetts Institute of Technology, Cambridge, MA; Charles Kolb, Aerodyne Research Inc., Billerica, MA; Jose Jimenez, University of Colorado, Boulder, CO; Doug Worsnop, Aerosyne Research Inc., Billerica, MA

7E4 3:40 PM
DOE'S GASOLINE/DIESEL PM SPLIT STUDY - SOURCE CHARACTERIZATIONS AND APPORTIONMENT
ERIC FUJITA, David Campbell, Barbara Zielinska, William Arnott, Judith Chow, Desert Research Institute, Reno, NV; Douglas Lawson, National Renewable Energy Laboratory, Golden, CO

7E5
4:00 PM

THE CORRELATION OF LUBRICATING OIL AND FUEL ORGANIC COMPOSITION WITH TAILPIPE EMISSIONS

BARBARA ZIELINSKA, Eric Fujita, John Sagebiel, Mark McDaniel, Desert Research Institute, Reno, NV; Douglas R. Lawson, National Renewable Energy Laboratory, Golden, CO

4:20 PM

POSTER PREVIEW

This session ends with a brief presentation of posters 7PE6-7PE14 (1 min each).

Thursday, October 23, 2003
8:00 AM - 9:00 AM

Plenary #3
Pacific Ballroom A/B

8:05 AM

ELECTROSPRAY WINGS FOR MOLECULAR ELEPHANTS
Dr. John Fenn
Research Professor, Department of Chemistry, Virginia Commonwealth University
Professor Emeritus, Department of Chemical Engineering, Yale University, New Haven Connecticut, USA

8:50 AM

PRESENTATION OF THE WHITBY AWARD
Lynn Hildemann

Thursday, October 23, 2003 **Platform Session #8**

9:30 AM - 10:45 AM

8A **Chemical and Biological Agent Detection 1** *Laguna A/B*

Chair: David Fergenson, Co-chair: Jim Ho *9:30 AM - 10:45 AM*

8A1
9:30 AM
AEROSOL TECHNOLOGY FOR DEVELOPING AND TESTING BIOLOGICAL AGENT DETECTORS, BASIC PRINCIPLES
WILLIAM HINDS, University of California, Los Angeles, CA

8A2
9:50 AM
AEROSOL TECHNOLOGY FOR DEVELOPING AND TESTING BIOLOGICAL AGENT DETECTORS, APPLICATIONS
EDWARD STUEBING, US Army Edgewood CB Center, Aberdeen Proving Ground, MD

8A3
10:10 AM
IS IT POSSIBLE TO MONITOR BIOLOGICAL HAZARDS ON 24X7 BASIS?
JIM HO, Defence R & D Canada Suffield, Medicine Hat, AB, Canada

10:10 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 8PA4-8PA8 (1 min each).

8B **Deposition: Modeling** *Avila A/B*

Chair: Beverly Cohen, Co-chair: Zongqin Zhang *9:30 AM - 10:45 AM*

8B1
9:30 AM
"LA FAMILIA" - HUMAN MALE, FEMALE, AND CHILD TRACHEOBRONCHIAL HOLLOW AIRWAY MODELS
RODNEY CLINKENBEARD, University of Oklahoma, Oklahoma City, OK; Michael Oldham, University of California, Irvine, CA; Terri Pearce, Enercon Services Inc., Oklahoma City, OK

8B2
9:50 AM
A NEW MATHEMATICAL MODEL FOR THE GEOMETRY OF ASYMMETRIC AIRWAYS
DONG YOUB LEE, Seong Suk Park, University of California, Davis, CA; George A. Ban-Weiss, University of California, Berkeley, CA; Anthony S. Wexler, University of California, Davis, CA

8B3
10:10 AM
TRANSPORT AND DEPOSITION OF NANO-SIZE PARTICLES IN THE UPPER HUMAN RESPIRATORY AIRWAYS
ZHE ZHANG, Huawei Shi, Clement Kleinstreuer, North Carolina State University, Raleigh, NC; Chong Kim, US EPA, Research Triangle Park, NC

10:10 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 8PB4-8PB11 (1 min each).

8C **Clouds & Fog** *El Capitan A/B*

Chair: Sara Pryor, Co-chair: Robert Griffin *9:30 AM - 10:45 AM*

8C1
9:30 AM
MEASUREMENTS OF ORGANIC CLOUD CONDENSATION NUCLEI
CYNTHIA TWOHY, Oregon State University, Corvallis, OR; James Anderson, Peter Crozier, Arizona State University, Tempe, AZ

8C2
9:50 AM
DEVELOPMENT OF MIXED-PHASE CLOUDS FROM MULTIPLE AEROSOL SIZE DISTRIBUTIONS AND THE EFFECTS OF THE CLOUDS ON AEROSOL REMOVAL
MARK JACOBSON, Stanford University, Stanford, CA

8C3
10:10 AM
MEASUREMENTS OF SUMMERTIME CLOUD-AEROSOL INTERACTIONS AT THE JUNGFRAUJOCH MOUNTAIN-TOP SITE IN THE SWISS ALPS
KEITH BOWER, UMIST, Manchester, UK

10:10 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 8PC4-8PC10 (1 min each).

8D **Bioaerosols & Biomass Burning** *Huntington A/B/C*

Chair: Paul Makar, Co-chair: Lynn Russell *9:30 AM - 10:45 AM*

8D1
9:30 AM
CORRELATING BIOAEROSOL LOAD WITH PM2.5 AND PM10 CONCENTRATIONS
JUSTIN BORESON, Jordan Peccia, Ann Dillner, Arizona State University, Tempe, AZ

8D2
9:50 AM
MEASUREMENTS OF PARTICLE DIAMETER GROWTH FACTORS OF A BIOMASS BURNING INFLUENCED AEROSOL
CHRISTIAN CARRICO, Sonia Kreidenweis, Jeffrey Collett, Colorado State University, Fort Collins, CO; William Malm, National Park Service, Colorado State University, Fort Collins, CO

8D3
10:10 AM
OBSERVATIONS OF CARBON, NITROGEN AND SULFUR SPECIES IN BIOMASS BURNING EVENTS
ERIC EDGERTON, Benjamin Hartsell, ARA Inc., Plano, TX; John Jansen, Southern Company, Birmingham, AL; Alan Hansen, EPRI, Palo Alto, CA

10:10 AM
POSTER PREVIEW
This session ends with a brief presentation of posters 8PD4-8PD11 (1 min each).

8E **Combustion and Environmental Aerosol Formation II** *Palos Verdes A/B*

Chair: David Cocker, Co-chair: Charles Stanier *9:30 AM - 10:45 AM*

8E1 9:30 AM	DEVELOPMENT OF A MODEL FOR ASH AEROSOL FORMATION UNDER PRESSURIZED COAL COMBUSTION CONDITIONS *AURA C. DÁVILA, Joseph J. Helble, University of Connecticut, Storrs, CT*
8E2 9:50 AM	CHARACTERIZATION OF ON-ROAD GASEOUS AND PM EMISSIONS FROM HEAVY DUTY DIESEL VEHICLES BY DIRECT EXHAUST HOOKUP *DAVID COCKER, Sandip Shah, Kent Johnson, Wayne Miller, Joseph Norbeck, CE-CERT/University of California, Riverside, CA*
8E3 10:10 AM	FINE PARTICLE FORMATION IN HEAVY FUEL OIL COMBUSTION - THE EFFECT OF VANADIUM AND SULPHUR *JORMA JOKINIEMI, Jouni Hokkinen, Jussi LyyrŠnen, VTT Processes, Finland*
10:10 AM	POSTER PREVIEW *This session ends with a brief presentation of posters 8PE4-8PE11 (1 min each).*

Thursday, October 23, 2003 **Platform Session #9**

11:00 AM - 12:35 PM

9A **Heterogeneous Aerosol Chemistry II** *Laguna A/B*

Chair: Barbara Finlayson-Pitts, Co-chair: Douglas Worsnop *11:00 AM - 12:35 PM*

9A1
11:00 AM
THE REACTIVE UPTAKE OF OZONE ON DRY NACL AND BR-DOPED NACL
JOHN C. HEMMINGER, John T. Newberg, University of California, Irvine, CA

9A2
11:20 AM
HETEROGENEOUS CHEMISTRY OF MINERAL DUST AND SEASALT FOLLOWED BY SINGLE PARTICLE ANALYSIS
VICKI GRASSIAN, Brenda Krueger, University of Iowa, Iowa City, IA; Alexander Laskin, James Cowin, Pacific Northwest National Laboratory, Richland, WA

9A3
11:40 AM
SURFACTANT CONTROL OF HCL UPTAKE INTO SUPERCOOLED SULFURIC ACID SOLUTIONS
JENNIFER LAWRENCE, Samuel Glass, Gilbert Nathanson, University of Wisconsin, Madison, WI

9A4
12:00 PM
MASS ACCOMMODATION COEFFICIENTS AT LIQUID-VAPOR INTERFACES: THEORETICAL ANALYSIS BY MOLECULAR DYNAMICS AND FLUID DYNAMICS CALCULATIONS
AKIHIRO MORITA, Kyoto University, Kyoto, Japan; Masakazu Sugiyama, Hirofumi Kameda, University of Tokyo, Tokyo, Japan; Seiichiro Koda, Sophia University, Tokyo, Japan; David Hanson, NCAR, Boulder, CO

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 9PA5-9PA11 (1 min each).

9B **Deposition: Experimental** *Avila A/B*

Chair: Risa Robinson, Co-chair: Brian Wong *11:00 AM - 12:35 PM*

9B1
11:00 AM
DEPOSITION DISTRIBUTION AMONG THE PARALLEL PATHWAYS IN THE HUMAN LUNG CONDUCTING AIRWAY STRUCTURE
CHONG KIM, US EPA, US EPA, Research Triangle Park, NC; Zhe Zhang, Clement Kleinstreuer, North Carolina State University, Raleigh, NC

9B2
11:20 AM
DEPOSITION OF PARTICLE SURFACE AREA IN THE HUMAN RESPIRATORY TRACT: RELATION TO PARTICLE CONCENTRATION (NUMBER, SURFACE AREA, AND VOLUME) AND TO THE "ACTIVE" SURFACE AREA AS MEASURED BY A DIFFUSION CHARGER.
WILLIAM E. WILSON, US EPA, Research Triangle Park, NC; Hee-Siew Han, University of Minnesota, Minneapolis, MN; John Stanek, US EPA, Research Triangle Park, NC; Jay Turner, Washington University, St. Louis, MO; David Y. H. Pui, University of Minnesota, Minneapolis, MN

9B3
11:40 AM
DRY POWDER INHALER (DPI) DRUG DELIVERY ENHANCEMENT USING A NEWLY DEVELOPED ADD-ON SPACER
Edgar Matida, Warren Finlay, CARLOS LANGE, Mark Rimkus, Biljana Grgic, University of Alberta, Edmonton, AB, Canada

9B4
12:00 PM
PARTICLE DEPOSITION MEASUREMENTS AND NUMERICAL SIMULATION IN HIGHLY IDEALIZED MOUTH-THROATS
YU ZHANG, Warren Finlay, Edgar Matida, University of Alberta, Edmonton, AB, Canada

POSTER PREVIEW

9C **Carbonaceous Aerosol** *El Capitan A/B*

Chair: Robert Griffin, Co-chair: Ed Edney *11:00 AM - 12:35 PM*

9C1
11:00 AM
AEROSOL ORGANIC-MASS-TO-ORGANIC-CARBON MEASUREMENTS
LYNN RUSSELL, Princeton University, Princeton, NJ

9C2
11:20 AM
SOA FORMATION FROM THE IRRADIATION OF A-PINENE-NOX IN THE ABSENCE AND PRESENCE OF SULFUR DIOXIDE
TADEUSZ KLEINDIENST, Edward Edney, Michael Lewandowski, US EPA, Research Triangle Park, NC; Mohammed Jaoui and Eric W. Corse, ManTech Environmental Technology Inc., Research Triangle Park, NC

9C3
11:40 AM
ULTRA VIOLET LIGHT ABSORPTION BY ORGANIC GASES ADSORBED ONTO QUARTZ FILTERS - THE POSITIVE ARTIFACT STRIKES AGAIN
THOMAS KIRCHSTETTER, Melissa Lunden, Erin McNamara, Doug Black, Lara Gundel, Lawrence Berkeley National Laboratory, Berkeley, CA

9C4
12:00 PM
SOA FORMATION FROM THE OZONE OXIDATION OF CYCLOALKENES
MELITA KEYWOOD, Varuntida Varutbangkul, Roya Bahreini, Song Gao, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 9PC5-9PC12 (1 min each).

9D **Numerical Modeling of Regional Aerosols I** *Huntington A/B/C*

Chair: Sara Pryor, Co-chair: Paul Makar *11:00 AM - 12:35 PM*

9D1
11:00 AM
ESTIMATING GAS PHASE CONCENTRATIONS OF AMMONIA AND NITRIC ACID: MCMC IN THE MCMA
FEDERICO SAN MARTINI , Massachusetts Institute of Technology, Cambridge, MA; Dara Salcedo, Universidad Iberoamericana, Mexico City, Mexico; Manjula Canagaratna, Aerodyne Research Inc., Billerica, MA; Jose Ortega, Massachusetts Institute of Technology, Cambridge, MA; Douglas Worsnop, Aerodyne Research Inc., Billerica, MA; Luisa Molina, Massachusetts Institute of Technology, Cambridge, MA; Charles Kolb, Aerodyne Research Inc., Billerica, MA; Mario Molina, Gregory McRae, Massachusetts Institute of Technology, Cambridge, MA

9D2
11:20 AM
IMAGES-SCAPE2: A MODELING STUDY OF TROPOSPHERIC SIZE AND CHEMICALLY RESOLVED AEROSOL THERMODYNAMICS IN A GLOBAL CHEMICAL TRANSPORT MODEL.
MARCO RODRIGUEZ, Donald Dabdub, University of California, Irvine, CA

9D3
11:40 AM
SIMULATIONS OF MULTI-VARIATE AEROSOL POPULATIONS USING THE QUADRATURE METHOD OF MOMENTS (QMOM)
ROBERT MCGRAW, Brookhaven National Laboratory, Brookhaven, NY; Mauricio Zurita-Gotor, Daniel E. Rosner, Yale University, New Haven, CT

9D4
12:00 PM
MODELLING ORGANIC AEROSOLS OVER EUROPE: APPLICATION AND TESTING OF A UNIFAC-BASED APPROACH
DAVID SIMPSON, Norwegian Meteorological Institute, Oslo, Norway; Paul Makar, Mike Moran, Meteorological Service of Canada, Toronto, ON, Canada; Vigdis Vestreng, Norwegian Meteorological Institute, Oslo, Norway

12:20 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 9PD5-9PD12 (1 min each).

9E **Field Instrumentation** *Palos Verdes A/B*

Chair: Gilmore Sem, Co-chair: Charles Litton *11:00 AM - 12:35 PM*

9E1
11:00 AM

FIELD EXPERIENCE OF PORTABLE SMPS+C NANO PARTICLE SIZER
CHRISTIAN GERHART, H. J. Grimm, Grimm Aerosol Technik GmbH, Ainring, Germany; M. Hein, UniversitŠt Karlsruhe, Karlsruhe, Germany

9E2
11:20 AM

AN IONIZATION CHAMBER/OPTICAL SCATTERING TECHNIQUE FOR DETERMINING PARTICLE SIZE AND MASS CONCENTRATION OF SUBMICROMETER AEROSOLS
CHARLES LITTON, Jon C. Volkwein, National Institute for Occupational Safety and Health, Pittsburgh, PA

9E3
11:40 AM

EXPERIMENTAL MEASUREMENTS OF ASPIRATION EFFICIENCY FOR IDEALIZED SPHERICAL AEROSOL SAMPLERS IN CALM AIR
WEI-CHUNG SU, Lovelace Respiratory Research Institute, Albuquerque, NM; James H. Vincent, University of Michigan, Ann Arbor, MI

9E4
12:00 PM

PERFORMANCE EVALUATION OF AN ACTIVE PERSONAL DATARAM PM2.5 MASS MONITOR (THERMO ANDERSON PDR-1200) DESIGNED FOR CONTINUOUS PERSONAL EXPOSURE MEASUREMENTS
BHABESH CHAKRABARTI, Philip M. Fine, Ralph Delfino, Constantinos Sioutas, University of Southern California, Los Angeles, CA

12:20 PM

POSTER PREVIEW
This session ends with a brief presentation of posters 9PE5-9PE11 (1 min each).

Thursday, October 23, 2003 **Platform Session #10**

2:10 PM - 4:25 PM

10A **Heterogeneous Aerosol Chemistry III** *Laguna A/B*

Chair: Jon Abbat, Co-chair: Vicki Grassian *2:10 PM - 4:25 PM*

10A1
2:10 PM
KINETICS OF COMPLEX AEROSOL PROCESSES
DOUGLAS WORSNOP, Aerodyne Research, Billerica, MA

10A2
2:30 PM
DELIQUESCENCE AND EFFLORESCENCE OF DICARBOXYLIC ACID PARTICLES
ALLAN BERTRAM, Matthew Parsons, Jackson Mak, University of British Columbia, Vancouver, BC, Canada

10A3
2:50 PM
AEROSOL PRODUCTS AND MECHANISM OF THE HETEROGENEOUS REACTION OF OZONE WITH OLEIC ACID IN PURE AND MIXED PARTICLES
PAUL ZIEMANN, Air Pollution Research Center, University of California, Riverside, CA

10A4
3:10 PM
ORGANIC AEROSOL GROWTH BY HETEROGENEOUS ACID-CATALYZED REACTIONS OF DIVERSE ORGANIC CARBONYLS IN THE PRESENCE OF DIFFERENT SEED AEROSOLS
MYOSEON JANG, Di Hu, Nadine Czoschke, Richard Kamens, University of North Carolina, Chapel Hill, NC

10A5
3:30 PM
INSIGHTS ON NUCLEATION BURST AND NUCLEI GROWTH DURING PARTICLE NUCLEATION IN PITTSBURGH FROM AEROSOL MASS SPECTROMETRY
QI ZHANG, University of Colorado, Boulder, CO; Charles Stanier, Carnegie Mellon University, Pittsburgh, PA; Manjula Canagaratna, John Jayne, Douglas Worsnop, Aerodyne Research Inc., Billerica, MA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA; Jose-Luis Jimenez, University of Colorado, Boulder, CO

10A6
3:50 PM
THE SIZE & COMPOSITION DEPENDENCE OF NITRIC ACID REACTIVE UPTAKE ONTO MARINE AEROSOL NANO-DROPLETS
THOMAS SAUL, Murray Johnston, University of Delaware, Newark, DE

4:10 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 10PA7-10PA13 (1 min each).

10B **Chemical and Biological Agent Detection** *Avila A/B*

Chair: Kermit Murray, Co-chair: Kapil Pant *2:10 PM - 4:25 PM*

10B1
2:10 PM

REAGENTLESS REAL-TIME IDENTIFICATION OF INDIVIDUAL MICROORGANISMS BY BIOAEROSOL MASS SPECTROMETRY
ERIC E. GARD, David P. Fergeson, Keith R. Coffee, Maurice E. Pitesky, Herbert J. Tobias, Paul T. Steele, Lawrence Livermore National Laboratory, Berkeley, CA; Gregg A. Czerwieniec, Scott C. Russell, Carlito B. Lebrilla, University of California, Davis, CA; Joanne M. Horn, Matthias Frank, Lawrence Livermore National Laboratory, Berkeley, CA

10B2
2:30 PM

THE LATEST DEVELOPMENTS IN THE AEROSOL LASER TIME-OF-FLIGHT MASS SPECTROMETER FOR THE CHEMICAL ANALYSIS OF AEROSOL PARTICLES ON-LINE, WITH AN EMPHASIS ON BIO-AEROSOLS
JAN C.M. MARIJNISSEN, Arjan L. Van Wuijckhuijse, Michael A. Stowers, Delft University of Technology, Delft, Netherlands

10B3
2:50 PM

LASER DESORPTION MASS SPECTROMETRY FOR BIOAEROSOL DETECTION
KERMIT MURRAY, Shelly Jackson, Sushama Mishra, Jae-kuk Kim, Louisiana State University, Baton Rouge, LA

10B4
3:10 PM

DETECTION AND CLASSIFICATION OF BIOLOGICAL AEROSOLS USING LASER-INDUCED BREAKDOWN SPECTROSCOPY
STEVEN G. BUCKLEY, Gregg A. Lithgow, University of Maryland, College Park, MD; John D. Hybl, MIT Lincoln Laboratory, Lexington, MA

10B5
3:30 PM

FTIR MICROSCOPY OF MICROBIOLOGICAL CLUSTERS
HORN-BOND LIN, Naval Research Laboratory, Washington, DC; Cathy Scotto, Virginia Polytechnic Institute & State Unversity, Blacksburg, VA; Jay Eversole, Anthony Campillo, Naval Research Laboratory, Washington, DC

10B6
3:50 PM

AEROSOL DISPERSION AND DEPOSITION IN IDEALIZED URBAN SCENARIOS: LARGE EDDY SIMULATIONS
KAPIL PANT, Shivshankar Sundaram, CFD Research Corporation, Huntsville, AL

4:10 PM

POSTER PREVIEW
This session ends with a brief presentation of posters 10PB7-10PB12 (1 min each).

10C **Carbonaceous Aerosol** *El Capitan A/B*

Chair: Rebecca Barthelmie, Co-chair: Francis Binkowski *2:10 PM - 4:25 PM*

10C1
2:10 PM
COMPOSITION OF PM2.5 IN RESEARCH TRIANGLE PARK, NORTH CAROLINA, USA DURING THE WINTER OF 2003
Edward Edney, MICHAEL LEWANDOWSKI, Tadeusz Kleindienst, US EPA, Research Triangle Park, NC; Mohammed Jaoui, MANTECH ENVIRONMENTAL TECHNOLOGY INC., Research Triangle Park, NC

10C2
2:30 PM
ORGANIC COMPOUNDS MEASURED AT CHINESE, INDIAN, AND WESTERN FOOD STALLS
LIYA YU, Hwee Ting Lim, Feng Xu, National University of Singapore, Singapore

10C3
2:50 PM
FINE PARTICLE FORMATION AND PROCESSING IN A SIERRA NEVADA FOREST.
MELISSA LUNDEN, Douglas Black, Nancy Brown, Lawrence Berkeley National Laboratory, Berkeley, CA; Anita Lee, University of California, Berkeley, CA; Gunnar Schade, University of Bremen, Bremen, Germany; Allen Goldstein, University of California, Berkeley, CA

10C4
3:10 PM
INCREASE IN ABSORPTION OF DIESEL SOOT AEROSOL DUE TO COATING WITH NON-ABSORBING MATERIAL
WERNER SCHOECK, Harald Saathoff, Martin Schnaiter, Robert Wagner, Institute of Meteorology and Climate Research, Karlsruhe, Germany

10C5
3:30 PM
A NEW NON AMBIGUOUS ANALYTICAL TECHNIQUE FOR THE IDENTIFICATION OF AEROSOL OXYGENATED COMPOUNDS
MOHAMMED JAOUI, Eric Corse, ManTech Environmental Technology Inc., Research Triangle Park, NC; Tadeusz Kleindienst, Michael Lewandowski, Edward Edney, National Exposure Research Laboratory, US EPA, Research Triangle Park, NC

10C6
3:50 PM
VARIATIONS IN THE AVERAGE DAILY COMPOSITION OF THE ORGANIC FRACTION OF PM2.5 IN THE URBAN ATMOSPHERE
James Schauer, MIN-SUK BAE, University of Wisconsin, Madison, WI; Jay Turner, Washington University, St. Louis, MO

4:10 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 10PC7-10PC14 (1 min each).

10D **Analytical Techniques & Methods Intercomparison** *Huntington A/B/C*

Chair: David Ensor, Co-chair: Barbara Zielinska *2:10 PM - 4:25 PM*

10D1
2:10 PM
KEN WHITBY AND THE BIMODAL DISTRIBUTION: ON THE ROAD TO FINE AND COARSE PARTICULATE MATTER STANDARDS
WILLIAM WILSON, US EPA, Research Triangle Park, NC

10D2
2:30 PM
KENNETH T. WHITBY: A PERSONAL PERSECTIVE
EVAN WHITBY, Chimera Technologies Inc., Forest Lake, MN

10D3
2:50 PM
SAMPLING ARTIFACTS OF ACIDITY AND IONIC SPECIES IN PM2.5
RAVI KANT PATHAK, Chak K. Chan, Xiaohong Yao, Hong Kong University of Science and Technology, Kowloon, Hong Kong

10D4
3:10 PM
DETERMINING COARSE PARTICULATE MATTER CONCENTRATIONS: A PERFORMANCE EVALUATION OF CANDIDATE METHODOLOGIES UNDER WINTERTIME CONDITIONS
PAUL SOLOMON, Thomas Ellestad, Teri Conner, Roy Zweidinger, Mary Harmon, US EPA, Office of Research and Development, Las Vegas, NV; Tim Hanley, Byrd Lee Ann, Richard Scheffe, US EPA, Office of Air Qualilty Planning and Standards, Research Triangle Park, NC; Robert Vanderpool, Robert Murdoch, Sanjay Natarajan, Christopher Noble, Research Triangle Institute c/o US EPA; Jeff Ambs, Rupprecht & Patashnick Inc., Albany, NY; Gil J. Sem, TSI Inc., St. Paul, MN; John Tisch, Tisch Environmental Inc., Cleves, OH

10D5
3:30 PM
ABSORPTION COEFFICIENT MEASUREMENTS OF AEROSOL PARTICLE AGGLOMERATES
CARY PRESSER, Joseph Conny, Ashot Nazarian, National Institute of Standards and Technology, Gaithersburg, MD

10D6
3:50 PM
RETRIEVAL OF AEROSOL MICROPHYSICAL PARAMETERS FROM A LIMITED SET OF MEASURED CHARACTERISTICS OF SCATTERED RADIATION
MIKHAIL PANCHENKO, Institute of Atmospheric Optics, Tomsk, Russia; Mikhail Sviridenkov, A.M.Obukhov, Institute of Atmospheric Physics, Moscow, Russia; Svetlana Terpugova, Valerii Kozlov, Institute of Atmospheric Optics, Torrisk, Russia; Alexander Kozlov, Alexander Ankilov, Anatoli Baklanov, Institute of Chemical Kinetics and Combustion, Novosibirsk, Russia

4:10 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 10PD7-10PD14 (1 min each).

10E **Mass Spectrometry** *Palos Verdes A/B*

Chair: Kimberly Prather, Co-chair: Denis Phares *2:10 PM - 4:25 PM*

10E1
2:10 PM
QUANTITATIVE ANALYSIS OF SINGLE PARTICLE MASS SPECTROMETRY DATA FOR AMBIENT CARBONACEOUS AEROSOLS
JONATHAN O. ALLEN, Arizona State University, Tempe, AZ; Jeffrey R. Whiteaker, Segio A. Guazzotti, University of California, San Diego, La Jolla, CA ; Prakash V. Bhave, California Institute of Technology, Pasadena, CA; Kimberly A. Prather, University of California, San Diego, La Jolla, CA

10E2
2:30 PM
PROGRESS IN EXTERNAL ABLATION AND IONIZATION OF AIRBORNE PARTICLES--HOPE FOR REAL-TIME QUANTITATIVE PARTICLE ANALYSIS
PETER T. A. REILLY, Sven Hoffmann, William B. Whitten, J. Michael Ramsey, Oak Ridge National Laboratory, Oak Ridge, TN

10E3
2:50 PM
DEPENDENCE ON MASS AND CHARGE OF THE ELECTRICAL MOBILITY OF POLYETHYLENE GLYCOL CHAINS
SVEN UDE, Juan Fernandez De La Mora, Yale University, New Haven, CT; Bruce Thomson, Sciex, Concord, ON, Canada

10E4
3:10 PM
MICRO ELECTRICAL MOBILITY CLASSIFIER
RICHARD FLAGAN, California Institute of Technology, Pasadena, CA

10E5
3:30 PM
SINGLE PARTICLE STUDIES OF POLYMER CRYSTAL NUCLEATION FROM SOLUTION
ADAM OLSEN, Richard Flagan, Julia Kornfield, California Institute of Technology, Pasadena, CA

10E6
3:50 PM
DEVELOPMENT OF A MASSIVE AIR SAMPLER FOR COLLECTING ATMOSPHERIC FALLOUT FROM NUCLEAR TESTS OR ACCIDENTS
YUNG SUNG CHENG, Wei Chung Su, Yue Zhou, Lovelace Respiratory Research Institute, Albuquerque, NM; Andrew McFarland, Hammad Irshad, Texas A&M University, College Station, TX

4:10 PM
POSTER PREVIEW
This session ends with a brief presentation of posters 10PE7-10PE12 (1 min each).

Thursday, October 23, 2003 **Poster Session #3 and Exhibits. Refreshments provided.**
4:30 PM - 6:30 PM *Pacific Ballroom D*

7PA **Exposure Assissment I** *Pacific Ballroom D*
4:30 PM - 5:30 PM

7PA6 CHARACTERISTICS OF DUST AND FREE SILICA EXPOSURES FOR WORKERS IN THE REFRACTORY MATERIAL MANUFACTURING INDUSTRY
PERNG-JY TSAI, Li-Fang Su, National Chen Kung University, Tainan, Taiwan; Ming-S-Hsiu Lin, Institute of Occupational Safety and Health, Taipei, Taiwan

7PA7 ULTRAFINE PARTICLES FORMATION IN WELDING AND GRINDING
ARI UKKONEN, Dekati Ltd., Tampere, Finland; Rainer Schimberg, Tampere Regional Institute of Occupational Health,Tampere, Finland

7PA8 A SIMPLE MODEL TO PREDICT ULTRAFINE PARTICLES NEAR MAJOR HIGHWAYS
YIFANG ZHU, William Hinds, University of California, Los Angeles, CA

7PA9 AUTOMATED ELEMENTAL SIZE DISTRIBUTION ANALYSES AND CHARACTERIZATION OF PASSIVE AEROSOL SAMPLES FROM NEW YORK CITY
JEFF WAGNER, California Department of Health Services, Environmental Health Laboratory Branch, Berkeley, CA; Nathan Wood, University of San Francisco, San Francisco, CA; Stephen Wall, California Department of Health Services, Environmental Health Laboratory Branch, Berkeley, CA

7PA10 FIELD EVALUATION OF A PERSONAL CASCADE IMPACTOR SAMPLER (PCIS)
MANISHA SINGH, Chandan Misra, Constantinos Sioutas, University of Southern California, Los Angeles, CA

7PA11 A COMPARISON OF METHODS TO MEASURE AEROSOL SURFACE-AREA, USING MONODISPERSE AND POLYDISPERSE SILVER TEST AEROSOLS
BON KI KU, Andrew D. Maynard, National Institute for Occupational Safety and Health, Cincinnati, OH

7PA12 EFFICIENCY OF A NEWLY DEVELOPED BIOCIDAL ELECTROSTATIC MEMBRANE AGAINST AEROSOLIZED VIRAL PARTICULATES
STEPHANE BOURGET, David Ohayon, Aurelie De Fayard, Anne Marie Gendron, Pierre Jean Messier, Triosyn Corp., Mirabel, Quebec, Canada

7PA13 PERFORMANCE OF A NEW TYPE OF IMPACTOR WITH A COOLED IMPACTION PLATE FOR SAMPLING E. COLI AND B. SUBTILIS BACTERIA BIOAEROSOLS
Byung Uk Lee, SANG SOO KIM, Korea Advanced Institute of Science and Technology, Daejeon, Korea

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7PB **California Regional Particulate Air Quality Study** *Pacific Ballroom D*

4:30 PM - 5:30 PM

7PB7 APPLICATION OF CATEGORICAL AND REGRESSION TREE MODEL IN THE SAN JOAQUIN VALLEY TO UNDERSTAND RELATIONSHIP BETWEEN PM AND METEOROLOGICAL VARIABLES
RICHARD HACKNEY, Jeff Austin, California Air Resources Board, Sacramento, CA

7PB8 NEAR-TERM AND LOW WIND DISPERSION MEASUREMENTS OF PLUMES FROM STEAM GENERATORS DURING THE CRPAQS
THOMAS RAPPOLT, Greg Hauser, Stephen Kerrin, Tracer ES&T Inc., San Marcos, CA

7PB9 EVALUATING SIMILARITIES OF SOURCE PROFILES USING PAIR SLOPE DISTRIBUTION (PSD) METHOD: APPLICATIONS TO PM2.5 SOURCE PROFILES FROM THE BRAVO AND CRPAQS STUDIES
L.-W. ANTONY CHEN, Desert Research Institute, Reno, NV

7PB10 VERTICAL VARIATIONS IN PM AND PM PRECURSOR CONCENTRATIONS IN THE SAN JOAQUIN VALLEY, CALIFORNIA
NICOLE HYSLOP, Elizabeth Simon, Paul Roberts, Clinton MacDonald, Sonoma Technology Inc., Petaluma, CA

7PB11 AEROSOL PROCESSING AND REMOVAL BY FOGS: OBSERVATIONS IN RADIATION FOGS DURING THE CRPAQS STUDY
HUI CHANG, Pierre Herckes, Taehyoung Lee, Jeffrey L. Collett, Colorado State University, Fort Collins, CO

7PB12 SEMI-VOLATILE ORGANIC COMPOUND CHARACTERIZATION AND EVALUATION OF PM2.5 EMISSION SOURCES COLLECTED DURING THE CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY
LYNN R. RINEHART, L.-W. Antony Chen, Judith C. Chow, Barbara Zielinska, Desert Research Institute, Reno, NV

7PC **Heterogeneous Aerosol Chemistry I**

Pacific Ballroom D

4:30 PM - 5:30 PM

7PC6 THE STATE OF WATER IN ATMOSPHERIC AEROSOLS: FREE OR SOLVATED?
Chak K. Chan, M. Y. CHOI, Hong Kong University of Science and Technology, Kowloon, Hong Kong

7PC7 REACTIONS OF GAS PHASE OH AND O3 WITH NABR: EVIDENCE FOR AN INTERFACE MECHANISM
Weihong Wang, SHERRI W. HUNT, Rachel C. Hoffman, Lisa M. Wingen, University of California, Irvine, CA; Alexander Laskin, Daniel Gaspar, Pacific Northwest National Lab, Richland, WA; Eladio M. Knipping, EPRI, Palo Alto, CA; Donald Dabdub, Barbara J. Finlayson-Pitts, University of California, Irvine, CA

7PC8 THE IMPACTS OF DUST ON REGIONAL TROPOSPHERIC CHEMISTRY DURING THE ACE-ASIA EXPERIMENT: A THREE-DIMENSIONAL MODEL STUDY
YOUHUA TANG, University of Iowa, Iowa City, IA

7PC9 KINETICS STUDIES OF THE HETEROGENEOUS REACTION OF ADSORBED HNO3 ON SILICA WITH GASEOUS NO AT ROOM TEMPERATURE
ARMANDO RIVERA-FIGUEROA, Barbara Finlayson-Pitts, University of California, Irvine, CA

7PC10 OBSERVATION OF HETEROGENEOUS CHEMISTRY IN THE MARINE BOUNDARY LAYER EMPLOYING SINGLE PARTICLE MASS SPECTROMETRY
SERGIO GUAZZOTTI, David Sodeman, University of California San Diego, La Jolla, CA; Keith Coffee, University of California, Riverside, CA; Kimberly Prather, University of California San Diego, La Jolla, CA

7PC11 IMPACT OF TURBULENT COAGULATION OF CLOUD DROPLETS ON IN-CLOUD CHEMISTRY
NICOLE RIEMER, Anthony S. Wexler, University of California, Davis, CA

7PC12 ASSESSMENT OF GLOBAL EFFECT OF AEROSOLS ON TROPOSPHERIC OXIDANTS AND OZONE BUDGET
XUEXI TIE, ACD/NCAR, Boulder, CO

7PD **Urban/Regional Aerosol** *Pacific Ballroom D*

4:30 PM - 5:30 PM

7PD6 A COMPARISON OF ORGANIC CHARACTERISTICS AND PM2.5 SOURCES BETWEEN ASIAN AND THE U.S. CITIES
MEI ZHENG, Georgia Institute of Technology, Atlanta, GA; James Schauer, University of Wisconsin, Madison,WI; Armistead Russell, Michael Bergin, Glen Cass, Georgia Institute of Technology, Atlanta, GA*

7PD7 SINGLE ATMOSPHERIC PARTICLE MASS SPECTROSCOPY: COMPARING HOUSTON TX WITH NEW YORK.
DAN IMRE, Alla Zeleny-Imre, Pacific Northwest National Laboratory, Richland, WA

7PD8 THE RELATIONSHIP BETWEEN BOTH REAL-TIME AND TIME-INTEGRATED COARSE (2.5-10UM), INTERMEDIATE (1-2.5UM), AND FINE (0-2.5UM) PARTICULATE MATTER IN THE LOS ANGELES BASIN
MICHAEL D. GELLER, Philip M. Fine, Constantinos Sioutas, University of Southern California, Los Angeles, CA; Paul A. Solomon, US EPA, Las Vegas, NV

7PD9 AEROSOLS IN DANISH AIR (AIDA)
FINN PALMGREN, Peter WŒhlin, Marianne Glasius, Ruwim Berkowicz, Matthias Ketzel, National Environmental Research Institute,Roskilde, Denmark

7PD10 MEASUREMENT OF PARTICULATE ORGANICS IN MEXICO CITY USING AN AEROSOL MASS SPECTROMETER
DARA SALCEDO, Universidad Iberoamericana,Mexico City, Mexido; Jose Luis Jimenez, Peter De Carlo, Alex Huffman, Katjia Dzepina, Qi Zhang, University of Colorado, Boulder, CO; John T. Jayne, Douglas R. Worsnop, Manjula R. Canagaratna, Timothy Onasch, Philip Mortimer, Aerodyne Research Inc., Billerica, MA

7PD11 SIZE-RESOLVED CHEMICAL COMPOSITION OF FINE PARTICLES IN PITTSBURGH MEASURED WITH AN AERODYNE AEROSOL MASS SPECTROMETER
QI ZHANG, University of Colorado, Boulder, CO; Manjula Canagaratna, John Jayne, Douglas Worsnop, Aerodyne Research Inc., Billerica, MA; Jose-Luis Jimenez, University of Colorado, Boulder, CO

7PD12 PREDICTION OF FINE PARTICULATE LEVELS AT UNMONITORED LOCATIONS
LUTHER SMITH, ManTech Environmental Technology Inc., Durham, NC; Shaibal Mukerjee, Gary Norris, US EPA, Research Triangle Park, NC; Melissa Gonzales, University of New Mexico School of Medicine, Albuquerque, NM; Casson Stallings, ManTech Environmental Technology Inc., Durham, NC; Lucas Neas, Haluk Ozkaynak, US EPA, Research Triangle Park, NC

7PD13 TWO-STROKE VEHICULAR EMISSIONS AND AIR QUALITY IN NEW DELHI, INDIA: A PARTICULATELY INTERESTING PILOT STUDY
DAVID COCKER, Aniket Sawant, CE-CERT/University of California, Riverside, CA; Dhruv Sharma, Indian Institute of Technology, New Delhi, India

7PD14 CHARACTERIZATION OF SUBMICRON SECONDARY AEROSOLS IN AN URBAN ATMOSPHERE
JIUN-HORNG TSAI, National Cheng Kung University, Tainan, Taiwan; Jim Lin, National Kaohsiung First University of Science and Technology, Kaohsiung, Taiwan; Hung-lung Chiang, Fooyin University, Kaohsiung, Taiwan

7PD15 DRY DEPOSITION FLUXES OF HEAVY METALS IN SEOUL, KOREA DURING YELLOW-SAND EVENTS AND THOSE LOCATIONS OF POSSIBLE SOURCES
SEUNG-MUK YI, Kyung-duk Zoh, Seoul National University, Seoul, Korea; Young-ji Han, Thomas Holsen, Clarkson University, Potsdam, NY

7PE **Emissions II**

Pacific Ballroom D

4:30 PM - 5:30 PM

7PE6 RESIDENTIAL AIR POLLUTION NEAR LAGUARDIA AIRPORT, QUEENS, NY
Beverly Cohen, MAIRE HEIKKINEN, New York University School of Medicine, Tuxedo, NY

7PE7 EMISSION RATES OF FINE PARTICLES FROM TIRE WEAR IN A HIGHWAY TUNNEL DETERMINED BY MOLECULAR MARKER COMPOUNDS
OLGA ALEXANDROVA, Jonathan O. Allen, Arizona State University, Tempe, AZ; Thomas F. Dorsey, Jr., Cambridge Isotope Laboratories, Andover, MA

7PE8 CHASE STUDIES OF PARTICULATE EMISSIONS FROM IN-USE VEHICLES
MANJULA CANAGARATNA, John Jayne, Aerodyne Research Inc., Billerica, MA; David Ghertner, University of California, Berkeley, CA; Scott Herndon, Quan Shi, Aerodyne Research Inc., Billerica, MA; Jose Jimenez, University of Colorado, Boulder, CO; Philip Silva, Aerodyne Research Inc., Billerica, MA; Paul Williams, University of Manchester, Manchester, UK; Thomas Lanni, Department of Environmental Conservation, Albany, NY; Frank Drewnick, Kenneth Demerjian, State University of New York, Albany, NY; Charles Kolb, Douglas Worsnop, Aerodyne Research,Inc.

7PE9 ELEMENTAL COMPARISON OF FUGITIVE DUST FROM THE SAN JOAQUIN VALLEY AND AMBIENT SAMPLES FROM YOSEMITE AND SEQUOIA NATIONAL PARK IMPROVE SITES
MICHAEL S. BROWN, Omar F. Carvacho, Lowell L. Ashbaugh, Robert G. Flocchini, University of California, Davis, CA

7PE10 PROGRAM POVA (POLLUTION DES VALLEES ALPINES) : INTENSIVE FIELD MEASUREMENTS
Gilles Aymoz, JEAN-LUC JAFFREZO, Laboratoire de Glaciologie et de GŽophysique de l'Environnement, Saint Martin Dheres, France

7PE11 YEARLY CHEMICAL PROFILES OF AEROSOL IN 2 ALPINE VALLEYS
Gilles Aymoz, JEAN-LUC JAFFREZO, Julie Cozic, Laboratoire de Glaciologie et de GŽophysique de l'Environnement , Saint Martin Dheres, France; Willy Maenhaut, Ghent University, Ghent, Belgium; Didier Chapuis, AIR-APS, Chambery, France

7PE12 CONTINUOUS ULTRAFINE PM MEASUREMENTS IN SOURCE AND RECEPTOR SITES OF THE LOS ANGELES BASIN AND RELATION TO PM2.5 MASS, CHEMICAL COMPOSITION AND SOURCES
BHABESH CHAKRABARTI, Manisha Singh, Philip M. Fine, Constantinos Sioutas, University of Southern California, Los Angeles, CA

7PE13 AIR QUALITY CONTROL IN THE SAN JOAQUIN VALLEY
MARCUS WATSON, Anthony Wexler, University of California, Davis, CA

7PE14 ON-ROAD REMOTE SENSING MEASUREMENT OF AUTOMOTIVE PARTICULATE AND GASEOUS EMISSIONS IN LAS VEGAS, NV
CLAUDIO MAZZOLENI, Hampden D. Kuhns, Hans MoosmŸller, Robert E. Keislar, Peter W. Barber, Djordje Nicolic, Norman F. Robinson, John G. Watson, Desert Research Institute, Reno, NV

8PA **Chemical and Biological Agent Detection 1** *Pacific Ballroom D*
4:30 PM - 5:30 PM

8PA4 DETERMINATION OF THE METABOLIC STATES AND PYSIOLOGICAL STATES OF INDIVIDUAL BACTERIAL CELLS
HERBERT TOBIAS, Lawrence Livermore National Laboratory, Berkeley, CA

8PA5 OPTICALLY AND BIOLOGICALLY FUNCTIONAL NANOPARTICLES
BING GUO, Ian Kennedy, University of California, Davis, CA

8PA7 AEROSOL-INDUCED PLASMA SPECTROMETER FOR SELECTED ELEMENTS
M.-D. CHENG, Oak Ridge National Laboratory, Oak Ridge, TN; D.-R. Chen, Washington University, St. Louis, MO

8PA8 CHARACTERIZATION OF BIOAEROSOL COMPOSITION IN TROPICAL ENVIRONMENT USING FT-RAMAN SPECTROSCOPY
LIYA YU, Xiao Yuen Tah, Wee Boon Lee, Wen-Tso Liu, National University of Singapore, Singapore

8PB **Deposition: Modeling** *Pacific Ballroom D*
4:30 PM - 5:30 PM

8PB4 NEAR-WALL TURBULENCE CORRECTIONS FOR IMPROVED NUMERICAL SIMULATION OF AEROSOL DEPOSITION
EDGAR MATIDA, Warren Finlay, Carlos Lange, Biljana Grgic, University of Alberta, Edmonton, AB, Canada

8PB5 PREDICTING EXTRATHORACIC DEPOSITION FROM DRY POWDER INHALERS
WARREN FINLAY, University of Alberta, Edmonton, AB, Canada; Wes Dehaan, Alkermes Inc., Cambridge, MA

8PB6 FLUID FLOW PIV MEASUREMENTS AND CFD SIMULATIONS IN AN IDEALIZED MOUTH-THROAT
WARREN FINLAY, Anthony Heenan, Edgar Matida, University of Alberta, Edmonton, AB, Canada

8PB7 DEPOSITION OF FINE PARTICLES IN THE UPPER THREE-AIRWAY BIFURCATION
ALI R. MAZAHERI, Goodarz Ahmadi, Clarkson University, Potsdam, NY

8PB8 MATHEMATICAL ANALYSIS OF PARTICLE TRANSPORT AND DEPOSITION IN HUMAN LUNGS
JUNG-IL CHOI, University of North Carolina, Chapel Hill, NC; Chong S. Kim, US EPA National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC

8PB9 NUMERICAL SIMULATION OF AEROSOL TRANSPORT IN HUMAN ORAL AIRWAYS
XIAOBO ZHU, Zongqin Zhang, University of Rhode Island, Kingston, RI; Yung Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

8PB10 LOW VOLUME ORBITAL MOTION DUST GENERATOR FOR NOSE-ONLY INHALATION STUDIES
STEPHEN TEAGUE, University of California, Davis, CA; John Veranth, University of Utah, Salt Lake City, UT; Ann Aust, Utah State University, Logan, UT; Kent Pinkerton, University of California, Davis, CA

8PB11 A PERSONAL AND MICROENVIRONMENTAL AEROSOL SPECIATION SAMPLER (PMASS)
NATHAN KREISBERG, Susanne Hering, Aerosol Dynamics Inc., Berkeley, CA; Alison Geyh

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8PC **Clouds & Fog**

Pacific Ballroom D

4:30 PM - 5:30 PM

8PC4 EFFECT OF TURBULENCE ON COLLISION EFFICIENCY OF CLOUD DROPLETS. PART 2, NUMERICAL RESULTS
ORLANDO AYALA, University of Delaware, Newark, DE; Wojciech Grabowski, National Center for Atmospheric Research, Boulder, CO; Lian-ping Wang, University of Delaware, Newark, DE

8PC5 ORGANIC AEROSOL EFFECTS ON FOG DROPLET SPECTRA
YI MING, University of Delaware, Newark, DE; Lynn Russell, Princeton University, Princeton, NJ

8PC6 AIRCRAFT SAMPLING IN CLOUDS PRODUCES ARTIFACTS
DANIEL MURPHY, Daniel Cziczo, Paula Hudson, NOAA Aeronomy Lab, Boulder, CO

8PC7 PROPERTIES OF THE SIZE-RESOLVED FOG DROPLETS AND INDIVIDUAL CLOUD DROPLETS COLLECTED IN WESTERN JAPAN DURING ASIAN DUST STORM EVENT
MIKIO KASAHARA, Chang-jin Ma, Susumu Tohno, Kyoto University, Kyoto, Japan; Shinjiro Hayakawa, Hiroshima University, Hiroshima, Japan

8PC8 ANALYSIS OF ATMOSPHERIC AEROSOL PARTICLES USING AN ENIVRONMENTAL SCANNING ELECTRON MICROSCOPE
TIMOTHY RAYMOND, Emily Beesing, Bucknell University, Lewisburg, PA

8PC9 EFFECT OF TURBULENCE ON COLLISION EFFICIENCY OF CLOUD DROPLETS. PART 1, THEORETICAL FORMULATION
LIAN-PING WANG, Orlando Ayala, University of Delaware, Newark, DE; Wojciech Grabowski, National Center for Atmospheric Research, Boulder, CO

8PC10 AEROSOL/CLOUD CONDENSATION NUCLEI (CCN) CLOSURE DURING THE AEROSOL IOP AT THE ARM SGP SITE
TRACEY RISSMAN, Timothy Van Reken, California Institute of Technology, Pasadena, CA; Jian Wang, Brookhaven National Laboratory, Upton, NY; Varuntida Varutbangkul, California Institute of Technology, Pasadena, CA; Haflidi Jonsson, CIRPAS, United States Naval Postgraduate School, Marina, CA; John Seinfeld, Richard Flagan, California Institute of Technology, Pasadena, CA

8PD **Bioaerosols & Biomass Burning** *Pacific Ballroom D*

4:30 PM - 5:30 PM

8PD4 REPRESENTATIVENESS OF CULTURABLE MICROORGANISMS IN THE BIOGENIC COMPONENT OF ATMOSPHERIC AEROSOL IN THE SOUTH OF WESTERN SIBERIA.
ALEXANDER SAFATOV, Irina Andreeva, Alexander Borodulin, Galina Buryak, Yurii Marchenko, Victor Marchenko, Sergei Olkin, Valentina Petrishchenko, Oleg P'yankov, Irina Reznikova, Vladimir Repin, Alexander Sergeev, State Research Center of Virology and Biotechnology "Vector," Koltsovo, Russia; Boris Belan, Mikhail Panchenko, Institute of Atmospheric Optics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

8PD5 THE IMPACT OF WILDFIRE ON REGIONAL AIR QUALITY IN BRAZIL
SREELA NANDI, Christine Wiedinmyer and Alex Guenther, Atmospheric Chemistry Division, National Center for Atmospheric Research, Boulder, CO

8PD6 THE BIOGENIC COMPONENT FRACTION OF ATMOSPHERIC AEROSOL MASS IN THE SOUTH OF WESTERN SIBERIA.
ALEXANDER SAFATOV, Irina Andreeva, Alexander Borodulin, Galina Buryak, Yurii Marchenko, Victor Marchenko, Sergei Olkin, Valentina Petrishchenko, Oleg P'ankov, Irina Reznikova, Alexander Sergeev, Center of Virology and Biotechnology "Vector," Koltsovo, Russia; Alexander Ankilov, Anatoli Baklanov, Konstantin Koutsenogii, Valerii Makarov, Nataliya Ivanova, Institute of Chemical Kinetics and Combustion, Russian Academy of Sciences; Boris Belan, Mikhail Panchenko, Institute of Atmospheric Optics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

8PD7 FLUORESCENCE SPECTRA OF ATMOSPHERIC AEROSOL AT ADELPHI, MARYLAND
RON PINNICK, Steven Hill, Army Research Lab; Yong-le Pan, Richard Chang, Yale University, New Haven, CT

8PD8 AIR QUALITY IMPACTS FROM PRESCRIBED BURNING
KARSTEN BAUMANN, Sangil Lee, Mei Zheng, Venus Dookwah, Fu Wang, Armistead Russell, Georgia Institute of Technology, Atlanta, GA

8PD9 BIOMASS BURNING PARTICLE MEASUREMENTS: CHARACTERISTIC COMPOSITION AND CHEMICAL PROCESSING
PAULA HUDSON, CIRES/NOAA, Boulder, CO; Daniel Murphy, NOAA, Boulder, CO; Daniel Cziczo, David Thomson, CIRES/NOAA, Boulder, CO

8PD10 THE COMPARISON OF SEVERAL YEARS DATA ON ACCUMULATED IN SNOW COVER BIOGENIC COMPONENT OF ATMOSPHERIC AEROSOL
ALEXANDER SAFATOV, Galina Buryak, Irina Andreeva, Alexander Borodulin, Sergei Olkin, Valentina Petrishchenko, Irina Reznikova, Yurii Marchenko, State Research Center of Virology and Biotechnology "Vector," Koltsovo, Russia; Vladimir Raputa, Institute of Computation Mathematics and Mathematical Geophysics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

8PD11 COMPOSITION OF WILDFIRE SMOKE AT WESTERN U.S. IMPROVE SITES IN SUMMER 2002
LOWELL ASHBAUGH, University of California, Davis, CA

8PE **Combustion and Environmental Aerosol Formation II** *Pacific Ballroom D*

4:30 PM - 5:30 PM

8PE4 ULTRAFINE PARTICLES FROM VEHICLES DURING THE PITTSBURGH AIR QUALITY STUDY: LINKING NEAR SOURCE (TRAFFICE TUNNEL) AND AMBIENT SIZE DISTRIBUTIONS
CHARLES STANIER, Eric Lipsky, Andrey Khlystov, Allen Robinson, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA

8PE5 PARTICLE SIZE DISTRIBUTION FUNCTIONS OF SOOT IN LAMINAR PREMIXED ETHYLENE FLAMES
ZHIWEI YANG, Bin Zhao, Hai Wang, University of Delaware, Newark, DE

8PE6 EVOLUTION OF METAL OXIDE PARTICLES IN A HYDROGEN DIFFUSION FLAME
BING GUO, Ian Kennedy, University of California, Davis, CA

8PE7 HIGH TEMPERATURE INTERACTIONS BETWEEN RESIDUAL OIL ASH AND DISPERSED KAOLINITE POWDERS
WILLIAM LINAK, C. Andrew Miller, US EPA, Reserach Triangle Park, NC; Dawn Santoianni, Charles King, ARCADIS Geraghty & Miller Inc., Durham, NC; Takuya Shinagawa, US EPA, Research Triangle Park, NC; Jost Wendt, University of Arizona, Tucson, AZ; Jong-Ik Yoo, US EPA, Research Triangle Park, NC; Yong-Chil Seo, Yonsei University, Wonju, Korea

8PE8 DIFFUSIONAL DEPOSITION OF DIESEL PARTICLES IN A MONOLITHIC CATALYST CHANNEL
Z. GERALD LIU, Byron A. Pardue, Fleetguard/Nelson, Stoughton, WI; Evan Whitby, Chimera Technologies Inc., Forest Lake, MN

8PE9 SYNTHESIS OF LITHIUM-COBALT OXIDE NANOPARTICLES BY FLAME SPRAY PYROLYSIS
HEE DONG JANG, KIGAM, Daejon, Korea

8PE11 EMISSION OF PARTICULATE MATTER AND POLYCYCLIC AROMATIC HYDROCARBONS (PAH) FROM SELECTED COOKSTOVE-FUEL SYSTEMS IN ASIA
NGUYEN THI KIM OANH, Do Albina, Li Ping, Asian Institute of Technology, Pathumthani, Thailand

9PA **Heterogeneous Aerosol Chemistry II**

Pacific Ballroom D

5:30 PM - 6:30 PM

9PA5 REAL TIME MEASUREMENTS OF OXIDATION OF SAMS USING ATR
YAEL DUBOWSKI, Barbara J. Finlayson-Pitts, University of California, Irvine, CA

9PA6 PREPARATION AND CHARACTERIZATION OF ORGANIC COATINGS OF VARIABLE THICKNESS ON INERT CORES AND THEIR CHEMICAL REACTIONS WITH OZONE
Y. Katrib, SCOT T. MARTIN, Harvard University, Cambridge, MA; Y. Rudich, Weizmann Institute, Rehovot, Israel; H. Zhang, P. Davidovits, Boston College, Chestnut Hill, MA; J.T. Jayne, D.R. Worsnop, Aerodyne Research Corp., Billerica, MA

9PA7 UPTAKE OF SMALL ORGANIC COMPOUNDS BY SULFURIC ACID AEROSOLS: DISSOLUTION AND REACTION
LAURA IRACI, Rebecca Michelsen, Samantha Ashbourn, NASA Ames Research Center, Moffett Field, CA

9PA8 EFFECT OF MORPHOLOGY AND COMPOSITION ON THE HYGROSCOPICITY OF SOOT AEROSOLS
JAY G. SLOWIK, Wyatt Biel, Paul Davidovits, Boston College, Chestnut Hill, MA; Leah R. Williams, John T. Jayne, Charles E. Kolb, Douglas R. Worsnop, Aerodyne Research Inc., Billerica, MA; Yinon Rudich, Weizmann Institute, Rehovot, Israel

9PA9 AN INTEGRATED SYSTEM FOR ANALYSES OF AEROSOL COMPOSITION AND CHEMISTRY (ISAACC)
DARIN TOOHEY, Alice Delia, University of Colorado, Boulder, CO; Ann Middlebrook, CIRES/NOAA Aeronomy Laboratory, Boulder, CO; Shelly Miller, Margaret Tolbert, Brian Toon, University of Colorado, Boulder, CO

9PA10 DESIGN AND CHARACTERIZATION OF AN APPARATUS FOR STUDYING THE KINETICS AND MECHANISMS OF HETEROGENEOUS REACTIONS IN THE ATMOSPHERE
KEVIN RAMAZAN, Lisa Wingen, Barbara Finlayson-Pitts, University of California, Irvine, CA

9PA11 OXY-HYDROCARBON / ICE INTERACTIONS IN THE TROPOSPHERE
JEFFERSON SNIDER, University of Wyoming, Laramie, WY; William Huffman, Huffman Laboratories Inc., Golden, CO

9PB **Deposition: Experimental**

Pacific Ballroom D

5:30 PM - 6:30 PM

9PB5 AEROSOL DEPOSITION AND FLOW MEASUREMENTS IN AN IDEALIZED MOUTH AND THROAT
BILJANA GRGIC, University of Alberta, Edmonton, AB, Canada

9PB6 DIMENSIONAL ANALYSIS IN AIRWAY PARTICLE DEPOSITION EXPERIMENTS
ZONGQIN ZHANG, Richard Lessmann, Xiaobo Zhu, University of Rhode Island, Kingston, RI

9PB7 A SET-UP FOR STUDY OF DEPOSITION OF DIFFERENT TYPES OF AEROSOL PARTICLES IN RESPIRATORY TRACTS OF LABORATORY ANIMALS.
ALEXANDER SAFATOV, Vladimir Zhukov, Alexander Sergeev, Vladimir Toporkov, Victor Yashin, Nikolai Belyaev, Oleg P'yankov, Larissa Shishkina, Elena Ryabchikova, Elena Malkova, Boris Zaitsev, State Research Center of Virology and Biotechnology Vector, Koltsovo, Russia; Anatoli Baklanov, Andrei Onishchuk, Nataliya Ivanova, Vladimir Karasev, Institute of Chemical Kinetics and Combustion, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

9PB9 DEPOSITION FRACTION OF MONODISPERSE AEROSOLS LABELED WITH 59FE IN BALB/C MICE.
BRIAN WONG, Earl Tewksbury, Bahman Asgharian, CIIT Centers for Health Research, Research Triangle Park, NC

9PB10 AEROSOL DELIVERY OF MAMMALIAN CELLS
BARBARA WYSLOUZIL, Andrew Roberts, Worcester Polytechnic Institute, Worcester, MA; Lawrence Bonassar, Cornell University, Ithaca, NY

9PB11 AEROSOL DISPERSION WITH IMPINGING JET ENTRAINMENT
ZHAOLIN WANG, C. F. Lange, W. H. Finlay, University of Alberta, Edmonton, AB, Canada

9PB12 SINGLE PARTICLE CHARACTERIZATION OF ULTRAFINE AND FINE PARTICLES FROM HIGH VOLUME AEROSOL CONCENTRATORS
MICHELE F. SIPIN, Yongxuan Su, Kimberly A. Prather, University of California, San Diego, La Jolla, CA; Robert Gelein, Mark J. Utell, Gunther Oberdorster, University of Rochester School of Medicine and Dentistry, Rochester, NY

9PB13 THE EFFECT OF PARTICLE GROWTH ON DEPOSITION IN LUNG AIRWAYS
Bahman Asgharian, CIIT Centers for Health Research, Research Triangle Park, NC

9PC **Carbonaceous Aerosol** *Pacific Ballroom D*

5:30 PM - 6:30 PM

9PC5 CALCULATIONS OF INCREMENTAL SECONDARY ORGANIC AEROSOL REACTIVITY
MARC CARRERAS, University of California, Irvine, CA; Robert Griffin, University of New Hampshire, Durham, NH; Donald Dabdub, University of California, Irvine, CA

9PC6 ANALYSIS OF ORGANIC HYDROPEROXIDES FORMED FROM ALKENE OZONOLYSIS USING GAS CHROMATOGRAPHY/MASS SPECTROMETRY OF TRIMETHYLSILYL DERIVATIVES
KENNETH DOCHERTY, Kalyada Kumboonlert, Isaac Lee, Paul Ziemann, University of California, Riverside, CA

9PC7 EVALUATION OF SEMI-CONTINUOUS ORGANIC/ELEMENTAL CARBON AEROSOL BY COMPARISON WITH OTHER INSTRUMENT RESULTS AND METEOROLOGICAL DATA IN RUBIDOUX, CALIFORNIA
PETER A. JAQUES, Philip K. Hopke, Clarkson University, Potsdam, NY; Doh-won Lee, Oak Ridge National Laboratory, Oak Ridge, TN; David F. Smith, Sunset Laboratory, Hillsborough, NC; Constantinos Sioutas, University of Southern California, Los Angeles, CA; Robert A. Cary, Sunset Laboratory, Hillsborough, NC; William E. Wilson, US EPA, Research Triangle Park, NC

9PC8 A THEORETICAL LUMPING MODEL FOR COMPOSITION- AND TEMPERATURE-DEPENDENT PARTITIONING PARAMETERS OF ORGANIC AEROSOL MIXTURES
FEI BIAN, Frank Bowman, Vanderbilt University, Nashville, TN

9PC9 HYGROSCOPICITY OF SECONDARY ORGANIC AEROSOL FORMED BY OZONOLYSIS OF CYCLOALKENES, MONOTERPENES, AND SESQUITERPENES
VARUNTIDA VARUTBANGKUL, Fredrick Brechtel, Melita Keywood, Song Gao, Roya Bahreini, Richard Flagan, John Seinfeld, California Institute of Technology, Pasadena, CA

9PC10 INVESTIGATIONS ON THE WATER SOLUBLE FRACTION OF OC DURING POVA (POLLUTION DES VALLŽES ALPINES)
JEAN-LUC JAFFREZO, Julie Cozic, Gilles Aymoz, Laboratoire de Glaciologie et de GŽophysique de l'Environnement, Saint Martin Dheres, France

9PC11 NEW METHODOLOGY FOR THE DETERMINATION OF FUNCTIONNAL GROUP AND CHEMICAL BOND INFORMATION OF ATMOSPHERIC PARTICLES
VERONIQUE JACOB, GRECA, Grenoble, France

9PC12 PREPARATION OF SILICA/CARBON COMPOSITE PARTICLES AND EVALUATION OF THEIR COMPLEX REFRACTIVE INDEX
HANKWON CHANG, Kikuo Okuyama, Hiroshima University, Hiroshima, Japan; Wladyslaw Witold Szymanski, University of Vienna, Vienna, Austria

9PD **Numerical Modeling of Regional Aerosols I** *Pacific Ballroom D*

5:30 PM - 6:30 PM

9PD5 DEFINITION OF THE ATMOSPHERIC POLLUTANTS SOURCE PARAMETERS ON THE BASIS OF THE UNDERLYING SURFACE DEPOSIT DENSITY
Oxana V. Botalova, ALEXANDER I. BORODULIN, Sergey R. Sarmanaev, Svetlata S. Kotlyarova, State Research Center of Virology and Biotechnology Vector, Koltsovo, Russia

9PD6 MODELING OF THE ATMOSPHERIC ADMIXTURES DISPERSION WITHIN THE BOUNDS OF CITY BUILDINGS
Sergey R. Sarmanaev, Boris M. Desyatkov, ALEXANDER I. BORODULIN, State Research Center of Virology and Biotechnology Vector, Koltsovo, Russia; Vladimir A. Dycha, Oleg G. Myslin, Novosibirskgragdanproyekt, Novosibirsk, Russia

9PD7 TAKING INTO ACCOUNT OF THE DISPERSION OF THE MEASURED CONCENTRATION VALUES IN THE PROBLEMS OF SEARCHING OF THE LATENT SOURCES OF ATMOSPHERIC AEROSOL POLLUTANTS
Boris M. Desyatkov, ALEXANDER I. BORODULIN, Sergey R. Sarmanaev, Svetlana S. Kotlyarova, State Research Center of Virology and Biotechnology Vector, Koltsovo, Russia

9PD8 MODELING MULTIPHASE AEROSOL FOR AN URBAN CASE IN THE ALPS
JULIETTE RIMETZ, Catherine Liousse, Jean-Luc Jaffrezo, Laboratoire de Glaciologie et de GŽophysique de l'Environnement, Saint Martin Dheres, France; Robert Rosset, Universite Paul Sabatier, Toulouse, France

9PD9 AURAMS SIMULATIONS OF PM AND PRECURSOR CONCENTRATIONS FROM THE PACIFIC2001 AIR QUALITY STUDY: MODEL/MEASUREMENT COMPARISONS
PAUL MAKAR, Veronique Bouchet, Louis-Philippe Crevier, Ashu Dastoor, Sunling Gong, Wanmin Gong, Sylvain Menard, Michael Moran, Balbir Pabla, Srinivasan Venkatesh, Leiming Zhang, Shao-meng Li, Environment Canada, Downsview, ON, Canada

9PD10 CONVERSION OF MULTICOMPONENT AEROSOL SIZE DISTRIBUTIONS FROM SECTIONAL TO MODAL REPRESENTATIONS
JIN LU, Frank Bowman, Vanderbilt University, Nashville, TN

9PD11 GLOBAL AMMONIUM AEROSOL CHEMISTRY AND DISTRIBUTION RELATIONSHIP TO SULFATE, NITRATE, SEASALT, AND DUST AEROSOLS
HUISHENG BIAN, Charlie Zender, University of California, Irvine, CA

9PD12 THE ROLE OF AMMONIA EMISSIONS FROM TRAFFIC IN URBAN AEROSOL BURDENS
REBECCA BARTHELMIE, Risoe National Laboratory, Roskilde, Denmark; Sara Pryor, Indiana University, Bloomington, IN; Lise Lotte S¿rensen, Risoe National Laboratory, Roskilde, Denmark

9PE **Field Instrumentation**

Pacific Ballroom D

5:30 PM - 6:30 PM

9PE5 CALIBRATION OF DIFFERENTIAL MOBILITY ANALYZER BY USE OF A C60 MONOMER AS AN INHERENTLY MONODISPERSE STANDARD NANOPARTICLE
HIDEKI TANAKA, Kazuo Takeuchi, RIKEN, Saitama, Japan

9PE6 ATMOSPHERIC AEROSOL COMPOSITION AS A FUNCTION OF HYGROSCOPICITY, VOLATILITY AND DENSITY
DABRINA DUTCHER, Kihong Park, Peter McMurry, Michael Zachariah, University of Minnesota, Minneapolis, MN; Markus Gaelli, TSI Inc., Shoreview, MN; Deborah Gross, Alexandra Schmitt, Amy Silverburg, Carleton College, Northfield, MN

9PE7 COMPARISON OF TIME RESOLVED AND 24-HR PARTICULATE NITRATE MEASUREMENTS AT THE BALTIMORE SUPERSITE
JOHN ONDOV, David Harrison, Seung Shik Park, University of Maryland, College Park, MD; Timothy Buckley, Johns Hopkins School of Public Health, Baltimore, MD; R. K. M. Jayanty, RTI International, Research Triangle Park, NC

9PE8 SELECTION OF APPROVED PM10 AND PM2.5 CONTINUOUS SAMPLERS IN CALIFORNIA
AHMED MEHADI, Clifford Popejoy, Jeffrey Cook, California Air Resources Board, Sacramento, CA

9PE9 DIFFERENCES IN AEROSOL SAMPLER COLLECTION CHARACTERISTICS WHEN SAMPLING THREE DUST TYPES
PATRICK O'SHAUGHNESSY, Julie Lo, Matthew Nonnenmann, University of Iowa, Iowa City, IA; Stephen Reynolds, Colorado State University, Fort Collins, CO

9PE10 COMPARISON OF PERFORMANCES OF SEMI-CONTINUOUS PM2.5 SAMPLERS IN SIX CITIES ACROSS THE UNITED STATES
JONG HOON LEE, Philip K. Hopke, Clarkson University, Potsdam, NY; Doh-Won Lee, Oak Ridge National Laboratory, Oak Ridge, TN; Alexander V. Polissar, New Jersey Department of Environmental Protection, Trenton, NJ; William E. Wilson, US EPA, Research Triangle Park, NC

9PE11 EXPERIMENTAL VALIDATION OF A HIGH TRANSMISSION RATE INLET FOR ULTRA-FINE SINGLE PARTICLE MASS SPECTROMETER
YONGJING ZHAO, Keith Bein, Anthony S. Wexler, University of California, Davis, CA; Prachi Middha, University of Delaware, Newark, DE

10PA **Heterogeneous Aerosol Chemistry III**

Pacific Ballroom D

5:30 PM - 6:30 PM

10PA7 POTENTIAL EVIDENCE OF ACIDIC SULFATE HETEROGENEOUS CHEMISTRY ON AMBIENT AEROSOLS DURING THE NEW ENGLAND AIR QUALITY STUDY
ANN MIDDLEBROOK, Brendan Matthew, NOAA Aeronomy Laboratory, Boulder, CO; Manjula Canagaratna, Doug Worsnop, Aerodyne Research Inc., Billerica, MA; Trish Quinn, Tim Bates, NOAA Pacific Marine Environmental Laboratory, Seattle, WA; Carsten Warneke, Joost De Gouw, Paul Goldan, Bil Kuster, Eric Williams, NOAA Aeronomy Laboratory, Boulder, CO

10PA8 COMPARISON OF AEROSOL MEASUREMENTS AT TWO FORESTED SITES: PROPHET 2001 AND CELTIC 2003
ALICE E. DELIA, Darin W. Toohey, Rebecca Garland, Margaret A. Tolbert, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA

10PA9 EFFECT OF ACTIVITY COEFFICIENT MODELS ON PREDICTIONS OF SECONDARY ORGANIC AEROSOL CONCENTRATIONS
FRANK BOWMAN, Joshua Melton, Vanderbilt University, Nashville, TN

10PA10 PARTITIONING OF ORGANIC SPECIES DERIVED FROM THE PHOTO-OXIDATION OF TOLUENE/NOX MIXTURES
CRAIG STROUD, NCAR, Boulder, CO; Paul Makar, MSC, Downsview, ON, Canada; Don Hastie, Diane Michelangeli, Mike Mozurkewich, York University, North York, ON, Canada

10PA11 ORGANIC AEROSOLS AS CLOUD CONDENSATION NUCLEI: IMPORTANCE OF SOLUBILITY, SURFACE ACTIVITY AND CHEMICAL PROCESSING
JONATHAN ABBATT, Keith Broekhuizen, University of Toronto, Toronto, ON, Canada; Pradeep Kumar, University of Pune, Pune, India

10PA12 SURFACE PHOTOCHEMISTRY OF OXIDIZED ORGANIC LAYERS IMMOBILIZED ON SEA-SALT STUDIED WITH CAVITY-RING DOWN SPECTROSCOPY
SERGEY NIZKORODOV, Anthony Gomez, Ao Lin, Ahmad Alshawa, University of California, Irvine, CA

10PA13 UPTAKE STUDIES WITH COATED PARTICLES
ERIN MYSAK, Dave Nash, Tomas Baer, Roger. E. Miller, University of North Carolina, Chapel Hill, NC

10PB **Chemical and Biological Agent Detection** *Pacific Ballroom D*

5:30 PM - 6:30 PM

10PB7 AIRBORNE AND DEPOSITED BACTERIA NEAR A WASTEWATER TREATMENT PLANT
ASHISH SAHU, Thomas Holsen, Stefan Grimberg, Clarkson University, Potsdam, NY

10PB9 QUANTITATIVE TECHNIQUE FOR TESTING BIO-AEROSOL SAMPLERS
VLADIMIR MIKHEEV, Maria Luna, Patricia Irving, InnovaTek, Richland, WA

10PB10 DESIGN, DEVELOPMENT, AND CHARACTERIZATION OF THE AMBIENT BREEZE TUNNEL
MATTHEW J. SHAW, Rodney S. Black, Mary C. Shell, Heather L. Green, Beth A. Fink, Vladimir Kogan, Jason A. Curran, Battelle Memorial Institute, Columbus, OH

10PB11 DEVELOPMENT AND TESTING OF A NOVEL STANDARD PARTICLE FOR PERFORMANCE VERIFICATION OF BIODEFENSE/BIOTERRORISM DETECTION SYSTEMS
ANDREW PAGE, David Alburty, Kelly Brown, Jennifer Hancock, Midwest Research Institute, Kansas City, MO

10PB12 DESIGN OF ELECTROSTATIC BIOAEROSOL SAMPLERS
KAPIL PANT, Shivshankar Sundaram, CFD Research Corporation, Huntsville, AL

10PC **Carbonaceous Aerosol** *Pacific Ballroom D*

5:30 PM - 6:30 PM

10PC7 ESTIMATION OF THE FORMATION RATE OF SECONDARY ORGANIC AEROSOL IN SUBURBAN/RURAL LOCATIONS: APPLICATION TO YELLOWSTONE NATIONAL PARK AND SUBURBAN SOUTHERN NEW HAMPSHIRE
ROBERT GRIFFIN, Barkley Sive, Yong Zhou, University of New Hampshire, Durham, NH; Oliver Wingenter, New Mexico Institute of Technology, Socorro, NM

10PC8 CHARACTERISTICS OF THE ORGANIC AND ELEMENTAL CARBON IN PM2.5 OF BEIJING
JIANHUA YU, Tong Yu, Beijing Municipal Environmental Monitoring Center, Beijing, PR China

10PC9 OPTIMIZING THERMAL-OPTICAL ANALYSIS FOR ELEMENTAL CARBON IN ATMOSPHERIC PARTICULATE MATTER BY FOCUSING ON OPTICAL BEHAVIOR
JOSEPH CONNY, Donna Klinedinst, National Institute of Standards and Technology, Gaithersburng, MD

10PC10 CHEMICAL CHARACTERIZATION OF ORGANIC AEROSOL DURING THE 2002 YOSEMITE AEROSOL AND VISIBILITY STUDY
PIERRE HERCKES, Guenter Engling, Jacqueline Carillo, Taehyoung Lee, Christian Carrico, Jeffrey L. Collett, Sonia Kreidenweis, Colorado State University, Fort Collins, CO; Derek Day, William Malm, NPS/CIRA, Colorado State University, Fort Collins CO; Graham Bench, Lawrence Livermore National Laboratory, Livermore, CA

10PC11 ESTIMATION OF SECONDARY ORGANIC AEROSOL
YEE-LIN WU, National Cheng Kung University, Tainan, Taiwan

10PC12 STUDIES OF THE AGEING AND TRANSFORMATION OF ATMOSPHERIC AEROSOLS
MOHAMMEDRAMI ALFARRA, James Allan, Keith Bower, Mike Cubison, Gordon McFiggans, David Topping, Hugh Coe, UMIST, Manchester, UK; Jose Jimenez, University of Colorado, Boulder, CO; John Jayne, Manjula Canagaratne, Doug Worsnop, Aerodyne Research Inc., Billerica, MA

10PC13 AMBIENT AEROSOL FORMATION AND GROWTH BY PHOTOCHEMICAL REACTIONS IN AN INDOOR SMOG CHAMBER

GWI-NAM BAE, Min Cheol Kim, Seung-Bok Lee, Young-Mee Lee, Kil-Choo Moon, Korea Institute of Science and Technology, Seoul, Korea

10PC14 ORGANIC TRACERS AT THE BALTIMORE SUPERSITE: SECONDARY ORGANIC AEROSOL PRECURSORS FROM VOC MASS SPECTRA USING NITRO-SUBSTITUTED POLYCYLIC AROMATIC HYDROCARBONS.
BERNARD CRIMMINS, University of Maryland Center for Environmental Science, Solomons, MD; John Offenberg, Rutgers University, New Brunswick, NJ; Joel Baker, University of Maryland Center for Environmental Science, Solomons, MD

10PD Analytical Techniques & Methods Intercomparison

Pacific Ballroom D
5:30 PM - 6:30 PM

10PD7 SIZE, TIME, AND COMPOSITION-RESOLVED AEROSOL MEASUREMENTS IN MEXICO CITY DURING THE MCMA-2003 FIELD CAMPAIGN
JOSE-LUIS JIMENEZ, Katja Dzepina, Peter Decarlo, J. Alex Huffman, Qi Zhang, University of Colorado, Boulder, CO; Dara Salcedo, Universidad Iberoamericana, Mexico City, Mexico; John T. Jayne, Douglas R. Worsnop, Manjula R. Canagaratna, Timothy B. Onasch, Phillip Mortimer, Aerodyne Research Inc., Billerica, MA; Linsey C. Marr, Luisa T. Molina, Mario Molina, Massachusetts Institute of Technology, Cambridge, MA; Jeffrey S. Gaffney, Nancy A. Marley, Argonne National Laboratory, Argonne, IL

10PD8 CHEMICAL SPECIATION OF AMBIENT PM2.5 ACROSS SOUTHWESTERN OHIO
DAINIUS MARTUZEVICIUS, University of Cincinnati, Cincinnati, OH; Anna L. Kelley, Harry St. Clair, Hamilton County Department of Environmental Services, Cincinnati, OH; Pratim Biswas, Washington University, St. Louis, MO; Tiina Reponen, Sergey A. Grinshpun, University of Cincinnati, Cincinnati, OH

10PD9 KEN WHITBY AND THE PARTICLE TECHNOLOGY LABORATORY, 1964 - 1969: LAYING THE FOUNDATION
GILMORE J. SEM, TSI Inc., St. Paul, MN

10PD10 FRACTAL DIMENSIONS OF AMBIENT AND SOURCE AEROSOLS
RAFAEL MCDONALD, Pratim Biswas, Shaohua Hu, Jay Turner, Washington University, St Louis. MO; Dainius Martuzevicius, Sergey Grinshpun, Grace Lemasters, University of Cincinnati, Cincinnati, OH

10PD11 CHARACTERIZATION OF FREE RADICALS IN ATMOSPHERIC AEROSOLS USING EPR AND SPIN TRAPS
LIYA YU, N. M. Kocherginsky, Yuri Kostetski, National University of Singapore, Singapore

10PD12 SAMPLING FROM MOBILE PLATFORMS: COMPUTATIONAL AND EXPERIMENTAL INVESTIGATIONS
ANITA NATARAJAN, Suresh Dhaniyala, Clarkson University, Potsdam, NY

10PD13 SUB/SUPER-MICRON PARTICLE MEASUREMENTS WITH EMPHASIS ON PHYSICAL PROPERTIES OF ATMOSPHERIC AEROSOL
DARIUS CEBURNIS, Stephen G. Jennings, Colin D. O'Dowd, National University of Ireland, Galway, Ireland

10PD14 QUALITY ASSURANCE OF AEROSOL DATA IN THE IMPROVE PROGRAM
LOWELL ASHBAUGH, University of California, Davis, CA

10PE **Mass Spectrometry**

Pacific Ballroom D

5:30 PM - 6:30 PM

10PE8 SPECTRAL EXTINCTION FOR REAL-TIME SIZING OF HIGH CONCENTRATION, SUBMICRON AEROSOLS
DAVID KANE, Philip Morris, Richmond, VA; Mohammad S. Saidi, Isfahan University of Technology, Isfahan,Iran; Peter Lipowicz, Philip Morris, Richmond, VA

10PE9 RESONANCE ELECTRON CAPTURE IONIZATION AEROSOL MASS SPECTROMETRY FOR THE ANALYSIS OF ULTRAFINE ORGANIC PARTICLES
BRIAN LAFRANCHI, Giuseppe Petrucci, University of Vermont, Burlington, VT

10PE10 INVESTIGATION OF THE EFFECT OF AEROSOL MASS LOADING ON THE PERFORMANCE OF A SLIT VIRTUAL IMPACTOR USING FLOW VISUALIZATION TECHNIQUES
SATYANARAYANAN SESHADRI, Taekyun Kim, Kenneth Kihm, Denis Phares, Texas A and M University, College Station, TX

10PE11 PARTICLE FOCUSING CHARACTERISTICS OF SONIC JETS
PRACHI MIDDHA, University of Delaware, Newark, DE; Anthony Wexler, University of California, Davis, CA

10PE12 DMM-230: REAL-TIME MASS AND SIZE MEASUREMENT DEVICE FOR DIESEL EXHAUST EMISSIONS
MIKKO MOISIO, Ville NiemelŠ, Jarmo Lilja, Henna Tuomenoja, Dekati Ltd., Tempere, Finland

Friday, October 24, 2003
8:00 AM - 9:00 AM

Plenary #4
Pacific Ballroom A/B

8:05 AM — UNDERSTANDING THE HEALTH EFFECTS OF AIR POLLUTION: AN EPIDEMIOLOGIST'S QUAGMIRE
Dr. Paige E. Tolbert
Associate Professor, Department of Environmental and Occupational Health and Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA

8:50 AM — PRESENTATION OF THE SINCLAIR AWARD
Lynn Hildemann

Friday, October 24, 2003 **Platform Session #11**

9:30 AM - 10:50 AM

11A **Health-Related Aerosols and Related Instrumentation** *Laguna A/B*

Chair: Gediminas Mainelis, Co-chair: Lupita Montoya *9:30 AM - 10:50 AM*

11A1
9:30 AM
DEVELOPMENT OF A PROTOCOL FOR THE USE OF POLYURETHANE FOAM (PUF) IN A NEW COMPACT CASCADE IMPACTOR FOR TOXICOLOGICAL STUDIES.
LUPITA MONTOYA, Ramon Molina, Joseph Brain, Harvard School of Public Health, Boston, MA

11A2
9:50 AM
DEVELOPMENT AND EVALUATION OF A VERY COMPACT FACILITY FOR EXPOSING HUMANS TO CONCENTRATED AMBIENT ULTRAFINE PARTICLES
CHANDAN MISRA, Philip M. Fine, Manisha Singh, Constantinos Sioutas, University of Southern California, Los Angeles, CA

11A3
10:10 AM
PERSONAL SAMPLER FOR MEASURING THE SURFACE AREA OF PARTICLES DEPOSITED IN THE LUNG
HEINZ FISSAN, Andreas Trampe, Lukas Wawryniuk, University Duisburg, Essen, Germany; David Y.H. Pui, University of Minnesota, Minneapolis, MN

11A4
10:30 AM
CHARACTERIZATION OF HOUSEHOLD VACUUM CLEANER PERFORMANCE FOR THE REMOVAL OF LEAD DUST AEROSOL DEPOSITED ON HARD SURFACES
STEPHEN WALL, Jeff Wagner, Paul Wong, Diamon Pon, California Department of Health, Berkeley, CA

11B **Clouds & Fog** *Avila A/B*

Chair: Mark Jacobson, Co-chair: Cynthia Towhy *9:30 AM - 10:50 AM*

11B1
9:30 AM
SEASONAL CONTRASTS OF THE SOUTHERN OCEAN CLOUD CONDENSATION NUCLEI AND CLOUD MICROPHYSICS
SEONG S. YUM, Yonsei University, Seoul, South Korea; James Hudson, Desert Research Institute, Reno, NV

11B2
9:50 AM
MODIFICATION OF INTERNALLY MIXED ORGANIC/INORGANIC AEROSOLS BY CLOUD CHEMISTRY
BARBARA ERVENS, CIRA, Boulder, CO; Graham Feingold, NOAA, Boulder, CO; Simon Clegg, University of East Anglia, Norwich, UK; Sonia Kreidenweis, Colorado State University, Fort Collins, CO

11B3
10:10 AM
ASSESSING THE PERFORMANCE OF THE STREAMWISE THERMAL-GRADIENT CCN CHAMBER
GREGORY ROBERTS, Scripps Institution of Oceanography, La Jolla, CA; Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA

11B4
10:30 AM
SCAVENGING OF BLACK CARBON BY CLOUD DROPLETS
CRAIG CORRIGAN, Ernest Weingartner, Urs Baltensperger, Paul Scherrer Institute, Villigen, Switzerland

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11C **Numerical Modeling of Regional Aerosols II** *El Capitan A/B*

Chair: David Simpson, Co-chair: James Schauer *9:30 AM - 10:50 AM*

11C1
9:30 AM
FURTHER DEVELOPMENT OF THE COMMUNITY MULTISCALE AIR QUALITY MODEL WITH AEROSOL INORGANIC MODULE (CMAQ-AIM)
KE MAX ZHANG, Anthony Wexler, University of California, Davis, CA

11C2
9:50 AM
SIMULATION OF PARTICULATE MATTER IN SOUTHERN TAIWAN BY MODELS-3/CMAQ
YEE-LIN WU, National Cheng Kung University, Tainan, Taiwan

11C3
10:10 AM
APPLICATION OF A THREE-DIMENSIONAL CHEMICAL TRANSPORT MODEL (PMCAMX+) TO A JULY 2001 PM EPISODE IN THE EASTERN UNITED STATES
TIMOTHY M. GAYDOS, Bonyoung Koo, Kathleen M. Fahey, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA

11C4
10:30 AM
ON THE MODELING OF A TRUE STOCHASTIC COALESCENCE EQUATION
YAN XUE, Orlando Ayala, University of Delaware, Newark, DE; Wojciech Grabowski, National Center for Atmospheric Research, Boulder, CO; Lian-Ping Wang, University of Delaware, Newark, DE

11D **Particle Synthesis and Diagnostics I** *Huntington A/B/C*

Chair: Pratim Biswas, Co-chair: Kikuo Okuyama *9:30 AM - 10:50 AM*

11D1
9:30 AM
IN-SITU NANOPARTICLE DIAGNOSTICS IN A THERMAL PLASMA PROCESS
XIAOLIANG WANG, Thierry Renault, Christopher Perrey, Rajesh Mukherjee, Jami Hafiz, Ashok Gidwani, C. Barry Carter, Joachim Heberlein, Steven Girshick, Peter H. McMurry, University of Minnesota, Minneapolis, MN

11D2
9:50 AM
ENHANCED SINTERING OBSERVED IN VANADIUM DOPED TITANIUM DIOXIDE SYNTHESIZED IN THE TUBULAR REACTORS
PRATIM BISWAS, Kuk Cho, Washington University, St. Louis, MO; Philip Fraundorf, University of Missouri, St. Louis, MO

11D3
10:10 AM
BIMODAL MOMENT MODELS FOR SIMULTANEOUS PARTICLE FORMATION, SURFACE GROWTH, COAGULATION AND COALESCENCE
JAE IN JEONG, Mansoo Choi, Seoul National University, Seoul, Korea

11D4
10:30 AM
PREPARATION OF HIGHLY CRYSTALLINE BARIUM TITANATE NANOPARTICLES USING SALT-ASSISTED SPRAY PYROLYSIS
Kikuo Okuyama, YOSHIFUMI ITOH, Wuled Lenggoro, Hiroshima University, Hiroshima, Japan; Sotiris E. Pratsinis, Swiss Federal Institute of Technology, Zurich, Switzerland

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11E **Composition Measurement** *Palos Verdes A/B*

Chair: Clifford Davidson, Co-chair: Da-Ren Chen *9:30 AM - 10:50 AM*

11E1
9:30 AM

EFFECTS OF REFRACTORY MATERIAL AND TEMPERATURE PROTOCOL ON MEASUREMENT OF PARTICULATE ELEMENTAL CARBON USING THE THERMAL-OPTICAL TRANSMITTANCE METHOD
R. SUBRAMANIAN, Allen Robinson, Andrey Khlystov, Carnegie Mellon University, Pittsburgh, PA

11E2
9:50 AM

ULTRAVIOLET LIDAR AND TRANSMISSOMETER FOR THE ON-ROAD MEASUREMENT OF AUTOMOTIVE PARTICLE EMISSION FACTORS
CLAUDIO MAZZOLENI, Hans MoosmŸller, Peter W. Barber, Hampden D. Kuhns, Robert E. Keislar, John G. Watson, Desert Research Institute, Reno, NV

11E3
10:10 AM

EVALUATION OF FREQUENCY-MODULATED COHERENT BURST LIDAR FOR PARTICLE MEASUREMENT USING LABORATORY GENERATED PARTICLES
M.D. CHENG, T. Darn, Oak Ridge National Laboratory, Oak Ridge, TN; W.G. Fisher, Galt Technology; K.E. Lennox, M.L. Simpson, J.M.E. Storey, Oak Ridge National Laboratory, Oak Ridge, TN; E.A. Wachter

11E4
10:30 AM

AMBIENT PARTICLE MEASUREMENTS IN AN URBAN ENVIRONMENT USING LASER-INDUCED BREAKDOWN SPECTROSCOPY
GREGG LITHGOW, University of Maryland, College Park, MD; Allen Robinson, Carnegie Mellon University, Pittsburgh, PA; Steven Buckley, University of Maryland, College Park, MD

Friday, October 24, 2003 **Platform Session #12**

11:10 AM - 12:30 PM

12A **Atmospheric Aerosol Advances** *Laguna A/B*

Chair: Barbara Turpin, Co-chair: John Ondov *11:10 AM - 12:30 PM*

12A1
11:10 AM

PROGRAM POVA (POLLUTION DES VALLEES ALPINES) : GENERAL PRESENTATION
JEAN-LUC JAFFREZO, Laboratoire de Glaciologie et de GŽophysique de l'Environnement, Saint Martin Dheres, France; Didier Chapuis, AIR-APS, Chambery, France

12A2
11:30 AM

PM EMISSION RATES FROM HIGHLY TIME-RESOLVED AMBIENT CONCENTRATION MEASUREMENTS
JOHN ONDOV, Patrick Pancras, University of Maryland, College Park, MD; Noreen Poor, University of South Florida, Tampa, FL; Jay Turner, Megan Yu, Washington University, St. Louis, MO; Eric Lipsky, Emily Weitkamp, Allen Robbinson, Carnegie Mellon University, Pittsburgh, PA

12A3
11:50 AM

OPTICAL CLOSURE AT GOSAN DURING ACE-ASIA: RESULTS AND LESSONS LEARNED
PATRICK CHUANG, University of California, Santa Cruz, CA

12A4
12:10 PM

THE CHEMICAL COMPOSITION OF ATMOSPHERIC ULTRAFINE PARTICLES DURING NUCLEATION EVENTS
JAMES N. SMITH, Katharine F. Moore, National Center for Atmospheric Research, Boulder, CO; Didier Voisin, University of Provence, Marseille, France; Lee Mauldin, National Center for Atmospheric Research, Boulder, CO; Ajaya K. Ghimire, Hiromu Sakurai, Melissa A. Fink, Peter H. McMurry, University of Minnesota, Minneapolis, MN; Fred L. Eisele, National Center for Atmospheric Research, Boulder, CO

12B **Clouds & Fog** *Avila A/B*

Chair: Mark Jacobson, Co-chair: Cynthia Towhy *11:10 AM - 12:30 PM*

12B1
11:10 AM

IN-CLOUD MEASUREMENTS ON A MOUNTAIN-TOP SITE IN CENTRAL SWEDEN USING AN AEROSOL MASS SPECTROMETER
FRANK DREWNICK, University of Mainz, Mainz, Germany; Silke Henseler, Nele Hock, Max-Planck Institute for Chemistry, Mainz, Germany; Kevin J. Noone, Stockholm University, Stockholm, Sweden; Johannes Schneider, Silke Weimer, Max-Planck Institute for Chemistry, Mainz, Germany; Stephan Borrmann, University of Mainz, Mainz, Germany

12B2
11:30 AM

AEROSOL-CLOUD INTERACTIONS DURING TROPICAL DEEP CONVECTION: EVIDENCE FOR THE IMPORTANCE OF FREE TROPOSPHERIC AEROSOLS
ANN FRIDLIND, Andy Ackerman, Eric Jensen, NASA Ames Research Center, Moffett Field, CA; Dave Stevens, Lawrence Livermore National Laboratory, Livermore, CA; Donghai Wang, NASA Langley Research Center, Hampton, VA; Andy Heymsfield, Larry Miloshevich, National Center for Atmospheric Research, Boulder, CO; Cindy Twohy, Oregon State University, Corvallis, OR; Mike Poellot, University of North Dakota, Grand Forks, ND; Timothy Vanreken, Tracey Rissman, Varuntida Varutbangkul, Rick Flagan, John Seinfeld, California Institute of Technology, Pasadena, CA; Haf Jonsson, CIRPAS, Monterey, CA

12B3
11:50 AM

CHEMICAL AND DYNAMICAL EFFECTS ON AEROSOL CLOUD DROPLET NUMBER: A REVERSE MODELING APPROACH
SARA LANCE, Georgia Institute of Technology, Atlanta, GA; Tracey Rissman, California Institute of Technology, Pasadena, CA; Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA

12B4
12:10 PM

FREE AND COMBINED AMINO COMPOUNDS IN ATMOSPHERIC FINE PARTICLES (PM2.5) AND FOG WATERS FROM NORTHERN CALIFORNIA

12C **Numerical Modeling of Regional Aerosols III** *El Capitan A/B*

Chair: James Schauer, Co-chair: David Simpson *11:10 AM - 12:30 PM*

12C1
11:10 AM
MODELING PARTICULATE MATTER WITH TWO THREE-DIMENSIONAL MODELS: CMAQ AND PM-CAMX
YANG ZHANG, Betty Pun, Shiang-yuh Wu, Krish Vijayaraghavan, Gopi Yelluru, Christian Seigneur, Atmospheric and Environmental Research, Inc., San Ramon, CA

12C2
11:30 AM
NEXT GENERATION MODEL FOR PREDICTING ATMOSPHERIC GAS-TO-PARTICLE CONVERSION IN INORGANIC/ORGANIC SYSTEMS
ROBERT GRIFFIN, University of New Hampshire, Durham, NH; Donald Dabdub, University of California, Irvine, CA; John Seinfeld, California Institute of Technology, Pasadena, CA

12C3
11:50 AM
THERMODYNAMIC MODELING FRAMEWORK OF ATMOSPHERIC INORGANIC AEROSOL
KEE-YOUN YOO, Jiwen He, Neal R. Amundson, University of Houston, Houston, TX

12C4
12:10 PM
CONTRIBUTION OF VEGETATIVE BURNING TO PM2.5 CONCENTRATIONS IN THE SAN JOAQUIN VALLEY
RICHARD COUNTESS, Countess Environmental, Westlake Village, CA

12D **Particle Synthesis and Diagnostics** *Huntington A/B/C*

Chair: George Mulholland, Co-chair: Ying-Wu Teng *11:10 AM - 12:30 PM*

12D1
11:10 AM
A COMPUTATIONAL AND EXPERIMENTAL STUDY ON THE OPTICAL SIZING OF COMBUSTION PARTICULATES USING TWO-ANGLE LASER SCATTERING MEASUREMENTS
Yingwu Teng, Kai Yu, UMIT KOYLU, University of Missouri, Rolla, MO

12D2
11:30 AM
A MOVING SECTIONAL MODEL FOR THE FORMATION AND GROWTH OF SOOT PARTICLES
SUNG HOON PARK, Steven N. Rogak, University of British Columbia, Vancouver, BC, Canada

12D3
11:50 AM
MEASUREMENT OF AIRCRAFT-GENERATED NANOPARTICLES
HEE-SIEW HAN, University of Minnesota, Minneapolis, MN

12D4
12:10 PM
SIZE AND CHEMISTRY OF INCIPIENT SOOT IN A WELL STIRRED REACTOR
GEORGE MULHOLLAND, Eui Ju Lee, Samuel Manzello, NIST, Gaithersburg, MD; Linda Blevens, Sandia National Laboratories, Livermore, CA; Scott Stouffer, Air Force Research Laboratory, Wright Patterson Air Force Base, OH

12E **Nanopartices II** *Palos Verdes A/B*

Chair: Goodarz Ahmadi, Co-chair: Suresh Dhaniyala *11:10 AM - 12:30 PM*

12E1
11:10 AM
PARTICLE TRANSPORT AND DEPOSITION IN A COMPLEX INDUSTRIAL HOT-GAS FILTERATION SYSTEM
ALI R. MAZAHERI, Goodarz Ahmadi, Clarkson University, Potsdam, NY

12E2
11:30 AM
AEROSOL DYNAMICS MODELING OF SILICON PARTICLE FORMATION
SUDDHA S. TALUKDAR, Mark T. Swihart, State University of New York, Buffalo, NY

12E3
11:50 AM
EVAPORATION CHARTERISTICS OF DROPLETS CONTAINING NONVOLATILE SOLUTES IN HIGHLY VOLATILE SOLVENTS
ASIT RAY, University of Kentucky, Lexington, KY; Venkat Devarakonda, BlazeTech Corp., Cambridge, MA

12E4
12:10 PM
PRELIMINARY DATA ON THE N-PENTANOL - HELIUM NUCLEATION RATES UP TO 120 ATMOSPHERES
MICHAEL ANISIMOV, Philip Hopke, Clarkson University, Potsdam, NY

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