## SUNDAY, OCTOBER 16

**5:00 PM – 9:00 PM**
Registration- Austin Grand Ballroom Pre-function
Speaker Ready Room

**8:00 PM - 9:00 PM**
Student Assistants Orientation

## MONDAY, OCTOBER 17

**7:00 AM – 8:00 PM**
Registration- Austin Grand Ballroom
Speaker Ready Room

**8:00 AM – 9:50 AM**
**Tutorial Session 1**

**1. Intro to Aerosol Mechanics I**
**Dr. William C. Hinds**

*Abstract:* These two courses form a sequence that covers basic aerosol mechanics (particle motion) at an introductory level. Topics include: stokes law, settling velocity, slip correction, aerodynamic diameter, non-spherical particles, acceleration, relaxation time, stopping distance, impaction, isokinetic sampling, diffusion, and coagulation. The course covers theory and applications and is suitable for those new to the field and for others who want to brush up on the basics.

**2. Nucleation of Particles from the Gas Phase**
**Dr. Steven Girshick**

*Abstract:* Nucleation, which represents the birth of aerosol particles from gas-phase precursors, is of ubiquitous importance yet remains one of the great unsolved problems of science—unsolved, in that it is still not possible, with reasonable quantitative accuracy, to predict nucleation rates for most substances, even in the simplest scenarios. This seminar will present an overview of our understanding of nucleation from the gas phase. Various contexts will be considered, ranging from self-nucleation via condensation of a supersaturated vapor, to ion-induced nucleation, to nucleation of chemically bound clusters in reacting gases and plasmas.

**3. Health Effects Associated with Exposure to Particulate Matter**
**Dr. Robert Delvin**

*Abstract.* The World Health Organization estimates that exposure to air pollution particles results in 500,000 premature deaths each year. These numbers are primarily based on epidemiology studies that report associations between daily fluctuations in PM levels and mortality from cardiopulmonary causes. However, when these studies were published very little was known about which PM components might be responsible for the adverse health effects or whether PM emitted from different sources had different toxicity. There was almost no information about the biological mechanisms that could explain why a person could die within hours after inhaling very low levels of PM. Nor was it well understood which people might be particularly at risk. This course will present the latest research which addresses these three topics. It is suitable for those seeking a primer on health effects associated with exposure to PM.

**4. Secondary Aerosol Formation**
**Dr. Paul Zieman**

*Abstract:* Secondary aerosol is an important component of atmospheric fine particles that generally consists of organics, sulfates, and nitrates. The processes that lead to the formation of this material are often complex, and can involve gas and particle phase chemistry, nucleation, and gas-particle partitioning. In this course I will discuss the major chemical reactions and partitioning processes involved in the formation of secondary organic and inorganic aerosol (with a strong emphasis on organic aerosol) using examples from laboratory and field studies.

**10:00 AM – 11:50 AM**
**Tutorial Session 2**

**5. Intro to Aerosol Mechanics II**
**Dr. William C. Hinds**

*Abstract*: These two courses form a sequence that covers basic aerosol mechanics (particle motion) at an introductory level. Topics include: stokes law, settling velocity, slip correction, aerodynamic diameter, non-spherical particles, acceleration, relaxation time, stopping distance, impaction, isokinetic sampling, diffusion, and coagulation. The course covers theory and applications and is suitable for those new to the field and for others who want to brush up on the basics.

**6. Aerosols and Clouds: Can we Quantify the Effect of Aerosols on Climate Change?**
**Dr. Joyce Penner**

*Abstract.* Atmospheric aerosol particles serve as nuclei for cloud droplet and ice particle formation, affecting the number concentration of cloud particles and thereby influencing cloud reflectance and absorption as well as precipitation formation. The magnitude of the effect of aerosols on clouds depends on their chemical properties as well as their size distribution. The influences of anthropogenic aerosols through cloud processes on the Earth's radiation budget may be substantial, but the radiative forcing of climate change by anthropogenic aerosols is considered the most uncertain component of the forcing of climate change over the time period since 1750. This tutorial presents an overview of these phenomena and identifies the aerosol properties that must be known to quantify their influences on clouds.

**7. Introduction to Aerosol Technology for Pulmonary Drug Delivery**
**Dr. Ing. Reinhard Vehring**

Abstract: In the last decade, significant advances have been made in the area of pharmaceutical aerosols for drug delivery. For instance, the development of systemic drug delivery with inhalable insulin shows great promise. This course provides an overview of the technology behind the emerging new class of therapeutics that makes such advances possible. It introduces concepts of delivery, deposition, and the requirements that aerosols need to fulfill to meet product targets. The tutorial covers various approaches to formulation, manufacture, and dispersion of pharmaceutical aerosols across the industry. Special emphasis is put on the improvements in dispersibility and physical stability that were achieved via implementation of particle engineering methods in the drug development process.

**8. Ambient PM-2.5 Measurement and Characterization**
**Dr. Jay Turner**

*Abstract:* Data quality objectives are inherently linked to the intended use of the data (e.g., compliance monitoring, health studies, source apportionment studies) and these objectives guide the measurement strategy. This course will provide an overview of measurement methods to characterize the mass concentration and chemical composition of ambient fine particulate matter within the context of data quality objectives. Substrate and semicontinuous methods will be discussed with emphasis on commercially-available instruments and analytical services to characterize PM-2.5 mass and its major chemical components (sulfate, nitrate, carbon). Advantages and disadvantages of the various methods will be highlighted. This course is suitable for those seeking a primer on PM-2.5 measurement strategies and hardware.

**12:00 PM – 5:00 PM**
Exhibitor Set -up - Austin Grand Ballroom
Poster Set-up - Austin Grand Ballroom

**1:00 PM - 2:50 PM**
**Tutorial Session 3**

**9. Introduction to Source-Oriented Aerosol Modeling**
**Dr. Michael Kleeman**

*Abstract:* This course will cover the basics of source-oriented aerosol modeling where particles from different sources are tracked separately through an atmospheric simulation. Topics include: review of aerosol representation in models, motivation for externally mixed models, size and composition profiles for different

sources, aerosol transformation processes, validation of externally mixed aerosol predictions, applications of externally mixed aerosol predictions, and handling the increased computational burden via parallel processing. The course will cover fundamental theory and provide examples of applications where possible. Some aspects of this field are still active research areas, and so the class is suitable for anyone who is interested in the general topic.

**10. Nanoparticle Measurements**
**Dr. Richard Flagan**

*Abstract:* Aerosol nanoparticle measurements are needed both to support developing nanotechnologies and to facilitate quantification of the health consequences of such particles. Nanoparticles pose a number of measurement challenges that have stimulated a number of recent developments. This tutorial will examine the advances that have extended routine mobility analysis to the low nanometer, and even subnanometer size regimes, improved size resolution well beyond that of traditional differential mobility analyzers, and enabled the fast measurements that are needed to resolve the dynamics of rapidly changing nanoparticle concentrations. Many of these techniques involve redesign of instruments to optimize their performance in the nanoparticle regime, although a number of radical new designs have emerged in recent years. The tutorial will explore ways for rational comparison of the capabilities and limitations of the different methods.

**11. Assessing Bioaerosol Exposures and Their Impacts**
**Dr. Janet M. Macher**

*Abstract:* Particles of biological origin comprise variable fractions of particulate matter in the ambient and indoor environments. Measurement of baseline concentrations is fundamental in aerobiological investigations to evaluate the effects of bioaerosols on humans, other animals, plants, and the environment. The challenges faced in representative measurement of biological agents will be discussed with examples from studies of their roles in the development of the immune system and allergic diseases, recognition of microbial contamination in buildings, ambient monitoring of pollen and spores with impacts on human health and agriculture, and determination of the infectious doses of respiratory pathogens.

**12. Photochemistry of Atmospheric Particles and Aqueous Drops**
**Dr. Cort Anastasio**

*Abstract:* Sunlight, directly and indirectly, drives most of the chemistry in the atmosphere. While photochemistry in the gas phase has been studied for decades, the photochemistry of atmospheric condensed phases is a relatively new field. This tutorial will give an overview of the rich variety of photochemical processes that are known to occur in atmospheric particles, liquid fog and cloud drops, and frozen ice particles and snow. We will begin by discussing the fundamentals of photochemistry in condensed phases and the photochemical reactions of specific compounds such as nitrate, nitrite, iron, and several organic compounds. In the second half we will examine the formation of oxidants, and simultaneous transformations of reduced nitrogen, carbon, and sulfur compounds, in illuminated tropospheric particles and aqueous drops.

**3:00 PM – 4:50 PM**
**Tutorials Session 4**

**13. How to Make Advanced Factor Analysis Models Work for You**
**Dr. Philip K. Hopke**

*Abstract:* Over the past decade, two advanced factor analysis models, Unmix and Postive Matrix Factorization (PMF) have been developed and applied to air quality data. PMF has been more widely used and has a number of attractive features. The U.S. Environmental Protection Agency will be releasing a version of PMF in the summer of 2005 that can be freely downloaded and used. It will have a more user friendly interface and a better error estimations scheme. At the same time, version 3 of Unmix will be released. This tutorial will begin with a general introduction to receptor modeling. It will lift the lid on these black boxes and provide an introduction to how they work and how they can be utilized to analyze particulate composition data for source identification and apportionment. It will also introduce auxiliary analyses such as conditional probability function analysis that can be used to help identify the likely sources contributing to the particle samples.

**14. Light Scattering by Particles: An Intuitive Description for Aerosol Scientists**
**Dr. Chris Sorensen**

*Abstract.* This tutorial will describe simple and intuitive approaches for understanding and applying light scattering to aerosol and colloidal systems. Particulate systems will include spheres, aggregates, and nonspherical particles. With this foundation, there will be discussion regarding experimental methods for scattering and some instruments available in the marketplace. This tutorial will also cover light scattering problems relevant to current aerosol science.

**15. Biological Aerosol Measurement and Detection**
**Dr. Jim Ho**

*Abstract:* Recent global events have heightened public awareness in the need to detect potential biological threats. As a consequence, biological aerosol detection in real time has become a civilian urgency whilst for the military, this has been an on going requirement. Fortunately, much of the experience gained from satisfying the latter can be of benefit to most situations. Biological aerosol lessons learned have been successfully applied to environmental monitoring as well as to biological threat measurements. This overview will summarize work done over the past 20 years, applying cumulative experience that has helped in deriving a biological detection concept. I will describe recent developments towards building a detection system to operate continuously, 24 hours a day and 7 days a week with minimal maintenance and few false alarms and without continuous consumption of expensive biochemical reagents. This overview will further discuss practical aspects of measuring biological aerosols where the results must be compared to reference samplers that provide culturable or "live" data.

**16. Particle Mass Spectrometry**
**Murray Johnston**

*Abstract:* For over a decade, mass spectrometry has been used to determine the chemical composition of airborne particles in real-time, often with concurrent size selection or measurement. This tutorial will provide an overview of methodology and applications of particle mass spectrometry, emphasizing the complementary aspects of single-particle and bulk composition measurements with these instruments. The entire process will be covered from aerosol sampling, to the acquisition of “raw” data, to the extraction of meaningful information from the data. Applications of this methodology to both ambient aerosol characterization and laboratory aerosol reaction kinetics will be discussed.

**6:00 PM - 8:00 PM**
Welcome Reception, Exhibits Open & Poster Viewing

**Tuesday 8:00 AM**
**Plenary Session**
Governor's Ballroom A - C

8:00 **Welcome**, Spyros Pandis, Conference Chair

8:05 **Plenary Lecture: WHAT SATELLITES CONTRIBUTE TO THE GLOBAL AEROSOL PICTURE**, Ralph Kahn, Jet Propulsion Laboratory/Caltech

9:00 **Presentation of the S. K. Friedlander Award**

**Exhibits and Posters Open**
**9:00 AM - 6:30 PM**
Austin Grand Ballroom

**Tuesday 9:15 AM**
**Session 1: Posters I - Breakfast**
Bill Collins and Phil DeCola, Chairs

**1A Aerosol Physics**
Austin Grand Ballroom Row 1

1PA1 **INVESTIGATION OF GLASS FIBER DEPOSITION ONTO INNER WALLS OF STRAIGHT BRASS TUBING**, ZUOCHENG WANG, Philip K. Hopke, Goodarz Ahmadi, Center for Air Resources Engineering and Science, Clarkson University, Potsdam , NY; Paul A. Baron, Gregory Deye, National Institute for Occupational Safety and Health, Cincinnati , OH; Yung-Sung Cheng, Wei-Chung Su, Lovelace Respiratory Research Institute, Albuquerque, NM.

1PA2 **VAPOR AND LIQUID PHASE CRITICAL EMBRYOS OF POLYMETHYL METHACRYLATE GENERATED UNDER ILLUMINATION OF LASER ON FREE ELECTRONS**, A.M. BAKLANOV, A. A. Onischuk, T.A. Fedirko, and M.P. Anisimov

1PA3 **IMPACT OF TEMPERATURE FLUCTUATIONS ON NUCLEATION RATE**, I. H. UMIRZAKOV and M.P. Anisimov

1PA4 **DIRECT NUMERICAL SIMULATION OF MICRODROPLET KINETICS IN A TURBULENT FLOW**, OLEG KIM, University of Notre Dame, Notre Dame, IN

1PA5 **A CRCD COURSE FOR PARTICLE TRANSPORT, DEPOSITION AND REMOVAL**, GOODARZ AHMADI, David J, Schmidt, Kambiz Nazridoust, John McLaughlin, Cetin Cetinkaya, Suresh Dahniyala, Jeffrey Taylor, Stephen Doheny-Farina, Clarkson University, Potsdam, NY 13699-5725; Fa-Gung Fan, Xerox Corporation, Webster, NY, 14580

1PA6 **INFLUENCE OF METEOROLOGICAL PARAMETERS ON THE ANGSTRÖM TURBIDITY PARAMETERS AND THE CHARACTERISTICS OF INFERRED AOD**, SHANTIKUMAR SINGH NINGOMBAM, Indian Institute of Astrophysics, IAO, LEH, Ladakh, India

1PA7 **CAVITY RINGDOWN SPECTROSCOPY OF AEROSOLS.**, MIKHAIL JOURAVLEV

1PA8 **IMPACT OF PARAMETER REPRESENTATION IN GAS-PARTICLE PARTITIONING ON AEROSOL YIELD MODEL PREDICTION**, JANYA HUMBLE, Diane Michelangeli, York University; Paul Makar, MSC, Downsview, ON, Canada; Don Hastie, Mike Mozurkewich, York University, North York, ON, Canada

1PA10 **DIRECT NUMERICAL SIMULATION OF PARTICLE DEPOSITION IN TURBULENT CHANNEL FLOW**, HOJAT NASR, Goodarz Ahmadi, and John B. McLaughlin, Clarkson University, Potsdam, NY 13699.

1PA11 **THE ROLE OF ZETA POTENTIAL ON THE AUGMENTATION OF THERMAL CONDUCTIVITY IN NANOFLUID**, Jae-won Kim, DONGGEUN LEE,Boggi Kim, Pusan National University, Busan, Korea

1PA12 **ASSESSING THE PHYSICAL PROPERTIES OF POROUS PARTICLES FOR INHALATION**, Vasu Sethuraman, Mark DeLong, Craig Dunbar, Alkermes, Inc, Cambridge, MA

1PA13 **CLUSTER STRUCTURE IN DENSELY AGGREGATING SYSTEMS**, FLINT PIERCE, Amit Chakrabarti, Chris Sorensen, Kansas State University, Manhattan, KS

1PA14 **PATTERNS IN MIE SCATTERING: EVOLUTION WHEN NORMALIZED BY THE RAYLEIGH CROSS SECTION**, MATTHEW BERG, Chris Sorensen, Amit Chakrabarti, Kansas State University, Manhattan, KS

1PA15 **THEORETICAL ANALYSIS OF DATA FROM THE DMA-APM SYSTEM**, MARK EMERY, Peter McMurry (Particle Technology Laboratory, Minneapolis, MN, USA)

1PA16 **THE EFFECT OF MEAN FLOW ACCELERATION ON MICROPARTICLE DETACHMENT FROM SURFACES BY TURBULENT AIR FLOWS**, ABDELMAGED H. IBRAHIM and Patrick. F. Dunn Particle Dynamics Laboratory, Department of Aerospace and Mechanical Engineering, University of Notre Dame, Notre Dame, IN, USA

1PA17 **A COMPUTATIONALLY EFFICIENT METHOD FOR SOLVING DYNAMIC GAS-PARTICLE MASS TRANSFER DIFFERENTIAL EQUATIONS**, RAHUL ZAVERI, Richard Easter, Jerome Fast, Leonard Peters, Pacific Northwest National Laboratory, Richland, WA

1PA18 **REMOVE EFFICIENCIES OF PARTICLES FROM CLOTH AND PLANAR SURFACES BY AIR JET IMPINGEMENT**, ROBERT FLETCHER, Nathanael Briggs, Jennifer Verkouteren, Allyson Fisher and Greg Gillen, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD

## 1B Indoor Aerosols

Austin Grand Ballroom Row 2

1PB1 **ANALYSIS OF INDOOR PARTICLE SIZE DISTRIBUTIONS FROM AN OCCUPIED TOWNHOUSE USING POSITIVE MATRIX FACTORIZATION**, DAVID OGULEI, Philip Hopke, Clarkson University; Lance Wallace, United States Environmental Protection Agency (Retired)

1PB2 **CHARACTERISATION OF ENVIRONMENTAL TOBACCO SMOKE (ETS) PARTICLES BY USING REAL-TIME MASS SPECTROMETRY**, MANUEL DALL'OSTO, Roy M. Harrison, Division of Environmental Health and Risk Management, University of Birmingham, Edgbaston, Birmingham, B15 2TT, U.K.; E. Charpantidou, G. Loupa and S. Rapsomanikis,Laboratory of Atmospheric Pollution and Control Engineering of Atmospheric Pollutants, Xanthi, Greece

1PB3 **MICROPARTICLE MOTION RELEVANT TO HVAC SYSTEMS**, ABDELMAGED H. IBRAHIM and Patrick. F. Dunn University of Notre Dame, Notre Dame, IN, USA

1PB4 **PERSONAL EXPOSURE TO AEROSOLS FOR WOMEN IN URBAN HOUSEHOLDS**, RASHMI S PATIL,Virendra Sethi,Suresh K Varghese and S Gangamma Centre for environmental Science and Engineering IIT, Bombay,India

1PB5 **EFFECTS OF COAGULATION ON AEROSOL DEPOSITION ONTO AN ISOTHERMAL VERTICAL FLAT PLATE**, C. B. Huang, C.S. Lin, Yuan Ze University, Taiwan, ROC

1PB6 **AGEING OF SIDESTREAM & ENVIRONMENTAL TOBACCO SMOKE**, JOHN McAUGHEY and Conor McGrath, British American Tobacco, Southampton, UK

1PB7 **ON THE RESEARCH OF THE MICROENVIRONMENT BY USING OF CONTROLLABLE NUCLEAR EMULSION**, A. B. Akopova, M.M.Manaseryan, A.A. Melkonyan, S.Sh. Tatikyan

## 1C Instrumentation

Austin Grand Ballroom Rows 2, 3

1PC1 **A NEW, LOW-COST BAM MONITOR FOR PM10, PM2.5 AND ULTRAFINE PM MASS DESIGNED FOR COMMUNITY-SCALE EXPOSURE MEASUREMENTS**, SATYA SARDAR, Bhabesh Chakrabarti, Constantinos Sioutas, Philip M. Fine, University of Southern California, Los Angeles, CA; Brad Orton, David Gobeli, Met One Instruments, Grants Pass, OR

1PC2 **IMMUNOCHROMATOGRAPHIC METHOD OF REAL TIME DETECTION OF LEGIONELLA IN THE AIR**, S.F.Biketov, V.D. Potapov, I.M. Baranov, E.V. Baranova, State Scientific Center of Applied Microbiology, Obolensk, Moscow region, Russia, V.I. SIGAEV, A.D. Tolchinsky, K.G. Soloviev, S.N. Uspenskaya, R.V. Borovick, N.R. Dyadishchev, Research Center for Toxicology, Hygienic Regulation of Biopreparations, Serpukhov, Moscow region, Russia

1PC3 **CHARACTERISTICS OF SILVER NANOPARTICLE GENERATION BY SPARK DISCHARGE USING AIR AS A CARRIER GAS**, HYUNCHEOL OH, Hyungho Park, Sangsoo Kim, KAIST, KOREA; Junho Ji, SAMSUNG ELECTRONICS CO., KOREA.

1PC4 **FIELD EVALUATION OF A HIGH-VOLUME DICHOTOMOUS SAMPLER**, SATYA BRATA SARDAR, Bhabesh Chakrabarti, Michael D. Geller, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA; Paul Solomon, US EPA, Las Vegas, NV

1PC5 **NUCLEATION SENSOR COMBINED WITH GAS CHROMATOGRAPHY**, VLADIMIR B MIKHEEV, InnovaTek, Inc, Richland, WA; Richard Lee, Oleg Egorov, Nels Laulainen, Stephan Barlow, Kenneth Swanson, Pacific Northwest National Laboratory, Richland, WA

1PC6 **THE EFFECT OF WIND SPEED AND ORIENTATION ON SAMPLER PENETRATION CURVES**, PATRICK O'SHAUGHNESSY, Vijay Golla, University of Iowa, Iowa City, IA Jason Nakatsu, Stephen Reynolds, Colorado State University, Fort Collins, CO

1PC7 **DESIGNING AERODYNAMIC LENSES FOR NANOPARTICLES**, XIAOLIANG WANG, Peter H. McMurry, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN; Frank Einar Kruis, Process and Aerosol Measurement Technology, University Duisburg-Essen

1PC8 **NANOPARTICLE SURFACE AREA MONITOR FOR OCCUPATIONAL HEALTH EFFECTS STUDIES**, MANISHA SINGH, Brian L. Osmondson, TSI Incorporated, Shoreview, MN

1PC9 **DEVELOPMENT OF DIGITAL MICRO FLUIDIC IMPACTOR FOR REAL-TIME MEASUREMENT OF THE AEROSOL CHEMICAL COMPOSITION**, ANDREY KHLYSTOV, Yilin Ma, Dept. of Civil and Environmental Engineering, Duke University, Durham, NC; Vladislav Ivanov, Richard Fair, Dept. of Electrical and Computer Engineering, Duke University, Durham, NC

1PC10 **ESTIMATION OF PARTICLE DENSITY USING A CPC AND ELECTRICAL LOW PRESSURE IMPACTOR**, HENNA TUOMENOJA, Ari Ukkonen, Erkki Lamminen, Ville Niemelä, Pirita Mikkanen, Dekati Ltd, Tampere, FINLAND

1PC11 **REAL TIME MEASUREMENT OF FUGITIVE NANOPARTICLE EMISSION**, FRANCOIS GENSDARMES, Jacques Vendel, Institut de Radioprotection et de Sûreté Nucléaire; Marie Géléoc, Commissariat à l'Energie Atomique

1PC12 **A NEW THERMOPHORETIC SAMPLING DEVICE FOR COLLECTION OF ULTRAFINE PARTICLES**, LORENZO RONNY, Kaegi Ralf, Empa Material Science and Technology, Duebendorf, Switzerland; Scherrer Leo, Swiss Federal Institute for Technology, Zurich, Switzerland; Grobety Bernhard, University of Fribourg, Fribourg, Switzerland;

1PC13 **SHROUDED INLET FOR AIRBORNE MULTI-ANGLE-LIGHT-SCATTERING SPECTROMETER**, MIHAI CHIRUTA, Francisco Romay, William Dick, MSP Corporation, Shoreview, MN

1PC14 **INTERCOMPARISON OF THREE TECHNIQUES TO MEASURE AEROSOL CONCENTRATION FOR NIST TRACEABLE METROLOGY**, ROBERT A. FLETCHER, George W. Mulholland , Lance R. King and Michael R. Winchester, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD

1PC15 **FIELD EVALUATION OF P-TRAK ULTRAFINE PARTICLE COUNTERS**, YIFANG ZHU, Nu Yu, William C. Hinds, University of California at Los Angeles, Los Angeles, CA; Thomas Kuhn, University of Southern California, Los Angeles, CA

1PC16 **COMPARISON OF MEASUREMENT INSTRUMENTATION UNDER VARIOUS TEST CONDITIONS**, R. Arunkumar, John A. Etheridge, John C. Luthe, BRIAN A. NAGEL, Olin P. Norton, Michael S. Parsons, Donna M. Rogers, Kristina U. Hogancamp, and Charles A. Waggoner, Diagnostic Instrumentation and Analysis Laboratory, Starkville, MS

1PC17 **CHARACTERIZATION OF TWO NEW BUTANOL-BASED CONDENSATION PARTICLE COUNTERS (TSI MODEL 3776 UCPC AND 3775 CPC)**, QIAN SHI, Hee-Siew Han, Steve Kerrigan, Ed Johnson, TSI Incorporated, Shoreview, MN

1PC18 **MATRIX EFFECTS IN THE MEASUREMENT OF FINE PARTICULATE MATTER NITRATE BY FLASH VOLATILIZATION**, Catherine Reid, JAY TURNER, Washington University, St. Louis, MO; Susanne Hering, Aerosol Dynamics, Inc., Berkeley, CA

1PC19 **FIELD EVALUATION OF THE EFFECTS OF SAMPLING ARTIFACTS AND OPERATING PARAMETERS ON THE PERFORMANCE OF A SEMI-CONTINUOUS EC/OC MONITOR**, MOHAMMAD ARHAMI, Thomas Kuhn, Philip M. Fine, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA

1PC20 **TANIC: TANDEM INTEGRATING CAVITY ABSORPTION METER FOR FILTER-BASED MEASUREMENTS ON AEROSOL DEPOSITS**, KIRK FULLER, Venkataramanan Krishnaswamy, David Bowdle, University of Alabama in Huntsville, Huntsville, AL

1PC21 **USING THE FAST MOBILITY PARTICLE SIZER™ SPECTROMETER FOR AIR QUALITY MEASUREMENTS**, TIM JOHNSON, Robert Caldow, TSI Incorporated, Shoreview, MN;

1PC22 **DESIGN AND PERFORMANCE OF AN OPTICAL PARTICLE COUNTER USING A WHITE LED LIGHT SOURCE**, ADAM G. WOLLNY, Craig Simons, Charles A. Brock, NOAA Aeronomy Laboratory, Boulder, CO and University of Colorado, CIRES, Boulder, CO

1PC23 **EVALUATION OF AN INLET CONDITIONER FOR PARTICULATE MATTER MEASUREMENT**, THOMAS PETERS, Adam Riss, University of Iowa, Iowa City, IA; Manisha Singh, TSI Incorporated, Shoreview, MN

1PC24 **FIELD RESULTS WITH A WIDE RANGE AEROSOL SPECTROMETER COMBINED WITH A PAH SENSOR**, T. RETTENMOSER 1), C. Gerhart 1), M. Richter 2) and H. Grimm 1) 1) GRIMM AEROSOL Technik GmbH, Dorfstrasse 9, D-83404 Ainring, Germany. 2) G.I.P GmbH, Research Department, Mühlbecker Weg 38, 0671 Pouch, Germany.

## 1D Chemistry

Austin Grand Ballroom Row 4

1PD1 **MERCURY CAPTURE WITH IN-SITU GENERATED TIO2 PARTICLES BY ELECTROSTATIC PRECIPITATION**, Tai Gyu Lee, Jae Young Park, Deptment of Chemical Engineering in Yonsei University

1PD2 **CHARACTERISTICS OF REDUCTION REACTION OF METAL OXIDE NANOPARTICLES ACCOMPANIED BY MORPHOLOGY CHANGE DURING SPRAY PYROLYSIS**, Tae Il Kim, Sung Min Choi, DONGGEUN LEE, Pusan National Univerisity

1PD3 **ION-INDUCED NUCLEATION: DIPOLE-CHARGE ORIENTATION, SIGN PREFERENCE AND CHEMISTRY EFFECT**, ALEXEY NADYKTO, Fangqun Yu, Atmospheric Sciences Research Center, State University of New York at Albany, Albany, USA

1PD4 **THE EFFECT OF DILUTION ON ORGANIC COMPOSITION OF DIESEL PARTICULATE MATTER (DPM)**, Fuyan Liang, MINGMING LU, Tim. C. Keener, Zifei Liu, University of Cincinnati, Cincinnati, OH

1PD5 **OXIDANT UPTAKE BY MODEL ORGANIC AEROSOL MIXTURES**, AMY M. SAGE, Kara E. Huff Hartz, Emily A Weitkamp, Allen L. Robinson, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA

1PD6 **METHODS FOR SPECIATION OF METALS IN ATMOSPHERIC AEROSOLS USING X-RAY ABSORPTION NEAR EDGE STRUCTURE (XANES) SPECTROSCOPY**, Brian J. Majestic, Martin M. Shafer, and James J. Schauer, Environmental Chemsitry and Technology Program, University of Wisconsin-Madison, Madison, WI

1PD7 **EFFECT OF NH3 ON THE ION-INDUCED NUCLEATION IN SO2/H2O/AIR MIXTURES**, KENKICHI NAGATO, Tohru Kawabuchi, Kochi National College of Technology, Nankoku, Japan; Chan S. Kim, Kikuo Okuyama, Hiroshima University, Higashi-Hiroshima, Japan; Motoaki Adachi, Osaka Prefecture University, Sakai, Japan

## 1E Control Technology

Austin Grand Ballroom Row 4

1PE1 **PREDICTION OF VENTURI SCRUBBER PERFORMANCE USING LIQUID ATOMIZATION MODEL**, Sun-Il Pak, KEUN-SHIK CHANG, Korea Advanced Institute of Science and Technology, Daejeon, Korea

1PE2 **NANOPARTICLES IN THE RESULT OF POLITETRAFLUOROETHILEN THERMAL DECOMPOSITION**, M.P. Anisimov, A.M. BAKLANOV, I.A. Zayko, and A.A. Onischuk

1PE3 **A NEW FRICTION FACTOR FOR LAMINAR, SINGLE-PHASE FLOW THROUGH FRACTURES**, KAMBIZ NAZRIDOUST, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY 13699-5725; Duane H. Smith, National Energy Technology Laboratory, U.S. Department of Energy, Morgantown, WV 26507-0880

1PE4 **UNIPOLAR CHARGING OF SUBMICRON PARTICLES USING CONDENSATION-EVAPORATION METHOD**, Y. J. CHOI, S. S. Kim and J. B. Choo, Department of Mechanical Engineering, KAIST, Daejeon, Republic of Korea

1PE5 **SIMULTANEOUS CLEANUP OF PARTICLES AND HYDROGEN SULFIDE**, KYOUNG SOO LIM, Young Ok Park, Jung Hwan Lim, Fossil Energy & Environment Department, Korea Institute of Energy Research, Daejeon, South Korea

1PE6 **THE ROLE OF SALT IN SALT-ASSISTED AEROSOL-GEL AND SPRAY PYROLYSIS SYNTHESIS OF NANOPOROUS PARTICLES**, Sung Min Choi, Seung Geun Lee, DONGGEUN LEE, Pusan National University

1PE7 **PORTABLE ION GENERATORS AS PARTICLE REMOVAL DEVICES**, XIAORUI YU, Nasim Mullen, Ping Zhao, Richard Corsi, Jeffrey Siegel, Department of Civil, Architectural and Environmental Engineering, The University of Texas at Austin, Austin, TX

1PE8 **AEROSOL PENETRATION THROUGH THE POLYSULFONE MEMBRANE FILTERS**, Hsiao-Lin Huang, Department of Occupational Safety and Hygiene, Chia Nan University of Pharmacy & Science Yi-Chin Huang, Department of Land Management and Development, Chang Jung Christian University Pei-Chun Chuang, Graduate Institute of Public Health, National Yang Ming University Shinhao Yang, Graduate Institute of Environmental Engineering, National Taiwan University

1PE9 **CHALLENGE AND REGENERATION PROCEDURE FOR REGENERABLE FILTERS**, R. Arunkumar, John A. Etheridge, John C. Luthe, Brian A. Nagel, Olin P. Norton, Michael S. Parsons, Donna M. Rogers, Kristina U. Hogancamp, and CHARLES A. WAGGONER, Diagnostic Instrumentation and Analysis Laboratory, Starkville, MS

## 1F Health Related Aerosols

Austin Grand Ballroom Rows 4, 5

1PF1 **REDOX ACTIVITY OF AIRBORNE PARTICULATE MATTER (PM) AT DIFFERENT SITES IN THE LOS ANGELES BASIN**, Arthur K. Cho, Debra A. Schmitz, John R. Froines, UCLA, Los Angeles, CA: Bhabesh Chakrabarti, CONSTANTINOS SIOUTAS, University of Southern California, Los Angeles, CA

1PF2 **FIBROUS PARTICLE DEPOSITION ON HUMAN NASAL PASSAGE**, ZUOCHENG WANG, Philip K. Hopke, Goodarz Ahmadi, Center for Air Resources Engineering and Science, Clarkson University, Potsdam , NY; Paul A. Baron, Gregory Deye, National Institute for Occupational Safety and Health, Cincinnati , OH; Yung-Sung Cheng, Wei-Chung Su, Lovelace Respiratory Research Institute, Albuquerque, NM.

1PF3 **PARTICLE DEPOSITION IN HIGHLY IDEALIZED MOUTH-THROATS**, YU ZHANG, Tze Luck Chia, Warren H. Finlay Department of Mechanical Engineering Aerosol Research Laboratory of Alberta University of Alberta Edmonton, Alberta, Canada

1PF4 **SPATIAL AND TEMPORAL VARIABILITY OF BLACK CARBON IN NEW YORK CITY IN WINTER 2004**, PRASANNA VENKATACHARI, Liming Zhou, Philip K. Hopke, Clarkson University, Potsdam, NY; Dirk Felton, Oliver V. Rattigan, NYS Department of Environmental Conservation, NY; James J. Schwab, Kenneth L. Demerjian, State University of New York, Albany, NY.

1PF5 **THE EFFECT OF BODY ORIENTATION ON DEPOSITION OF PARTICLES IN THE HUMAN LUNG**, BAHMAN ASGHARIAN, Owen Price, CIIT Centers for Health Research, Research Triangle Park, NC

1PF6 **EFFECT OF PARTICLE SIZE ON RATES OF PHOTODEGRADATION OF ATMOSPHERIC TOXINS ADSORBED ON SOOT AEROSOL PARTICLES**, XIANG PAN, Ao Lin, Sergey Nizkorodov Department of Chemistry, University of California at Irvine, Irvine, CA

1PF7 **DEPOSITION OF POLYDISPERSE AEROSOLS IN THE HUMAN LUNG**, JUNG-IL CHOI, North Carolina State University, Raleigh, NC; Chong S. Kim, National Health and Environmental Effects Research Laboratory, US EPA, Research Triangle Park, NC

1PF8 **TECHNOLOGY FOR EFFECTIVE AEROSOL VACCINATION**, K. G. Soloviev*, E. Kurbatova**, N.B. Egorova**, A.D. Tolchinsky*, V.I. Sigaev*, S.N. Uspenskaya*, R.V. Borovick,* Semenov B.F. ** * Research Centre for Toxicology and Hygienic Regulation of Biopreparations, Bld.102A, Lenin Str., Serpukhov, Moscow Region, 142283 Russia ** Mechnikov Research Institute of Vaccines and Sera at the RAMS; 5 Maliy Kazenniy pereulok, Moscow, Russia.

1PF9 **ACTIVATION OF INNATE AND ADAPTIVE IMMUNITY AT AEROSOL INTRODUCTION OF VACCINE «IMMUNOVAC-VP-4»**, E. Kurbatova**, N.B.Egorova** K.G. Soloviev *, S.N.Uspenskaya*, A.V.Tretiakova*, A.N. Varfolomeev*, I.M. Gruber**, V.N. Efremova**, N.K. Akhmatova**, N.R. Dyadishchev*, I.B. Semenova**, F.B. Donenko***, B.F. Semenov**, R.V. Borovick* * Research Centre for Toxicology and Hygienic Regulation of Biopreparations, Bld.102A, Lenin Str., Serpukhov, Moscow Region, 142283 Russia ** Mechnikov Research Institute of Vaccines and Sera at the RAMS; Maliy Kazenniy pereulok, Moscow, Russia *** Russian Research Center of Oncology named by N.N. Blokhin at the RAMS

1PF10 **TOXICOLOGICAL EVALUATION OF REALISTIC EMISSIONS OF SOURCE AEROSOLS (TERESA) STUDY: RESULTS OF FIELD EXPERIMENTS (EXPOSURE CHARACTERIZATION) CONDUCTED AT TWO POWER PLANTS**, Pablo A. Ruiz, TARUN GUPTA, Choong-Min Kang, Joy E. Lawrence, Stephen T. Ferguson, Jack M. Wolfson, Annette C. Rohr and Petros Koutrakis. Department of Environmental Health. Harvard School of Public Health, Boston, MA.

1PF11 **POWDER DEPOSITION IN ORO-PHARYNGAL CAST OF HUMAN UNDER REALISTIC INSPIRATORY CONDITIONS**, TOMASZ R. SOSNOWSKI, Arkadiusz Moskal, Leon Gradon Warsaw University of Technology, Warsaw, Poland

1PF12 **IDENTIFICATION OF THE TOXICOLOGICAL EFFECTS OF REACTIVE OXIDATIVE SPECIES**, PRASANNA VENKATACHARI, Nupur Dutta, Pavithra Rao, Philip K. Hopke, Centre for Air Resources Engineering and Science, Clarkson University, Potsdam, NY

1PF13 **BIOAEROSOL PROPAGATION CAUSED BY LETTER OPENING**, Igor E. Agranovski, Oleg V. Pyankov, Igor S. ALTMAN, School of Environmental Engineering, Griffith University, Brisbane, QLD, Australia

1PF14 **PASTEURIZATION OF METALWORKING FLUIDS FOR CONTROL OF MICROORGANISMS**, AL ARMENDARIZ, Southern Methodist University, Dallas, TX; Nancy Dorsey, Environmental Protection Agency, Dallas, TX; John Wandryk, Crouch Engineering, Fort Worth, TX.

1PF15 **COMPARISON OF METHODS FOR CASCADE IMPACTOR DATA ANALYSIS TO PREDICT AEROSOL DEPOSITION INTO PATIENT AIRWAYS**, CAROLINE MAJORAL, Alain Le Pape, Patrice Diot, Laurent Vecellio, INSERM U618, Tours, F-37000 France ; IFR135, Tours, F-37000 France ; Université François Rabelais, Tours, F-37000 France

1PF16 **CFD INVESTIGATION OF PARTICLE INHALABILITY**, T. RENEE ANTHONY, Michael Flynn, The University of North Carolina, Chapel Hill, NC

1PF17 **ANOMALOUS RESPONSES (ARCING, ELECTRICAL DISCHARGE) IN A DIFFERENTIAL MOBILITY ANALYZER CAUSED BY ULTRAFINE FIBROUS CARBON AEROSOLS**, BON KI KU, Andrew D. Maynard, Paul A. Baron and Greg J. Deye, National Institute for Occupational Safety and Health (NIOSH), Cincinnati, OH, USA

1PF18 **DEVELOPMENT OF A SMALL ANIMAL WHOLE BODY INHALATION FACILITY FOR DIESEL PARTICLES**, CHARLES STANLEY, Joseph K. H. Ma , Rakesh Nandivada, West Virginia University, Morgantown, WV

1PF19 **PARTICLE CHARGE EFFECT ON DOSE DETERMINATION WITH IMPACTORS**, PIRITA MIKKANEN, Henna Tuomenoja, Ari Ukkonen, Dekati Ltd., Tampere, Finland

1PF20 **FLUOROCHROME IN MONITORING INDOOR BIOAEROSOLS**, Chih-Shan Li, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University Tzu-Yi Huang, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University

1PF21 **FLUOROCHROME AND FLUORESCENT IN SITU HYBRIDIZATION TO MONITOR BIOAEROSOLS IN SWINE HOUSES**, Chih-Shan Li, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University Miao-Ching Chi, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University

1PF22 **ANTIVIRAL ACTIVITY OF THE INFLUENZA VIRUS INHIBITOR MEASURED IN VITRO AND IN VIVO FOR DIFFERENT INFLUENZA VIRUS STRAINS**, LEONID BULYCHEV, Svetlana Rack, Olga Pyankova, Elena Goncharova, Alexandr Salnikov, Sergey Shepelenko, Vasiliy Poryvaev, Alexandr Ryzhikov. State Research Center of Virology and Biotechnology “Vector”, Koltsovo, Novosibirsk reg., Russia

## 1G Combustion

Austin Grand Ballroom Row 6

1PG1 **THE USE OF LASER-INDUCED IONIZATION TO DETECT SOOT INCEPTION IN A WELL-STIRRED REACTOR/PLUG-FLOW REACTOR**, DAVID B. LENHERT, Samuel L. Manzello, George W. Mulholland, Building and Fire Research Laboratory, National Institute of Standards and Technology (NIST), Gaithersburg, MD

1PG2 **EXPERIMENTAL STUDIES AND MODELING OF THIN-WALLED HOLLOW PARTICLE FORMATION BY SPRAY PYROLYSIS OF GEL-FORMING PRECURSORS**, Wenping Guo, TIMOTHY WARD, University of New Mexico, Albuquerque, NM

1PG3 **VARIABILITY IN ON-BOARD MEASUREMENTS OF LIGHT-DUTY VEHICLE PARTICLE NUMBER EMISSIONS**, YINGGE QU, Eric Jackson, Britt A. Holmén, Lisa Aultman-Hall, University of Connecticut, Storrs, CT

1PG4 **PARTICLE FORMATION IN GASES FROM TOTALLY FILTERED MAINSTREAM CIGARETTE SMOKE**, JOHN McAUGHEY and Conor McGrath, British American Tobacco, Southampton, UK

1PG5 **MEASUREMENT AND ANALYSIS OF SOOT INCEPTION LIMITS IN OXYGEN-ENRICHED NORMAL AND INVERTED COFLOW FLAMES**, Ben Kumfer, Richard Axelbaum, ERIK PITONIAK, Washington University, Saint Louis, MO

1PG6 **SIZE AND MORPHOLOGY OF PARTICULATES EMITTED FROM A SPARK-IGNITION ENGINE**, Matthew F. Chandler, UMIT O. KOYLU, James A. Drallmeier, Department of Mechanical and Aerospace Engineering, University of Missouri-Rolla, Rolla, MO

1PG7 **EMISSION CHARACTERISTICS OF SIDESTREAM CIGARETTE SMOKES**, FENG-YU CHIANG, Kuan-Ting Hou, Tzu-Ting Yang, Chih-Chieh Chen, College of Public Health, National Taiwan University, Taiepi, Taiwan; Yu-Mei Kuo, Chung Hwa College of Medical Technology, Tainan, Taiwan.

1PG8 **POLYMETHYL METHACRYLATE THERMAL DECOMPOSITION UNDER LASER RADIATION**, A.M. BAKLANOV, A. A. Onischuk, M.P. Anisimov

1PG9 **THE FATE OF FINE PARTICLE EMISSIONS FROM VARIOUS COMBUSTION PROCESSES**, JORMA JOKINIEMI Jarkko Tissari Olli Sippula Terttaliisa Lind Jouni Hokkinen

1PG10 **DESIGN AND CHARACTERIZATION OF AN ULTRAFINE COAL ASH AEROSOL GENERATOR FOR DIRECT ANIMAL EXPOSURE STUDIES**, Jong-Ik Yoo, WILLIAM P. LINAK, C. Andrew Miller, Takuya Shinagawa, Ha-Na Jang, M. Ian Gilmour, U.S. Environmental Protection Agency, Research Triangle Park, NC; Jost O.L. Wendt, University of Arizona, Tucson, AZ

1PG11 **IN SITU DETECTION AND SIZE DETERMINATION OF CARBON NANOTUBES**, CHAD UNRAU, Richard Axelbaum, Pratim Biswas, Washington University in St. Louis, St. Louis, MO

1PG12 **MULTI-COMPONENT AEROSOL DYNAMICS IN A SPHERICAL MICROGRAVITY FLAME**, B. M. Kumfer, Z. Sun, R. L. AXELBAUM Washington Univerisity, Dept. Mech. Engr., St. Louis, MO

## 1H Atmospheric Aerosols

Austin Grand Ballroom Rows 7, 8

1PH1 **THE ALTITUDE PROFILES OF BIOAEROSOL CONCENTRATION IN THE TROPOSPHERE**, ALEXANDER BORODULIN, Alexander Safatov, SRC VB "Vector", Koltsovo Novosibirsk region, Russia; Boris Belan, Mikhail Panchenko, Institute of Atmospheric Optics of the SB RAS, Tomsk, Russia; Vladimir Penenko, Elena Tsvetova, Institute of Computational Mathematics and Mathematical Geophysics of the SB RAS, Novosibirsk, Russia

1PH2 **DATA ON CULTURABLE MICROORGANISMS VARIABILITY IN ATMOSPHERIC AEROSOL IN THE SOUTH OF WESTERN SIBERIA**, ALEXANDER S. SAFATOV, Irina S. Andreeva, Alexander I. Borodulin, Galina A. Buryak, Yurii V. Marchenko, Victor V. Marchenko, Sergei E. Olkin, Valentina A. Petrishchenko, Oleg V. P'yankov, Vladimir E. Repin, Irina K. Reznikova, Alexander N. Sergeev, State Research Center of Virology and Biotechnology "Vector", Koltsovo, Novosibirsk Region, Russia; Alexander N. Ankilov, Aantoli M. Baklanov, Konstantin P. Koutsenogii, Valeriy I. Makarov, Svetlana A. Popova, Institute of Chemical Kinetics and Combustion, SB RAS, Novosibirsk, Russia; Mikhail Yu. Arshinov, Boris D. Belan, Mikhail V. Panchenko, Gennadiy N. Tolmachev, Institute of Atmospheric Optics SB RAS, Tomsk, Russia; Vladimir V. Penenko, Vladimir F. Raputa, Elena A. Tsvetova, Institute of Computation Mathematics and Mathematical Geophysics, SB RAS, Novosibirsk, Russia

1PH3 **LASER STRATEGIC AEROSOL DATA COLLECTED IN FEEDYARDS OF THE HIGH PLAINS**, CHARLES W. PURDY, USDA-ARS, Bushland, TX; David C. Straus, Texas Tech University Health Sciences Center, Lubbock, TX.

1PH4 **THE COMPARISON BETWEEN IMPROVE AND STN SOURCE IDENTIFICATION AT SEATTLE**, EUGENE KIM, Philip Hopke, Clarkson University, Potsdam, NY; Timothy Larson, Joellen Lewtas, University of Washington, Seattle, WA

1PH5 **COMPARISON OF ELEMENTAL COMPOSITION OF SPRINGTIME AEROSOL, BETWEEN URBAN CITY OF CHILLÁN AND A RURAL AREA, SAN CARLOS, CHILE**, OMAR F. CARVACHO, Lowell L. Ashbaugh, Robert Flocchini Crocker Nuclear Laboratory, University of California, Davis, One Shields Ave., Davis, CA 95616 USA.

1PH6 **COMPUTATIONAL METHODS FOR MULTI-PHASE MULTI-REACTION THERMODYNAMICAL EQUILIBRIUM PROBLEMS**, Neal R. Amundson, ALEXANDRE CABOUSSAT, Jiwen He, Department of Mathematics, University of Houston, Houston, TX; John H. Seinfeld, Department of Chemical Engineering, California Institute of Technology, Pasadena, CA; Kee-Youn Yoo, Department of Chemical Engineering, Seoul National University of Technology, Seoul, Korea

1PH7 **SEASONAL AND SPATIAL TRENDS IN PARTICLE NUMBER CONCENTRATIONS AND SIZE DISTRIBUTIONS AT THE CHILDREN'S HEALTH STUDY SITES IN SOUTHERN CALIFORNIA**, Manisha Singh, HARISH PHULERIA, Constantinos Sioutas, University of Southern California, Los Angeles, CA; Kenneth Bowers, California Air Resources Board, Sacramento, CA

1PH8 **BIOLOGICAL AND CHEMICAL POLLUTION OF FRESH SNOW (WHICH FELL DOWN ON FEBRUARY 18, 2005) IN NOVOSIBIRSK ENVIRON**, ALEXANDER S. SAFATOV, Irina S. Andreeva, Galina A. Buryak, Sergei E. Olkin, Vladimir E. Repin, Irina K. Reznikova, State Research Center of Virology and Biotechnology "Vector", Koltsovo, Novosibirsk Region, Russia; Marina P. Shinkorenko, Olga V. Shuvaeva, Boris S. Smolyakov, Institute of Inorganic Chemistry, SB RAS, Novosibirsk, Russia

1PH9 **PARTICLE FLUX DIVERGENCE DUE TO PARTICLE DYNAMICS: IS THERE A SPECTRAL SIGNATURE?**, S.C. PRYOR, Indiana University, IN; L.L. Soerensen, S.E. Larsen, Risoe National Laboratory, Denmark

1PH10 **COMBINED RECEPTOR MODEL FOR AMBIENT AND PERSONAL EXPOSURE SAMPLES**, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering, and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY; Gary Norris, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC

1PH11 **ATTRIBUTION OF SULFATE AEROSOLS IN THE CLASS I AREAS OF THE WESTERN UNITED STATES USING TRAJECTORY REGRESSION ANALYSIS**, JIN XU, Dave DuBois, Mark Green, Vic Etyemezian, Desert Research Institute, Las Vegas, NV; Marc Pitchford, NOAA Air Resource Laboratory, Las Vegas, NV

1PH12 **SIMULATION OF THE ACIDITY AND GROWTH OF MULTICOMPONENT NUCLEATED PARTICLES IN THE EASTERN UNITED STATES**, JAEGUN JUNG, Peter J. Adams, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA

1PH13 **MEASUREMENTS OF URBAN AEROSOL IN A LIGHT INDUSTRIAL AREA – PHYSICAL PROPERTIES, INCLUDING PARTICLE SIZE, NUMBER, AND DIAMETER CONCENTRATIONS**, OLIVER F. BISCHOF, Axel F. Zerrath, TSI GmbH, Particle Instruments, Aachen, Germany

1PH14 **COMPARISONS BETWEEN SAMALAYUCAN AND SAHARAN DUST MICROPHYSICS PROPERTIES**, ROSA FITZGERALD Roderick Pearson The University of Texas at El Paso, El Paso, TX Vernon Morris Howard University, Washington, DC Roy Armstrong Univeristy of Puerto Rico at Mayaquez

1PH15 **NITRO-PAHS IN THE COUNTRYSIDE OF ROME, ITALY. SYNTHESIS OF POSITIONAL ISOMERS FOR THEIR SPECIATION IN AMBIENT AIR.**, Patrizia Di Filippo; FEDERICA INCORONATO, Carmela Riccardi, Sergio Spicaglia, Italian National Institute of Occupational Safety and Prevention, Rome, I; Donatella Capitani, Angelo Cecinato, Italian National Research Council, Rome, I

1PH16 **AEROSOL OPTICAL PROPERTIES IN THE ARCTIC REGION**, Tymon Zielinski, Tomasz Petelski, Anna Rozwadowska, Institute of Oceanology, Polish Academy of Sciences

1PH17 **DEVELOPMENT AND LABORATORY EVALUATION OF A COUNTER-CURRENT PARALLEL PLATE MEMBRANE DENUDER FOR THE NON-SPECIFIC REMOVAL OF GASES FROM AN AEROSOL STREAM**, PABLO A. RUIZ, Joy E. Lawrence, Stephen F. Ferguson, Jack M. Wolfson, and Petros Koutrakis. Department of Environmental Health, Harvard School of Public Health, Boston MA 02215

1PH18 **LIQUID-TO-SOLID PHASE TRANSITIONS OF AMBIENT AEROSOLS**, SATOSHI TAKAHAMA, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA; Vlasis Karidis, Alexandra Tsimpidi, University of Patras, Greece

1PH19 **AEROSOL MASS DENSITY AND NUMBER DENSITY DISTRIBUTIONS DURING AEROSE-2004**, LIZETTE ROLDAN, Vernon R. Morris, Howard University, Washington, DC

1PH20 **AEROSOL NUTRIENT CONCENTRATIONS AND DRY DEPOSITION FLUXES IN THE GULF OF AQABA**, Ying Chen, Joe Street, Adina Paytan, Stanford University

1PH21 **LANTHANUM AND LANTHANIDES IN ATMOSPHERIC FINE PARTICLES AND THEIR APPORTIONMENT TO REFINERY AND PETROCHEMICAL OPERATIONS IN HOUSTON, TX**, PRANAV KULKARNI, Shankar Chellam, University of Houston, Houston, TX; Matthew P. Fraser, Rice University, Houston, TX

1PH22 **THE COMPOSITION OF SECONDARY ORGANIC PARTICULATE MATTER FROM THE PHOTO-OXIDATION OF META-XYLENE**, JULIE BENNETT, Michael Mozurkewich, Don Hastie, Centre for Atmospheric Chemistry, York University, Toronto, Canada; Janya Humble, Diane Michelangeli, York University, Toronto, Canada

1PH23 **MICRON SIZE PARTICLE TRANSPORT IN THE EARTH BOUNDARY SUBLAYER**, DAVID ALBURTY, Chatten Cowherd, Ph.D, , James Balarashti, MSChE, Jason Downing, Gregory Muleski, Ph.D., Midwest Research Institute, Kansas City, MO

1PH24 **CHARACTERIZATION OF FUGITIVE DUST FROM ALMOND HARVEST OPERATIONS WITH REAL-TIME MONITORS**, KRYSTYNA TRZEPLA-NABAGLO, Paul Wakabayashi, Robert Flocchini, Crocker Nuclear Laboratory, University of California, Davis, CA

1PH25 **CHARACTERIZATION OF FINE AEROSOLS IN THE SOUTH COAST AIR BASIN**, AMY E. GILDEMEISTER, Philip K. Hopke, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY

1PH26 **CHARACTERIZATION OF URBAN AEROSOL IN WILMINGTON, DELAWARE USING A REAL-TIME SINGLE PARTICLE MASS SPECTROMETER**, MELISSA S REINARD, Matthew A. Dreyfus, Michael P. Tolocka, Murray V. Johnston University of Delaware, Newark, DE;

1PH27 **CHEMICAL CHARACTERIZTION OF WATER SOLUBLE AEROSOLS AT AIRBORNE AND GROUND BASED SITES USING A PARTICLE-INTO-LIQUID SAMPLER (PILS).**, DESIREE TOOM-SAUNTY, Katherine L. Hayden, W. Richard Leaitch, Anne Marie Macdonald, Dave Halpin, Amy Leithead, Shao-Meng Li, Kurt G. Anlauf, Sangeeta Sharma, J. Walter Strapp, Meteorological Service of Canada, Toronto, ON

1PH28 **ROLE OF IONS IN ATMOSPHERIC PARTICLE FORMATION: SECOND-GENERATION ION-MEDIATED NUCLEATION MODEL**, FANGQUN YU, State University of New York at Albany, Albany, NY

1PH29 **COMPARISON OF SIZE-RESOLVED AEROSOL CONCENTRATIONS FROM MULTIPLE U.S. CITIES**, Kazeem B. Olanrewaju,Charles O. Stanier, Dept. of Chemical and Biochemical Engineering, University of Iowa, Peter H. McMurry, Dept. of Mechanical Engineering, University of Minnesota

1PH30 **OXYGENATED ORGANIC COMPOUNDS PRESENT IN MOTOR VEHICLE PARTICULATE EMISSIONS**, CHRIS JAKOBER, Sarah Riddle, Judith Charles, Department of Toxicology, UC Davis, Davis CA; Michael Robert, Michael Kleeman, Department of Civil and Environmental Engineering, UC Davis, Davis CA.

1PH31 **DEVELOPMENT OF THE AIRCRAFT-AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER (A-ATOFMS)**, GARY POON, John Holecek, Ryan Moffet, Hiroshi Furutani, Rene Sanchez, Sergio Guazzotti, Yongxuan Su, Thomas Rebotier, Kerri Denkenberger, Joseph Mayer, Kim Prather, University of California, San Diego, San Diego, CA; Marc Gonin, Katrin Fuhrer, TOF Werk AG, Thun, Switzerland

1PH32 **THE CASSIAR TUNNEL 2001 STUDY: EMISSIONS CHARACTERIZATION FROM VEHICULAR TRAFFIC IN VANCOUVER, BRITISH COLUMBIA, CANADA.**, JEAN-PIERRE CHARLAND, Gianni Caravaggio, Penny MacDonald, Tony McPhee, Natural Resources Canada, CANMET Energy Technology Centre-Ottawa, Ontario, Canada; Chung Chiu, Gary Poole, Lisa A. Graham, Environment Canada, Environmental Technology Centre , Ottawa, Ontario, Canada

1PH33 **FLOWRATES, CUTPOINTS, AND CONCENTRATIONS IN THE IMPROVE NETWORK**, NICOLE HYSLOP, Warren White, Chuck McDade, University of California, Davis, CA

1PH34 **ANALYSIS OF REACTIVE MERCURY IN ATMOSPHERIC AEROSOL USING PYROLYTIC THERMAL DESORPTION AND COLD VAPOR ATOMIC FLUORESENCE SPECTROSCOPY (PTD-CVAFS)**, Andrew P. Rutter and James J. Schauer, Environmental Chemsitry and Technology Program, University of Wisconsin-Madison, Madison, WI

1PH35 **DETERMINATION OF TRACE METALS IN FINE (PM2.5) PARTICULATE MATTER BY ICP-MS IN A LOW POLLUTED AREA IN MEXICO**, Mario Murillo-Tovar, MIREYA MOYA, Centro de Ciencias de la Atmósfera-UNAM, Mexico; Claudia Ponce de Leon, Instituto de Geografía- UNAM, Mexico.

1PH36 **SEASONAL VARIATION OF PM2.5 IONIC CONCENTRATIONS AND WATER CONTENT IN SEOUL**, JUNG YOUN KIM, Yong Pyo Kim, Ewha Womans Univerisity, Seoul, Korea

1PH37 **ESTIMATION OF THE EFFECT OF INTERACTION OF ORGANIC AND INORGANIC SPECIES ON AEROSOL WATER CONTENT DURING PITTSBURGH AIR QUALITY STUDY**, Nitin Goel, ANDREY KHLYSTOV, Duke University, Durham, NC; Charles O. Stanier University of Iowa, Iowa City, IA; Satoshi Takohama, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA

1PH38 **IN-SITU MEASUREMENTS OF AEROSOL OPTICAL AND PHYSICAL PROPERTIES**, A. W. Strawa, A.G. Hallar, NASA Ames Research Center, Moffett Field, CA, USA A.P. Arnott, Desert Research Inst., Reno, NV, USA R. Elleman, D. Covert, U. of Washington, Seattle, WA, USA J. Ogren, NOAA/CMDL, Boulder, CO, USA B. Schmid, J. Redemann, Bay Area Environmental Research Inst., Sonoma, CA, USA A. Bucholtz, Naval Research Lab., Monterey, CA, USA H.H. Jonsson, Naval Postgraduate School, Monterey, CA, USA C. Corrigan, Scripps Inst. of Oceanography, La Jolla, CA, USA

1PH39 **SOURCE APPORTIONMENT OF THE AMBIENT AEROSOL IN ZÜRICH, SWITZERLAND**, RAMYA SUNDER RAMAN, Philip K. Hopke, Eugene Kim, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson Univeristy, Potsdam, NY; Nicolas Bukowiecki, Ferenc Hegedus, Ernest Weingartner, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institut, 5232 Villigen PSI, Switzerland; Matthias Hill, Robert Gehrig, Peter Linemann, Empa, Materials Science and Technology, Duebendorf, CH-8600, Switzerland; Gerald Falkenberg, Hamburger Synchrotronstrahlungslabor at Deutsches Elektronen-Synchrotron DESY, Notkest. 85, Hamburg, D-22603, Germany

1PH40 **GAS-PARTICLE PARTITIONING OF PAHS AT URBAN AND BACKGROUND AREAS IN KOREA**, JI YI LEE, Yong Pyo Kim, Ewha Womans University, Seoul, Korea, Chang Hee Kang, Cheju National University, Jeju, Korea, Young Sung Ghim, Korea Institute of Science and Technology, Seoul, Korea

1PH41 **COMPARISON OF PARTICULATE PAHS LEVELS AT GOSAN AND MT. HALLA SITES, JEJU ISLAND, KOREA**, JI YI LEE, Yong Pyo Kim, Ewha Womans University, Seoul, Korea, Chang Hee Kang, Cheju National University, Jeju, Korea, Naoki Kaneyasu, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan

1PH42 **CLASSIFICATION OF SIZE-RESOLVED SOOT PARTICLES BY POROSITY**, ESTHER COZ, Francisco J. Gómez-Moreno, Manuel Pujadas, Begoña Artíñano, CIEMAT, Environmental Department, Madrid, Spain

1PH43 **AVIATION- RELATED METEOROLOGICAL CHANGES OF FOG IN SOUTHERN NIGERIA**, ONIFADE yemi sikiru Wesley College Of science, Ibadan, Oyo State, Nigeria

1PH44 **SECONDARY ORGANIC AEROSOL FORMATION IN THE EASTERN US: EFFECT OF TEMPERATURE, NOX, AND UV RADIATION**, TIMOTHY LANE, Albert Presto, Kara Huff-Hartz, Ravikant Pathak, Neil M. Donahue, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA; Charles Stainer, University of Iowa, Iowa City, IA

1PH45 **AN ASYNCHRONOUS TIME-STEPPING (ATS) INTEGRATOR FOR SOLVING STIFF ATMOSPHERIC PROBLEMS**, K. Max Zhang, Anthong S. Wexler, University of California, Davis, CA

1PH46 **ELEMENTAL ANALYSIS OF AIR PARTICULATE MATTER AND APPLICATION TO SOURCE FINGERPRINTING**, B.A. Begum and S. K. Biswas, Atomic Energy Centre, Dhaka, Bangladesh; PHILIP K. HOPKE, Clarkson University, Potsdam, NY

1PH47 **DATA QUALITY OF PAH AND NITRO-PAH DETERMINATIONS IN ATMOSPHERIC AEROSOL**, Patrizia Di Filippo, CARMELA RICCARDI, Donatella Pomata, Federica Incoronato, Sergio Spicaglia, Italian National Institute of Occupational Safety and Prevention, Rome, I

1PH48 **DERIVATION OF A GENERAL EQUATION FOR THE CALCULATION OF SECONDARY ORGANIC AEROSOLS (SOA) UNDER THE CONDITIONS THAT BOTH PRIMARY ABSORBING ORGANIC AEROSOL AND THE PRE-EXISTING PARTITIONING SPECIES ARE NOT ZERO**, Shaocai Yu 123 North Field Circle, Chapel Hill, NC 27516, U. S.A

1PH49 **INVESTIGATION OF ELEMENTAL SPECIES IN A REFERENCE MATERIAL FOR PM 2.5 URBAN PARTICULATE MATTER**, RABIA OFLAZ SPATZ, Rolf Zeisler, Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD

1PH50 **UPTAKE OF POLAR VAPOUR MOLECULES BY CLUSTERS IONS: THE EFFECT OF THE AVERAGE DIPOLE ORIENTATION**, ALEXEY NADYKTO, Fangqun Yu, Atmospheric Sciences Research Center, State University of New York at Albany, Albany, NY

1PH51 **DETERMINATION OF OLIGOMERIC FRACTION OF SECONDARY ORGANIC AEROSOLS BY TGA**, AMANDA NORTHCROSS, Myoseon Jang, University of North Carolina

1PH52 **EVOLUTIONS OF PARTICLE SIZE DISTRIBUTIONS DURING SECONDARY AEROSOL FORMATION**, YEE-LIN WU, Chi-Wen Chang, Department of Environmental Engineering, National Cheng-Kung University, Tainan, Taiwan

1PH53 **PMF VS. CMB: SOURCE APPORTIONMENT OF PM2.5 AT 4 SEARCH SITES**, Wei Liu, Sangil Lee, Yuhang Wang, Armistead Russell, Georgia Institute of Technology, Atlanta, GA; Eric S. Edgerton, Atmospheric Research and Analysis, Inc., Durham, NC.

1PH54 **SYNTHESIS OF SUPERSITE PROGRAM FINDINGS: UNCERTAINTIES IN EMISSION INVENTORIES**, ANN WITTIG, CUNY City College of New York, New York, NY; Heather Simon, David Allen, University of Texas at Austin, Austin, TX

1PH55 **FTIR REFLECTANCE SPECTROSCOPY OF SIZE-SEGREGATED AEROSOL DEPOSITS**, JUDITH HOPEY, Kirk Fuller, Venkataramanan Krishnaswamy, David Bowdle, The University of Alabama at Huntsville, Huntsville, AL

1PH56 **SOURCE APPORTIONMENT OF PM2.5 AT HERCULES-GLADE, MISSOURI, USING POSITIVE MATRIX FACTORIZATION**, STEVEN G BROWN, Anna Frankel, Sean M. Raffuse, Hilary R. Hafner, Paul T. Roberts, Sonoma Technology, Inc., Petaluma, CA; Brett A. Anderson, United States Environmental Protection Agency Region 7, Kansas City, KS

1PH57 **NUMERICAL SIMULATION OF TRANSPORT AND DISPERSION OF VEHICULAR PARTICULATE EMISSIONS NEAR A MAJOR INTERNATIONAL BRIDGE COMPARED WITH EXPERIMENTAL RESULTS**, CHAOSHENG LIU, Goodarz Ahmadi, Kambiz Nazridoust, Andrea R. Ferro, Timothy R. McAuley, Philip K. Hopke, Peter A. Jaques, Clarkson University, Potsdam, NY

1PH58 **DETECTION OF LOW MOLECULAR WEIGHT ORGANIC ACIDS BY ATMOSPHERIC PRESSURE ELECTROSPRAY IONIZATION AND ATMOSPHERIC PRESSURE PHOTOIONIZATION MASS SPECTROMETRY**, MONICA A. MAZUREK, Patricia Atkins, Department of Civil and Environmental Engineering, Rutgers University, Piscataway, NJ

1PH59 **SOURCE APPORTIONMENT OF SEATTLE PM2.5 USING STN ORGANIC CARBON PEAKS**, TIMOTHY V LARSON, Department of Civil and Environmental Engineering, University of Washington, Seattle; Eugene Kim, Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY; Gary Norris, National Environmental Research Lab, U.S.EPA., Research Triangle Park, NC

## Tuesday 11:00 AM

## Session 2: Platform

### 2A Symposium: Combining Multiple Data Sources and Models to Create an Accurate, Global Scale Aerosol Picture, I

Salon A

Ralph Kahn and Sonia Kreidenweis, chairs

2A1 11:00 **INTEGRATION OF SATELLITE-DERIVED AEROSOL DATA INTO AIR QUALITY APPLICATIONS**, FRED DIMMICK, Chief, Process Modeling Research Branch, Human Exposure and Atmospheric Sciences Division, National Exposure Research Laboratory, US EPA, Research Triangle Park, NC

2A2 11:15 **3-D INTEGRATED AIR QUALITY MONITORING APPLICATION OF SATELLITE SENSOR DATA FOR REGIONAL AND URBAN SCALE AIR QUALITY**, JILL ENGEL-COX, Battelle Memorial Institute, Arlington, VA; Raymond Hoff, Raymond Rogers, Joint Center for Earth Systems Technology and the Physics Department, University of Maryland, Baltimore County, Baltimore, MD; Alan Rush, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Washington, DC; Fred Dimmick, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC; James Szykman, U.S. Environmental Protection Agency, Office of Research and Development, c/o NASA Langley Research Center, Hampton, VA.

2A3 11:30 **AN "A-TRAIN" STRATEGY FOR QUANTIFYING DIRECT CLIMATE FORCING BY AEROSOLS**, THEODORE ANDERSON, Robert Charlson, University of Washington, Seattle, WA; Nicolas Bellouin, Olivier Boucher, Jim Haywood, UK Met Office, Essex, England; Mian Chin, Yoram Kaufman, Lorraine Remer, Omar Torres, NASA/ Goddard Space Flight Center, Greenbelt, MD; Sundar Christopher, University of Alabama, Huntsville, AL; Stefan Kinne, Max Planck Institute of Meteorology, Hamburg, Germany; John Ogren, NOAA/Climate Monitoring and Diagnostics Lab, Boulder, CO; Toshihiko Takemura, Kyushu University, Kyushu, Japan; Didier Tanré, University of Lille, Lille, France; Charles Trepte, Bruce Wielicki, David Winker, NASA/Langley, Langley, VA; Hongbin Yu, Georgia Institute of Technology, Atlanta, GA

2A4 11:45 **GLOBAL RETRIEVAL OF AEROSOL PROPERTIES OVER DESERT AND SEMI-DESERT REGIONS FROM MODIS**, N. CHRISTINA HSU, S.-C. Tsay, Michael D. King, and J. R. Herman, NASA/Goddard Space Flight Center, Greenbelt, MD

2A5 12:00 **AIR QUALITY ASSESSMENT USING COMBINED SATELLITE AND GROUND MEASUREMENTS**, SUNDAR CHRISTOPHER, Jun Wang, Pawan Gupta, Department of Atmospheric Sciences, University of Alabama in Huntsville, Huntsville, AL

2A6 12:15 **A LONG SAHARAN DUST EVENT OVER THE WESTERN MEDITERRANEAN: LIDAR, SUN PHOTOMETER AND DREAM MODEL SIMULATIONS**, Carlos Pérez, Slobodan Nickovic, Michaël Sicard, Carlos Toledano, Victoria E. Cachorro, JOSE M. BALDASANO

## 2B Gas to Particle Conversion

Salon B

Prakash Bhave and Charles Stanier, chairs

2B1 11:00 **ATMOSPHERIC FIELD STUDY OF ION-INDUCED NUCLEATION**, KENJIRO IIDA, Mark Stolzenburg, Peter McMurry, University of Minnesota, Minneapolis, MN; James Smith, Matthew Dunn, Fred Eisele, National Center for Atmospheric Research, Boulder, CO

2B2 11:15 **ROLE OF IONS IN ATMOSPHERIC PARTICLE FORMATION: MODELING AND COMPARISON WITH MEASUREMENTS**, FANGQUN YU, State University of New York at Albany, Albany, NY

2B3 11:30 **CHLORINE CHEMISTRY IN URBAN ATMOSPHERES: AEROSOL FORMATION ASSOCIATED WITH ANTHROPOGENIC CHLORINE EMISSIONS IN SOUTHEAST TEXAS**, SUNGHYE CHANG, David T. Allen, University of Texas at Austin, TX

2B4 11:45 **MATHEMATICAL MODELING OF THE FINE PARTICLE MASS AND PHASE PARTITIONING OF SEMI-VOLATILE ORGANICS IN DILUTED EXHAUST FROM COMBUSTION SYSTEMS**, MANISH K. SHRIVASTAVA, Eric M. Lipsky, Allen L. Robinson, Carnegie Mellon University, Pittsburgh, PA; Charles O. Stanier, University of Iowa, Iowa City, IA

2B5 12:00 **MOLECULAR DYNAMICS STUDY OF WATER UPTAKE BY NACL NANOPARTICLES**, RANJIT BAHADUR, Lynn M. Russell, Scripps Institue of Oceanography, San Diego, CA

2B6 12:15 **GAS-PARTICLE PARTITIONING COEFFICIENTS OF REACTIVE MERCURY IN ATMOSPHERIC AEROSOL**, Andrew P. Rutter and James Schauer, Environmental Chemistry and Technology Program, University of Wisconsin-Madison, Madison, WI

## 2C Aerosols and Homeland Security Symposium, I

Salon D

Ed Stuebing and Jana Kesavan, chairs

2C1 11:00 **SINGLE-PARTICLE LASER-INDUCED FLUORESCENCE AND BREAKDOWN SPECTROSCOPY FOR HIGH-DISCRIMINATION BIOAEROSOL SENSING**, JOHN HYBL and Shane Tysk, Lincoln Laboratory, Massachusetts Institute of Technology, Lexington, MA

2C2 11:15 **PREVENTING THE SPREAD OF AIRBORNE RESPIRATORY INFECTIOUS DISEASE**, WESLEY DEHAAN, Jeff Kastra, Karim Kokash, Matthew Brande, Robert Clarke, and Wiwik Watanabe, Pulmatrix Inc., Cambridge, MA; Megan Murray, Harvard School of Public Health, Boston, MA

2C3 11:30 **MALDI OF INDIVIDUAL BIOMOLECULE-CONTAINING AIRBORNE PARTICLES WITH AN ION TRAP MASS SPECTROMETER**, WILLIAM A. HARRIS, Peter T.A. Reilly, William B. Whitten, Oak Ridge National Lab, Oak Ridge, TN

2C4 11:45 **SINGLE PARTICLE FLUORESCENCE & MASS SPECTROMETRY FOR THE DETECTION OF BIOLOGICAL AEROSOLS**, Keith Coffee, Vincent Riot, Bruce Woods, Paul Steele, Eric Gard, Lawrence Livermore National Laboratory, Livermore, Ca.

2C5 12:00 **AERODYNAMIC SIZE DIFFERENCES IN SPORES OF BACILLUS ANTHRACIS AND OTHER BACILLUS SPECIES.**, EDWARD W. STUEBING, Jose-Luis Sagripanti, US Army Edgewood Chemical Biological Center, Abredeen Proving Ground, MD

2C6 12:15 **DISTINGUISHING SEVEN SPECIES OF BACILLUS SPORES USING BIOAEROSOL MASS SPECTROMETRY**, DAVID P. FERGENSON, Maurice E. Pitesky, Matthias Frank, Joanne M. Horn and Eric E. Gard, Lawrence Livermore National Laboratory

## 2D Secondary Organic Aerosol Chemistry

Salon E

Cort Anastasio and Kara Huff Hartz, chairs

2D1 11:00 **SECONDARY ORGANIC AEROSOL FORMATION FROM MIXTURES OF HYDROCARBONS IRRADIATED IN THE PRESENCE OF NOX**, JOHN H. OFFENBERG, Tadeusz E. Kleindienst, Edward O. Edney, Michael Lewandowski, National Exposure Research Laboratory, U.S. Environmental Protection Agency, RTP, NC 27711; Mohammed Jaoui, Alion Science and Technology, RTP, NC 27709.

2D2 11:15 **SECONDARY ORGANIC AEROSOL FORMATION FROM BIOGENIC PRECURSORS: ISOPRENE AND ALPHA-PINENE**, JOSEF DOMMEN, Jonathan Duplissy, Kathrin Gaeggeler, Axel Metzger, M. Rami Alfarra, Astrid Gascho, Andre S.H. Prevot, Ernest Weingartner, Urs Baltensperger, Paul Scherrer Institute, Villigen, Switzerland; Markus Kalberer, Mirjam Sax, Christian Emmenegger, Alain Reinhardt, Renato Zenobi, Swiss Federal Institute of Technology, Zurich, Switzerland

2D3 11:30 **EFFECT OF NH3 ON SECONDARY ORGANIC AEROSOL FORMATION FROM A- AND B-PINENE OZONOLYSIS IN THE PRESENCE AND ABSENCE OF WATER VAPOR**, KWANGSAM NA, Chen Song, David R. Cocker III, University of California, Riverside, CA

2D4 11:45 **IDENTIFICATION AND CHARACTERIZATION OF SEMIVOLATILE ORGANIC CARBON USING PROTON TRANSFER REACTION - MASS SPECTROMETRY (PTR-MS)**, ALBERT A. PRESTO, Kara E. Huff Hartz, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA

2D5 12:00 **IMPACT OF PROPENE ON SECONDARY ORGANIC AEROSOL FORMATION FROM M-XYLENE**, CHEN SONG, Bethany Warren, Kwangsam Na, David R. Cocker III, University of California, Riverside, CA

2D6 12:15 **LABORATORY STUDIES OF SECONDARY ORGANIC AEROSOL FORMATION FROM REACTIONS OF LINEAR ALKANES WITH OH/NOX**, Yong Bin Lim, PAUL J. ZIEMANN, Air Pollution Research Center, University of California, Riverside, CA

## 2E Indoor Aerosols, I

Meeting Room 406

Jacky Rosati and Jeff Siegel, chairs

2E1 11:00 **RESUSPENSION OF FIBERS FROM FLOORING SURFACES DUE TO HUMAN ACTIVITY**, JACKY ROSATI, U.S. EPA National Homeland Security Research Center, Research Triangle Park, NC; Jonathan Thornburg, Charles Rodes, RTI International, Research Triangle Park, NC; Mark Maddaloni, U.S. EPA Region 2, New York, NY

2E2 11:15 **PARTICULATE MATTER TRANSLOCATION MECHANISMS AND THEIR DIFFERENCES**, JONATHAN THORNBURG, Charles Rodes, RTI International, RTP, NC; Jacky Rosati, U. S. EPA NHSRC, RTP, NC; Jack Edwards, NCSU, Raleigh NC

2E3 11:30 **DETACHMENT CHARACTERISTICS OF DIFFERENT MICROPARTICLE CONFIGURATIONS ON SURFACES BY TURBULENT AIR FLOW**, ABDELMAGED H. IBRAHIM and Patrick. F. Dunn University of Notre Dame, Notre Dame, IN, USA

2E4 11:45 **FULL-SCALE CHAMBER STUDY TO ESTIMATE RESUSPENSION RATES FROM HUMAN ACTIVITY**, Jing Qian, ANDREA FERRO, Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY

2E5 12:00 **BIOAEROSOL LEVELS IN OFFICES AND RESIDENCES: A PILOT STUDY OF AIRBORNE PROTEIN, ENDOTOXIN AND (1 -3)-BETA-D-GLUCAN**, QING CHEN, Lynn M. Hildemann, Stanford, University, Stanford, CA

2E6 12:15 **EXPERIMENTAL MEASUREMENT OF PARTICLE TRACKING AND RESUSPENSION BY FOOT TRAFFIC**, MARK SIPPOLA, Tracy Thatcher, Indoor Environment Department, Lawrence Berkeley National Laboratory, Berkeley, CA

**12:30 PM**

**Lunch**

**Tuesday 2:00 PM**

**Session 3: Platform**

**3A Symposium: Combining Multiple Data Sources and Models to Create an Accurate, Global Scale Aerosol Picture, II**

Salon A

Graham Feingold and Doug Westphal, chairs

3A1 2:00 **THE GEMS AEROSOL PROJECT: EARLY RESULTS AND EXPECTED PROGRESS**, Olivier Boucher, Hadley Centre, Met Office, Exeter, U.K. Jean-Jacques Morcrette, European Centre for Medium-range Weather Forecasts, Reading, U.K. and the GEMS-aerosol project members

3A2 2:15 **POSSIBILITIES AND CHALLENGES IN USING SATELLITE DATA FOR PM2.5 FORECASTS**, MIAN CHIN, NASA Goddard Space Flight Center, Greenbelt, MD; Hongbin Yu, Allen Chu, University of Maryland at Baltimore County, Baltimore, MD

3A3 2:30 **CALIPSO IMPACTS ON ASSESSMENT OF GLOBAL AND REGIONAL SCALE AEROSOL TRANSPORT**, RAYMOND HOFF and Lynn Sparling, University of Maryland, Baltimore County, Baltimore MD David M. Winker, NASA Langley Research Center, Hampton, VA

3A4 2:45 **THE APPLICATION OF MISR AOT IN INTERPOLATING SURFACE LEVEL PM2.5 CONCENTRATIONS**, YANG LIU and Meredith Franklin, Harvard School of Public Health, Boston, MA

3A5 3:00 **AEROSOL OPTICAL PROPERTIES AND MICROPHYSICS FROM THE NASA DC-8, J -31 AND R/V RON BROWN COMPARED TO SATELLITE RETRIEVALS BY MISR DURING INTEX-A**, CAMERON S. MCNAUGHTON, Antony D. Clarke, Steven G. Howell, University of Hawai`i, Honolulu, HI Ralph Kahn, NASA Jet Propulsion Laboratory, Pasadena, CA Philip B. Russell, NASA Ames Research Center, Moffett Field, CA John M. Livingston, SRI International, Menlo Park, CA Beat Schmid, Jens Redemann, BAERI, Ventura, CA Patricia K. Quinn , Timothy S. Bates, NOAA Pacific Marine Environmental Laboratory, Seattle, WA

3A6 3:15 **SIMULATIONS OF BIOMASS BURNING SMOKE PLUMES AND COMPARISONS TO IN SITU AND REMOTE SENSING OBSERVATIONS FROM SAFARI 2000**, REBECCA I. MATICHUK, Jamison A. Smith, and Owen B. Toon, Laboratory for Atmospheric and Space Physics, Program in Atmospheric and Oceanic Sciences, University of Colorado, Boulder, CO; Peter R. Colarco, NASA Goddard Space Flight Center, Code 916, Greenbelt, MD

3A7 3:30 **EVALUATION OF REGIONAL PM PREDICTIONS WITH SATELLITE AND SURFACE MEASUREMENTS**, YANG ZHANG North Carolina State University, Raleigh, NC Hilary E. Snell Atmospheric & Environmental Research, Inc., Lexington, MA Krish Vijayaraghavan Atmospheric & Environmental Research, Inc., San Ramon, CA Mark Z. Jacobson Stanford University, Stanford, CA

## 3B Organic Aerosol Analysis

Salon B

Stephano Decesari and Amy Sullivan, chairs

3B1 2:00 **CHARACTERIZATION OF THE CARBONACEOUS FRACTION OF PARTICULATE MATTER USING HOT PRESSURIZED WATER FRACTIONATION AND NEAR-EDGE X-RAY ADSORPTION FINE STRUCTURE (NEXAFS) SPECTROSCOPY**, ALENA KUBATOVA, Steven B. Hawthorne, Energy & Environmental Research Center, University of North Dakota, Grand Forks, ND; Artur Braun, Department of Chemical & Materials Engineering, Consortium for Fossil Fuel Science, University of Kentucky, Lexington, KY

3B2 2:15 **QUANTITATIVE DETERMINATION OF AMBIENT AEROSOLS USING ATTENUATED TOTAL REFLECTANCE FOURIER TRANSFORM INFRARED SPECTROSCOPY AND MULTIVARIATE CHEMOMETRIC TECHNIQUES**, CHARITY COURY, Arizona State University, Tempe, AZ; Ann Dillner, University of California, Davis, CA

3B3 2:30 **DETERMINATION OF AMINO ACIDS AND PROTEINS IN AIR PARTICULATE MATTER**, Tobias Fehrenbach, REINHARD NIESSNER, Institute of Hydrochemistry, TU Muenchen, Germany; Ulrich Poeschl, Max Planck Institute of Chemistry, Mainz, Germany

3B4 2:45 **AMINES IN FINE PARTICLES: MYTH, TRACE SPECIES, OR MAJOR COMPONENTS?**, Mark Erupe and PHILIP J. SILVA, Department of Chemistry and Biochemistry, Utah State University, Logan, UT

3B5 3:00 **A METHOD TO ISOLATE CARBONACEOUS AEROSOLS SOLUBLE IN WATER BY ORGANIC FUNCTIONAL GROUP USING SOLID PHASE EXTRACTION AND SIZE-EXCLUSION CHROMATOGRAPHY**, AMY P. SULLIVAN, Rodney J. Weber, Georgia Institute of Technology, Atlanta, GA

3B6 3:15 **FUNCTIONAL GROUP ANALYSIS BY NUCLEAR MAGNETIC RESONANCE (NMR) SPECTROSCOPY: AN OVERVIEW OF THE RESULTS ON WATER-SOLUBLE ORGANIC COMPOUNDS IN AEROSOLS AND CLOUD/ FOG DROPLETS.**, STEFANO DECESARI, Maria Cristina Facchini, Mihaela Mircea, Fabrizia Cavalli, Lorenza Emblico, Sandro Fuzzi, ISAC-CNR, Bologna, IT; Emilio Tagliavini, Fabio Moretti, Department of Chemistry, University of Bologna, Bologna, IT.

3B7 3:30 **DETERMINATION OF WATER-SOLUBLE ORGANIC AND INORGANIC ATMOSPHERIC AEROSOL COMPONENTS**, Ulrike McKeon, REINHARD NIESSNER, TU Muenchen, Institut of Hydrochemistry Ulrich Pöschl, Max Planck Institute for Chemistry Mainz

## 3C Aerosols and Homeland Security Symposium, II

Salon D

Murray Johnston and Jerold Bottiger, chairs

3C1 2:00 **AN EVALUATION OF SHELTER-IN-PLACE STRATEGIES IN INDUSTRIAL AND RESIDENTIAL BUILDINGS**, JOSEPH FRADELLA III, Jeffrey Siegel, Department of Civil, Architectural, and Environmental Engineering, The University of Texas at Austin, Austin, TX

3C2 2:15 **SAMPLING/CONCENTRATION EFFICIENCY OF SOLID, LIQUID, AND BIOPARTICLES IN SAMPLERS/ CONCENTRATORS**, JANA KESAVAN, Jerold Bottiger, Robert Doherty, US ARMY, Aberdeen Proving Ground, MD

3C3 2:30 **INVESTIGATION OF COLLECTION EFFICIENCIES AND INHALATION CONVENTION CONFORMITY OF PORTABLE MICROBIAL SAMPLERS**, MAOSHENG YAO, Gediminas Mainelis, Rutgers, The State University of New Jersey, New Brunswick, NJ

3C4 2:45 **DE NOVO IDENTIFICATION OF VIABLE BIOLOGICAL SPECIES IN AMBIENT AIR**, ANN M. SNELLINGER, Murray V. Johnston, University of Delaware, Newark, DE

3C5 3:00 **PROPERTIES OF PATHOGENIC ANTHRACIS AND OTHER BACILLUS SPORES IN AEROSOL PARTICLES**, Monica Carrera, Jana Kesavan, and JOSE-LUIS SAGRIPANTI Edgewood Chemical Biological Center, US Army, Aberdeen Proving Ground, MD

3C6 3:15 **SAMPLING PERFORMANCE FOR BIOAEROSOLS BY FLOW CYTOMETRY WITH FLUOROCHROME**, Chih-Shan Li, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University Pei-Shih Chen, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University

3C7 3:30 **TEST PARTICLES FOR CALIBRATION AND VERIFICATION OF EXPLOSIVES TEST INSTRUMENTATION**, ROBERT A. FLETCHER, George A. Klouda, Jennifier Verkouteren and Greg Gillen, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD

## 3D Control Technology

Salon E

Al Armendariz and Mengdawn Cheng, chairs

3D1 2:00 **EVALUATION OF RESPIRATOR FILTERS FOR ASBESTOS FIBERS**, YUNG SUNG CHENG, Thomas Holmes, Lovelace Respiratory Research Institute; Bijian Fan, Amgen

3D2 2:15 **PERFORMANCE OF FIBROUS FILTERS OF N95 RESPIRATORS: WHAT IS THE MOST PENETRATING PARTICLE SIZE?**, SERGEY A. GRINSHPUN, Anna Balazy, Mika Toivola, Tiina Reponen, University of Cincinnati, Cincinnati, OH, USA; Albert Podgórski, Warsaw University of Technology, Warsaw, Poland

3D3 2:30 **INACTIVATION OF VIRUS AEROSOL PARTICLES IN AN ELECTROSTATIC PRECIPITATOR**, ERIC KETTLESON, Bala Ramaswami, Christopher Hogan, Myong-Hwa Lee, Pratim Biswas, Largus Angenent, Environmental Engineering Science Program, Washington University in St. Louis, St. Louis, MO

3D4 2:45 **NEUTRALIZATION OF CHARGES ON ELECTRET FILTER MEDIA FIBERS BY BIPOLAR IONS**, Ta-Chih Hsiao, Da-Ren Chen, Myong-Hwa Lee, and Pratim Biswas, Environmental Engineering Science Program, Washington University in St. Louis, St. Louis, MO63130

3D5 3:00 **PORTABLE ION GENERATORS AS PARTICLE REMOVAL DEVICES**, XIAORUI YU, Nasim Mullen, Ping Zhao, Richard Corsi, Jeffrey Siegel, Department of Civil, Environmental, and Architectural Engineering, The University of Texas at Austin, Austin, TX

3D6 3:15 **MERCURY EMISSIONS CONTROL WITHIN ELECTROSTATIC PRECIPITATORS: MASS TRANSFER LIMITATIONS**, HEREK CLACK, Illinois Institute of Technology, Chicago, IL

3D7 3:30 **THE CASE FOR CONTROLS ON AMMONIA AS A COST-EFFECTIVE STRATEGY FOR ACHIEVING PM2.5 COMPLIANCE**, ROBERT W. PINDER, Peter J. Adams, Carnegie Mellon University, Pittsburgh, PA

## 3E Particle Transport And Deposition

Meeting Room 406

Cliff Davidson and Goodarz Ahmadi, chairs

3E1 2:00 **PARTICLE DEPOSITION IN TURBULENT DUCT FLOWS – COMPARISONS OF DIFFERENT MODEL PREDICTIONS**, LIN TIAN, Goodarz Ahmadi, Parsa Zamankhan, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY

3E2 2:15 **ANALYTICAL MODELING OF PROTECTION SCHEMES FOR EUVL MASKS TO PREVENT NANOPARTICLE CONTAMINATION AT LOW PRESSURE**, CHRISTOF ASBACH, Jung Hyeun Kim, Se-Jin Yook, David Y.H. Pui, 1Particle Technology Laboratory, University of Minnesota, Minneapolis, USA Heinz Fissan, Institute for Energy and Environmental Technology (IUTA) e.V., Duisburg, Germany

3E3 2:30 **DESIGN AND PRELIMINARY RESULTS OF AN ATMOSPHERIC CHAMBER TO EVALUATE NANOPARTICLE PROTECTION SCHEMES FOR EUVL CARRIER SYSTEMS**, SE-JIN YOOK, Christof Asbach, Jung Kim, David Pui, University of Minnesota, Minneapolis, MN; Heinz Fissan, University of Duisburg-Essen, Duisburg, Germany; Kevin Orvek, Intel Corporation, Hudson, MA; Arun Ramamoorthy, Pei-Yang Yan, Intel Corporation, Santa Clara, CA

3E4 2:45 **3-DIMENIONAL FLOWFIELD SOLUTION IN AERODYNAMIC LENSES**, Omid Abouali, Vahid Yavari, Shiraz University, Shiraz, Iran GOODARZ AHMADI, Clarkson University, NY, USA

3E5 3:00 **NUMERICAL SIMULATION OF PARTICLE MOTION IN A VIRTUAL IMPACTOR**, SRIDHAR HARI, Yassin A. Hassan, John S. Haglund, Andrew R. McFarland, Texas A&M University, College Station, TX

3E6 3:15 **ESTIMATION OF POLYDISPERSED PARTICLE SCAVENGING COEFFICIENT AS A FUNCTION OF RAIN INTENSITY USING MOMENT METHOD**, SOOYA BAE, Yong Pyo Kim, Ewha Womans Univerisity, Seoul, South Korea, Chang Hoon Jung, Kyungin Women's College, Incheon, South Korea

3E7 3:30 **MODELING NANOPARTICLE TRANSPORT IN LOW-PRESSURE PLASMAS**, LAVANYA RAVI, Steven L. Girshick, Mechanical Engineering, University of Minneapolis, MN

**3:45 PM**

**Break**

Austin Grand Ballroom

**Tuesday 4:00 PM**

**Session 4: Platform**

**4A Symposium: Combining Multiple Data Sources and Models to Create an Accurate, Global Scale Aerosol Picture, III**

Salon A

Olivier Boucher and John Seinfeld, chairs

4A1 4:00 **PROGRESS TOWARDS AEROSOL DATA ASSIMILATION FOR NAVY OPERATIONAL VISIBILITY FORECASTING**, DOUGLAS L. WESTPHAL, Nancy L. Baker, Ming Liu, Jeffrey S. Reid, Annette L. Walker, Naval Research Laboratory; J. Zhang, UCAR; Piotr Flatau, Scripps Institute of Oceanography

4A2 4:15 **AN AEROSOL ANALYSIS USING NASA AQUA AND TERRA SATELLITE OBSERVATIONS**, WILLIAM COLLINS, National Center for Atmospheric Research, Boulder, CO; David Fillmore, Laboratoire des Sciences du Climat et l'Environnement (LSCE), Saclay, France

4A3 4:30 **TOWARDS AN A-TRAIN AEROSOL ASSIMILATION SYSTEM: ASSIMILATION OF MODIS AEROSOL OPTICAL THICKNESS RETRIEVALS INTO A GLOBAL AEROSOL TRANSPORT AND RADIATION MODEL**, PETER COLARCO, Arlindo da Silva, Mian Chin, NASA GSFC, Greenbelt, MD, Clark Weaver, GEST-UMBC/ NASA GSFC, Greenbelt, MD

4A4 4:45 **SATELLITE-BASED ASSESSMENT OF MARINE LOW CLOUD VARIABILITY ASSOCIATED WITH AEROSOL, ATMOSPHERIC STABILITY, AND THE DIURNAL CYCLES**, TOSHI MATSUI, Hirohiko Masunaga, Roger A. Pielke Sr. and Sonia M. Kreidenweis, Department of Atmospheric Science, Colorado State University, Ft. Collins, CO Wei-Kuo Tao, Mian Chin, and Yoram J. Kaufman, Laboratory for Atmospheres, NASA Goddard Space Flight Center, Greenbelt, MD

4A5 5:00 **A WEIGHTED, LEAST-SQUARES APPROACH TO DETERMINING THE BEST-ESTIMATE OF CLOUD DROP SIZE FROM A VARIETY OF REMOTE SENSING INSTRUMENTS**, GRAHAM FEINGOLD, NOAA, Boulder, CO; Reinhard Furrer NCAR, Boulder, CO; Peter Pilewskie, CU Boulder; Lorraine. A. Remer, NASA/GSFC; Qilong Min, SUNY Albany, Haflidi Jonsson, CIRPAS/NPS, CA

4A6 5:15 **OUTSTANDING ISSUES REGARDING ROLE OF ATMOSPHERIC AEROSOLS ON TERRESTRIAL BIOSPHERE AND REGIONAL CLIMATE**, DEV NIYOGI, Hsin-I Chang, Purdue University; Fitzgerald Booker, ARS- USDA Raleigh, NC; Roger A. Pielke Sr., Toshihisa Matsui, Colorado State Univerity; Lianhong Gu, Oak Ridge National Lab; Vinod K. Saxena, Randy Wells, N C State University; Yongkang Xue, UCLA.

## 4B Aerosol Analytical Techniques

Salon B

Rolf Zeisler and Daniel Murphy, chairs

4B1 4:00 **DIRECT MEASUREMENTS OF THE MIXING STATE OF AMBIENT AEROSOLS USING SINGLE PARTICLE MASS SPECTROMETRY**, K. A. PRATHER, X. Qin, M. T. Spencer, J. C. Holecek, L. G. Shields, University of California, San Diego, La Jolla, CA

4B2 4:15 **SPECIATION OF IRON IN ATMOSPHERIC AEROSOLS AND PERSONAL EXPOSURE SAMPLES**, BRIAN J. MAJESTIC, Martin M. Shafer, and James J. Schauer, Environmental Chemistry and Technology Program, University of Wisconsin-Madison, Madison, WI

4B3 4:30 **UNDERSTANDING SYSTEMATIC MEASUREMENT ERROR IN THERMAL-OPTICAL ANALYSIS FOR PM BLACK CARBON USING RESPONSE SURFACES AND SURFACE CONFIDENCE INTERVALS**, JOSEPH M. CONNY and George A. Klouda, Surface and Microanalysis Science Division, National Institute of Standards and Technology, Gaithersburg, MD; Gary Norris and David Olson, National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, NC

4B4 4:45 **INVESTIGATION OF THE LIGHT TRANSMISSION METHOD FOR MEASURING BLACK CARBON CONCENTRATION**, THOMAS W KIRCHSTETTER, T Novakov, Lawrence Berkeley National Laboratory, Berkeley, CA Jeffery Aguiar, University of the Pacific, Stockton, CA

4B5 5:00 **VERTICAL PROFILES OF SINGLE PARTICLE COMPOSITION**, DANIEL MURPHY NOAA Aeronomy Laboratory

4B6 5:15 **NIST REFERENCE MATERIALS FOR QUALITY ASSURANCE IN CONTEMPORARY AIR PARTICULATE MATTER RESEARCH**, ROLF ZEISLER, Barbara J. Porter, Rabia Oflaz Spatz, Michele M. Schantz, Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD; John Ondov, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD

4B7 5:30 **DRIFTS STUDIES OF THE EFFECTS OF OH PROCESSING OF SEA SALT AEROSOLS ON SO2 UPTAKE AND OXIDATION**, William Robertson, HUDA SHAKA', Barbara Finlayson-Pitts, University of California, Irvine, CA

## 4C New Electrical Mobility-Based Instrumentation

Salon D

Richard Flagan and Jian Wang, chairs

4C1 4:00 **A MINIATURE ELECTRICAL AEROSOL SPECTROMETER**, MANISH RANJAN and Suresh Dhaniyala, Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY

4C2 4:15 **A NEW AEROSOL MOBILITY SIZE SPECTROMETER: DESIGN, CALIBRATION, AND PERFORMANCE EVALUATION**, PRAMOD KULKARNI, Jian Wang, Brookhaven National Laboratory, Upton, NY

4C3 4:30 **ISOLATION OF AMBIENT PARTICLES OF KNOWN CRITICAL SUPERSATURATION: THE DIFFERENTIAL CRITICAL SUPERSATURATION SEPARATOR (DSCS)**, ROBERT OSBORN, Chance Spencer, Don Collins, Texas A&M University, College Station, TX

4C4 4:45 **CROSSFLOW MOBILITY CLASSIFIER**, SURESH DHANIYALA, Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY

4C5 5:00 **EXPERIMENTAL AND NUMERICAL STUDY OF A MULTI-STAGE DMA**, Weiling Li, Da-Ren Chen, Department of Mechanical and Aerospace Engineering, Joint Program in Environmental Engineering Science, Washington University in St. Louis, MO; and Meng-Dawn Cheng, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN.

4C6 5:15 **OPERATING CHARACTERISTICS OF THE OPPOSED MIGRATION AEROSOL CLASSIFIER**, Harmony Gates and Richard Flagan, California Institute of Technology, Pasadena, CA

4C7 5:30 **CREATING WIDE RANGE PARTICLE SIZE DISTRIBUTION DATA BY MERGING TSI SCANNING MOBILITY PARTICLE SIZER™ AND AERODYNAMIC PARTICLE SIZER DATA**, TIM JOHNSON, Hee-Siew Han, Doug Plate, TSI Incorporated, Shoreview, MN; Evan Whitby, Chimera Technologies, Inc., Forest Lake, MN

## 4D Combustion

Salon E

Junhong Chen and Sheryl Ehrman, chairs

4D1 4:00 **ELECTROSTATIC-DIRECTED DEPOSITION OF NANOPARTICLES ON A FIELD GENERATING SUBSTRATE**, D. Tsai, R. Phaneuf, S. H. Kim and M.R. ZACHARIAH

4D2 4:15 **HYDROGEN PRODUCTION VIA NANOSTRUCTURED PHOTOCATALYTIC TITANIA THIN-FILMS**, RAFAEL MCDONALD, Pratim Biswas; Environmental Engineering Science Program, Washington University in St. Louis, St. Louis, MO

4D3 4:30 **FLAME SYNTHESIS OF LANTHANIDE-DOPED FLUORESCENT SILICA GLASS NANOPARTICLES**, BING GUO, Ian M. Kennedy, University of California, Davis, CA

4D4 4:45 **SOLVENT EVAPORATION AND PHASE SEPARATION EFFECTS ON MESOPOROUS SILICA PARTICLES PRODUCED BY EVAPORATION-INDUCED SELF ASSEMBLY IN DROPLETS**, Shailendra Rathod, Brett Andrzejewski, TIMOTHY WARD, Gabriel Lopez, University of New Mexico, Albuquerque, NM

4D5 5:00 **ANALYSIS OF FE/NB NANOCOMPOSITES PRODUCED BY THE SODIUM FLAME AND ENCAPSULATION PROCESS**, Jacob A. Nuetzel, Richard L. Axelbaum, Ron S. Indeck

4D6 5:15 **NANOSIZED YTTRIUM IRON GARNET BY FLAME SYNTHESIS**, Ranjan K. Pati, Osifo Akhuemonkhan, Sicong Hou, and SHERYL H. EHRMAN, Department of Chemical Engineering, University of Maryland, College Park, MD; Ichiro Takeuchi, Departments of Physics and Materials Science and Engineering, University of Maryland, College Park, MD

4D7 5:30 **MOBILITY CHARACTERIZATION AND THE KINETICS OF CARBON NANOTUBE GROWTH**, S.H. Kim and M.R. ZACHARIAH

### 4E Aerosols and Health Effects, I

Meeting Room 406

Meng Dawn Cheng and Tom Peters, chairs

4E1 4:00 **EXPOSURE OF VOLUNTEERS TO CONCENTRATED ULTRAFINE PARTICLES IN LOS ANGELES**, Henry Gong Jr., William S. Linn, Kenneth W. Clark; Los Amigos Research/USC Keck School of Medicine, Los Angeles, CA Bhabesh Chakrabarti, Philip M. Fine and CONSTANTINOS SIOUTAS, USC Viterbi School of Engineering, Los Angeles, CA

4E2 4:15 **AEROSOL CHEMICAL CHARACTERISTICS IN FERTILIZER MANUFACTURING FACILITIES**, YU-MEI HSU, Chang-Yu Wu, Dale A. Lundgren, University of Florida, Gainesville, FL; Wesley J. Nall, Polk County Health Department, Winter Haven, FL; Brian K. Birky, Florida Institute of Phosphate Research, Bartow, FL

4E3 4:30 **THE DETERMINATION OF AMMONIA IN MAINSTREAM TOBACCO SMOKE**, CAI CHEN, James F. Pankow, OGI School of Science & Engineering, Oregon Health & Science University, Beaverton, OR

4E4 4:45 **EVALUATION OF PRE-TODDLER EXPOSURE TO INDOOR PM USING PRE-TODDLER INDOOR PARTICULATE ENVIRONMENTAL ROBOT (PIPER), OR LEGOS ARE NOT JUST FOR KIDS**, GEDIMINAS MAINELIS, Kathleen Schmeelck, Rutgers University, Dept. of Environmental Sciences, New Brunswick, NJ; Paul J. Lioy, Stuart L. Shalat, Environmental and Occupational Health Sciences Institute, Piscataway, NJ.

4E5 5:00 **DEPOSITION MEASUREMENTS FROM A TURBULENT IMPINGING JET LADEN WITH FLUORESCENT PARTICLES**, WES BURWASH, Edgar Matida, Carleton University, Ottawa, Ontario, Canada; Warren Finlay, University of Alberta, Edmonton, Alberta, Canada;

4E6 5:15 **EVALUATION OF AN AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER FOR INDUSTRIAL MONITORING, PART II**, STEPHEN CRISTY, BWXT Y-12, Oak Ridge, TN

4E7 5:30 **NANOPARTICLE OCCUPATIONAL HEALTH, SAFETY, AND ENVIRONMENT CONSORTIUM**, MICHELE L OSTRAAT, DuPont, Particle Science Research and Technology, Wilmington, DE

**Tuesday 5:50 PM**
**AAAR Business Meeting**
**[ 5:50 - 6:30 PM ]**
Salon A

**Tuesday 6:30 PM**
**Special Poster Session and Reception for the Symposium on Combining Data Sources and Models to Create a Global Scale Aerosol Picture [ 6:30 - 7:30 PM ]**
Salon A

**Wednesday 8:00 AM**
**Plenary Session**
Governor's Ballroom A - C

8:00 **Plenary Lecture: THE HEALTH EFFECTS OF AMBIENT PARTICULATE MATTER: WHAT WE KNOW IN 2005 AND WHERE WE NEED TO GO IN THE FUTURE**, Dan Costa, Environmental Protection Agency

9:00 **Presentation of the David Sinclair Award**

**Exhibits and Posters Open**
**9:00 AM - 6:30 PM**
**Coffee Break**
Austin Grand Ballroom

**Wednesday 9:30 AM**
**Session 5: Platform**

## 5A International Consortium Atmospheric Research on Transport and Transformation (ICARTT) Symposium, I

Salon A

Ann Middlebrook and Chuck Brock, chairs

5A1 9:30 **PRODUCTION AND DISTRIBUTION OF PM2.5 AT A RURAL NEW YORK SITE DURING ICARTT 2004**, JAMES SCHWAB, Min-Suk Bae, John Spicer, Olga Hogrefe, Yongquan Li, Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY

5A2 9:45 **OVERVIEW OF AEROSOL MASS SPECTROMETRY AT CHEBOGUE POINT DURING ICARTT 2004**, DOUGLAS WORSNOP, Megan Northway, John Jayne, Manjula Canagaratna, Tim Onasch, Aerodyne Research, Billerica, MA; James Allan, Mike Cubison, Hugh Coe, University of Manchester, UK; Jose Jimenez, Peter DeCarlo, Alex Huffman, Qi Zhang, University of Colorado, Boulder, CO; Eben Cross, Paul Davidovits, Boston College, Chestnut Hill, MA

5A3 10:00 **FINE PARTICLE COMPOSITION MEASURED DURING ICARTT – AN OVERVIEW OF INORGANIC IONS AND WATER SOLUBLE ORGANIC CARBON**, RICHARD E. PELTIER, Amy Sullivan, Rodney Weber, Georgia Institute of Technology, Atlanta, GA Charles A. Brock, Adam G. Wollny, Joost A. de Gouw, Carsten Warneke, and John S. Holloway, NOAA Aeronomy Laboratory & University of Colorado - CIRES, Boulder, CO

5A4 10:15 **MAJOR SOURCES OF SUBMICRON AEROSOL MASS ABOVE THE NORTHEASTERN UNITED STATES INFERRED FROM AIRBORNE AEROSOL MASS SPECTROMETER MEASUREMENTS DURING ICARTT**, ANN M. MIDDLEBROOK, Brendan M. Matthew*, Charles A. Brock*, Adam G. Wollny*, Joost A. de Gouw*, Carsten Warneke*, John S. Holloway,* and Fred C. Fehsenfeld*, NOAA ESRL Chemical Science Division, Boulder, CO; Richard Peltier and Rodney Weber, SEAS, Georgia Institute of Technology, Atlanta, GA * Also at CIRES, University of Colorado, Boulder, CO

5A5 10:30 **CHARACTERISTICS OF AN URBAN/ INDUSTRIAL AEROSOL PLUME FROM THE EAST COAST OF THE UNITED STATES DURING ICARTT**, CHARLES BROCK, CIRES/University of Colorado and NOAA Aeronomy Laboratory, Boulder, CO

5A6 10:45 **SUBMICRON AEROSOL COMPOSITION AND CHARACTERIZATION OVER THE MID ATLANTIC USING AN AMS ON THE UK FACILITY FOR AIRBORNE ATMOSPHERIC MEASUREMENTS (FAAM) DURING ITOP (INTERCONTINENTAL TRANSPORT OF OZONE AND PRECURSORS), A PART OF THE ICARTT CAMPAIGN.**, JONATHAN CROSIER, Paul Williams, Keith Bower, James Allan, Hugh Coe, SEAES, University of Manchester, UK; John Methven, Department of Meteorolgy, University of Reading, UK; Andreas Stohl, Norsk institutt for luftforskning (NILU), Kjeller, Norway; Douglas Worsnop, John Jayne, Aerodyne Research Inc, Billerica, MA; Jose-Luis Jimenez, University of Colorado, Boulder, CO

## 5B Aerosol Hygroscopicity

Salon B

Scot Martin and Don Collins, chairs

5B1 9:30 **CLOUD DROPLET ACTIVATION: SOLUBILITY REDEFINED**, LUZ-TEREZA PADRO, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA

5B2 9:45 **DIRECT MEASUREMENT OF THE RELATIONSHIP BETWEEN HYGROSCOPICITY AND ACTIVATION EFFICIENCY**, CRYSTAL REED, Don Collins, Texas A&M University, College Station, TX

5B3 10:00 **NANOSIZE EFFECT ON THE DELIQUESCENCE AND EFFLORESCENCE OF SODIUM CHLORIDE PARTICLES**, GEORGE BISKOS, Adam Malinowski, Scot T. Martin, Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA 02138 Lynn M. Russell, Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA 92093 Peter R. Buseck, Department of Geological Sciences, Arizona State University, Tempe, AZ 85287

5B4 10:15 **MICRO-PHYSICAL CONSISTENT MODELING OF THE DELIQUESCENCE AND EFFLORESCENCE HYSTERESIS**, Neal R. Amundson, Alexandre Caboussat, JIWEN HE, Department of Mathematics, University of Houston, Houston, TX; John H. Seinfeld, Department of Chemical Engineering, California Institute of Technology, Pasadena, CA; Kee-Youn Yoo, Department of Chemical Engineering, Seoul National University of Technology, Seoul, Korea

5B5 10:30 **HYGROSCOPICITY OF SECONDARY ORGANIC AEROSOL FORMED BY OZONOLYSIS OF CYCLOALKENES AND PHOTOOXIDATION OF BIOGENIC HYDROCARBONS**, VARUNTIDA VARUTBANGKUL, Nga Lee Ng, Roya Bahreini, Jesse H. Kroll, Fred J. Brechtel, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

5B6 10:45 **HYGROSCOPICITY OF MULTI-COMPONENT ORGANIC AERSOLS USING AN ENVIRONMENTAL SCANNING ELECTRON MICROSCOPE**, TIMOTHY RAYMOND, Richard Moore, Bucknell University, Lewisburg, PA

## 5C Electric Effects in Aerosols

Salon D

J. Daily and Andrey Fillipov, chairs

5C1 9:30 **COMPACT MULTIPLEXING OF MONODISPERSE ELECTROSPRAYS USING MICROFABRICATION**, WEIWEI DENG (1), Xiaohui Li (2), James Klemic (2), Mark Reed (2) and Alessandro Gomez (1) (1) Department of Mechanical Engineering (2) Department of Electrical Engineering Yale University, New Haven, CT 06520-8286

5C2 9:45 **EFFECT OF SOLUTES/NANOPARTICLES ON CHARGE LIMITS OF DROPLETS**, Kuo-Yen Li, ASIT K. RAY Department of Chemical Engineering, University of Kentucky, Lexington, KY 40506-0045, U. S. A

5C3 10:00 **HIGHLY CHARGING OF NANOPARTICLES THROUGH ELECTROSPRAY OF NANOPARTICLE SUSPENSION**, Jeongsoo Suh, Dae Seong Kim, Mansoo Choi, National CRI Center for Nano Particle Control, School of Mechanical and Aerospace Engineering, Seoul National University, Seoul 151-742, Korea; Bangwoo Han, Eco-machinery Engineering Department, Korea Institute of Machinery & Materials, Deajeon 305-343, Korea; Kikuo Okuyama, Department of Chemical Engineering, Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima 739-8527, Japan

5C4 10:15 **MOLECULAR DYNAMICS SIMULATION OF ION EMISSION FROM NANODROPLETS OF IONIC LIQUIDS**, JOHN W. DAILY, University of Colorado at Boulder; James Nabity, TDA Research Inc.

5C5 10:30 **MODIFIED KELVIN-THOMSON EQUATION CONSIDERING ION-DIPOLE INTERACTION: COMPARISON WITH EXPERIMENTAL ION-CLUSTERING THERMODYNAMIC DATA**, FANGQUN YU, State University of New York at Albany, ALbany, NY

5C6 10:45 **STUDY OF ELECTRO-BROWNIAN COAGULATION OF AEROSOL NANO-PARTICLES**, Vladimir Y. Smorodin, Department of Chemical & Biological Engineering, the University of Maine, Orono, ME; ICES, Department of Chemical & Fuel Engineering, University of Utah, Salt Lake City, UT; Adel Sarofim, Department of Chemical & Fuel Engineering, University of Utah, Salt Lake City, UT; JoAnn Lighty, Department of Chemical & Fuel Engineering, University of Utah, Salt Lake City, UT

## 5D Combustion Particle Formation

Salon E

Chris Sorensen and Bin Zhao, chairs

5D1 9:30 **CHARACTERIZATION OF FINE PARTICLE EMISSION IN SMALL SCALE WOOD COMBUSTION.**, Jarkko Tissari, JORMA JOKINIEMI, Olli Sippula, Kati Hytönen, Taisto Raunemaa, University of Kuopio, Kuopio, Finland

5D2 9:45 **IN-SITU MEASUREMENT OF PARTICLES FROM GRATE COMBUSTION OF BIOMASS**, JOAKIM PAGELS, Aneta Wierzbicka, Mats Bohgard, Div. Aerosol Technology , Lund University, Lund, Sweden. Michael Strand and Mehri Sanati, Växjö University, Växjö, Sweden. Jenny Rissler and Erik Swietlicki, Div. Nuclear Physics, Lund University, Lund, Sweden.

5D3 10:00 **DIESEL AND SPARK IGNITION ENGINE ON-ROAD AND LABORATORY COMPARISONS**, DAVID B. KITTELSON, Winthrop F. Watts, and Jason P. Johnson Center for Diesel Research, University of Minnesota, Minneapolis, MN USA

5D4 10:15 **DILUTION OF TAILPIPE EXHAUST IN VEHICLE WAKE: EFFECTS OF SPEED, SHAPE OF VEHICLE, AND TAILPIPE LOCATION**, VICTOR W. CHANG, Lynn M. Hildemann, Stanford University, Stanford, CA; Cheng-Hsin Chang, Tamkang University, Tamsui, Taiwan

5D5 10:30 **BIMODAL PARTICLE SIZE DISTRIBUTIONS AND MORPHOLOGY OF SOOT IN A RELATIVELY SOOTY LAMINAR PREMIXED ETHYLENE FLAME**, BIN ZHAO, Kei Uchikawa, Hai Wang, University of Southern California, Los Angeles, CA; Murray V. Johnston, University of Delaware, Newark, DE

5D6 10:45 **EMISSIONS FROM SPARK IGNITION ENGINES: CHARACTERIZATION OF PARTICLE MORPHOLOGY**, RAJAN K. CHAKRABARTY, W. Patrick Arnott, Hans Moosmüller, John Walker, Mark Garro,Desert Research Institute, University of Nevada System, Reno, NV

## 5E ISAM/AAAR Symposium: Disposition and Biological Effects

Meeting Room 406

Ron Wolff and Jim Blanchard, chairs

5E1 9:30 **DELIVERY AND BIOLOGICAL EFFECTS OF INHALED PARTICLES**, ANTHONY HICKEY, Daniel Cooney
*(invited, 30-min presentation)*

5E3 10:00 **HEALTH EFFECTS OF COAL COMBUSTION-DERIVED PM: PRELIMINARY RESULTS FROM THE TERESA STUDY**, ANNETTE C. ROHR, EPRI, Palo Alto, CA; Pablo A. Ruiz, Edgar Diaz, Meriam Lemos, Beatriz Gonzalez-Flecha, John Godleski, Petros Koutrakis, Harvard School of Public Health, Boston, MA

5E4 10:15 **GENERATION OF REACTIVE OXYGEN SPECIES BY URBAN PARTICULATE MATTER**, Chuautemoc Arellanes and SUZANNE E. PAULSON Atmospheric Sciences Department, University of California at Los Angeles, CA

5E5 10:30 **CELLULAR AND CYTOKINE RESPONSE TO PULMONARY GENE DELIVERY BY ELECTROHYDRODYNAMIC SPRAYS**, CORINNE LENGSFELD, University of Denver, Denver, CO; Yvonne Lentz, Tom Anchordoquy, University of Colorado Health Sciences Center, Denver, CO

5E6 10:45 **ULTRAVIOLET GERMICIDAL IRRADIATION FOR VIRUS INACTIVATION**, Chih-Shan Li, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University Chun Chieh Tseng, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University

**Wednesday 11:00 AM**

**Coffee Break**

Austin Grand Ballroom

**Wednesday 11:15 AM**

**Session 6: Platform**

**6A International Consortium Atmospheric Research on Transport and Transformation (ICARTT) Symposium, II**

Salon A

Elizabeth Andrews and Richard Leaitch, chairs

6A1 11:15 **MEASUREMENTS OF AEROSOL RADIATIVE PROPERTIES AND EFFECTS USING AIRBORNE SUNPHOTOMETER AND SOLAR SPECTRAL FLUX RADIOMETER IN ICARTT 2004**, PHILIP RUSSELL, Warren Gore, James Eilers, NASA Ames Research Center, Moffett Field, CA; John Livingston, SRI International, Menlo Park, CA; Peter Pilewskie, University of Colorado, Boulder, CO; Jens Redemann, Beat Schmid, John Pommier, Steven Howard, Bay Area Environmental Research Institute, Sonoma, CA; Ralph Kahn, Jet Propulsion Laboratory, Pasadena, CA; Allen Chu, NASA Goddard Space Flight Center, Greenbelt, MD

6A2 11:30 **AIRBORNE MEASUREMENTS OF SPECTRAL DIRECT AEROSOL RADIATIVE FORCING - A NEW AEROSOL GRADIENT METHOD APPLIED TO DATA COLLECTED IN INTEX/ITCT/ICARTT, 2004**, JENS REDEMANN, Steve Howard, Beat Schmid, John Pommier, Bay Area Environmental Research Institute, Sonoma, CA; Peter Pilewskie, University of Colorado, Boulder, CO; Philip Russell, Warren Gore, James Eilers, NASA Ames Research Center, Moffett Field, CA; John Livingston, SRI International, Menlo Park, CA; Manfred Wendisch, Leibniz-Institute for Tropospheric Research, Leipzig, Germany

6A3 11:45 **AEROSOL OPTICAL PROPERTIES AND F (RH) OVER NORTH AMERICA DURING INTEX**, ANTONY CLARKE, Steven Howell, Cameron McNaughton, Yohei Shinozuka, Vladimir Kapustin, University of Hawaii, Honolulu, HI

6A4 12:00 **AEROSOL OPTICAL PARTICLE PROPERTIES DURING NEAQS 2004: SHIP-BASED MEASUREMENTS OF AEROSOL ABSORPTION AND SCATTERING**, BERKO SIERAU, David S. Covert, University of Washington, Dept. of Atmospheric Sciences, Seattle, WA Patricia K. Quinn, Timothy S. Bates, Derek Coffman, NOAA-PMEL, Seattle, WA

6A5 12:15 **THE RELATIVE HUMIDITY DEPENDENCE OF AEROSOL EXTINCTION**, TAHLLEE BAYNARD, Edward Lovejoy, Anders Pettersson, Rebecca Garland, Hans Osthoff, Margaret Tolbert, A. R. Ravishankara, NOAA Aeronomy Lab and/or CIRES, University of Colorado, Boulder, CO; Patricia Quinn, Tim Bates, NOAA PMEL, Seattle, WA

6A6 12:30 **MEASUREMENT OF ANTHROPOGENICALLY INFLUENCED AEROSOLS AT A MARINE SITE**, ELISABETH ANDREWS, Anne Jefferson, University of Colorado, Boulder, CO Patrick Sheridan, Ellsworth G. Dutton, John A. Ogren, NOAA/CMDL, Boulder CO James Allan, University of Manchester, Manchester, UK

## 6B New Particle Formation

Salon B

Timothy VanReken and Sara Pryor, chairs

6B1 11:15 **LABORATORY MEASUREMENTS OF BIOGENICALLY-INDUCED PARTICLE FORMATION AND GROWTH**, TIMOTHY M. VANREKEN, James N. Smith, Alex Guenther, Peter Harley, and Thomas Karl, National Center for Atmospheric Research, Boulder, CO

6B2 11:30 **MARINE PARTICLE NUCLEATION: OBSERVATIONS AT BODEGA BAY AND POINT REYES, CALIFORNIA**, JIAN WEN, Yongjing Zhao, Anthony S. Wexler, University of California, Davis, CA

6B3 11:45 **ROLE OF SULPHURIC ACID IN PARTICLE FORMATION EVENTS IN FINLAND**, Sanna-Liisa Sihto, Markku Kulmala, University of Helsinki, Helsinki, Finland; Veli-Matti Kerminen, Finnish Meteorological Institute, Helsinki, Finland; Ari Laaksonen, University of Kuopio, Kuopio, Finland; KARI LEHTINEN, Finnish Meteorological Institute and University of Kuopio, Kuopio, Finland.

6B4 12:00 **FORMATION AND INITIAL GROWTH OF ATMOSPHERIC AEROSOLS**, MARKKU KULMALA, University of Helsinki, Helsinki, Finland; Kari Lehtinen, Finnish Meteorological Institute and University of Kuopio, Kuopio, Finland.

6B5 12:15 **MEASUREMENTS OF HETEROGENEOUS ICE NUCLEATION BY MINERAL DUST**, KIRSTEN KOEHLER, Paul Demott, Anthony Prenni, Christian Carrico, Sonia Kreidenweis, Colorado State University, Fort Collins, CO

6B6 12:30 **OBSERVATIONS OF ULTRA-FINE PARTICLES OVER A FOREST**, S.C. PRYOR, Indiana University, IN; R.J. Barthelmie, L.L. Soerensen, Risoe National Laboratory, Denmark

## 6C Aerosol Microphysics

Salon D

Gerald Wilemski and M Zacharia, chairs

6C1 11:15 **MOLECULAR DYNAMICS OF THE COALESCENCE OF UNEQUAL SIZE AND COATED AEROSOLS**, T. Hawa and M.R. ZACHARIAH

6C2 11:30 **MEASURING MICROPARTICLE ADHESION FORCE USING ELECTROSTATICS**, THOMAS SZAREK and Patrick F. Dunn, Particle Dynamics Laboratory, University of Notre Dame, Notre Dame, IN

6C3 11:45 **A SELF-CONSISTENT GAS-KINETIC THEORY OF NANOPARTICLE TRANSPORT**, HAI WANG, Denis Phares, Charles S. Campbell, University of Southern California, Los Angeles, CA; Zhigang, Li, University of Delaware, Newark, DE

6C4 12:00 **MONTE CARLO SIMULATIONS OF STRUCTURAL TRANSITIONS IN BINARY AEROSOL NANODROPLETS**, GERALD WILEMSKI, Hongxia Ning, Department of Physics, University of Missouri-Rolla, Rolla, MO

6C5 12:15 **GAS-NANOPARTICLE SCATTERING: A MOLECULAR VIEW OF MOMENTUM ACCOMMODATION FUNCTION**, Zhigang Li, University of Delaware, Newark, DE; HAI WANG, University of Southern California, CA

6C6 12:30 **ENHANCED PHOTOLYSIS IN THE AEROSOL PHASE RELATIVE TO THE BULK-LIQUID PHASE**, PAUL NISSENSON, Chris Knox, Donald Dabdub. University of California, Irvine. Irvine, CA; Leon Phillips. University of Canterbury, Christchurch, New Zealand.

## 6D Organic Particulate Matter Formation

Salon E

Vicki Grassian and Thomas Saul, chairs

6D1 11:15 **USING FUNDAMENTAL THERMODYNAMICS TO EVALUATE THE FORMATION OF ORGANIC PARTICULATE MATTER IN THE ATMOSPHERE BY ACCRETION REACTIONS**, KELLEY BARSANTI, James Pankow, OGI School of Science & Engineering, Oregon Health & Science University, Portland, OR

6D2 11:30 **THERMODYNAMIC MODELS OF AEROSOLS CONTAINING DICARBOXYLIC ACIDS, THEIR SALTS, AND INORGANIC COMPOUNDS**, SIMON L. CLEGG, School of Environmental Sciences, University of East Anglia, Norwich, U.K.; John H. Seinfeld, Dept. Chemical Engineering, California Institute of Technology, Pasadena, CA

6D3 11:45 **THE ORGANIC CHEMICAL COMPOSITION OF SOURCE AEROSOLS BY THERMAL EXTRACTION-GC/MS**, MICHAEL HAYS, Richard Lavrich, US EPA, Research Triangle Park, NC

6D4 12:00 **LABORATORY INVESTIGATION OF THE OXIDATION KINETICS OF ORGANIC MOLECULAR MARKERS USED FOR SOURCE-APPORTIONMENT: MEAT COOKING EMISSIONS**, EMILY WEITKAMP, Kara Huff-Hartz, Amy Sage, Allen Robinson, Neil Donahue, Carnegie Mellon University, Pittsburgh, PA;

6D5 12:15 **INVESTIGATION OF THE PHYSICAL PROPERTIES OF GROUP SPECIATED FINE PARTICLE WATER-SOLUBLE ORGANIC CARBON AEROSOLS**, Rodney J. Weber, AMY P. SULLIVAN, Poulomi Sannigrahi, Ellery D. Ingall, Georgia Institute of Technology, Atlanta, GA

6D6 12:30 **TEMPERATURE DEPENDENCE OF THE YIELD AND KINETICS OF SECONDARY ORGANIC AEROSOL FORMATION DURING THE LIMONENE OZONOLYSIS**, KARA E. HUFF HARTZ, Albert A. Presto, Ravi Pathak, Joshua E. Tischuk, Bryce J. Marquis, Spyros N. Pandis, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA

## 6E ISAM/AAAR Symposium: Experimental Approaches

Meeting Room 406

Chong Kim and Brian Wong, chairs

6E1 11:15 **EXPERIMENTAL APPROACHES FOR ASSESSING AND OPTIMIZING AEROSOL DELIVERY**, WILLIAM D. BENNETT *(invited, 30-min presentation)*

6E3 11:45 **MOUTH-THROAT DEPOSITION OF AEROSOL BOLUSES INHALED DURING FLOW ACCELERATION**, WARREN H. FINLAY, Biljana Grgic, University of Alberta, Canada

6E4 12:00 **PARTICLE SIZING OF EXHALED MAINSTREAM TOBACCO SMOKE**, JOHN McAUGHEY, Phil Biggs and Richard Baker, British American Tobacco, Southampton, UK

6E5 12:15 **THE REGIONAL LUNG DEPOSITION OF INHALED, NEBULIZED AEROSOL DEPOSITED FROM A SHALLOW BOLUS WITH BREATH HOLDING COMPARED TO CONTINUOUS, RAPID, SHALLOW BREATHING.**, KIRBY ZEMAN and William Bennett. Center for Environmental Medicine, Asthma and Lung Biology, University of North Carolina, Chapel Hill, NC

6E6 12:30 **FABRICATION OF SUB-MICRON DIAMETER AEROSOL FIBERS BY PHYSICAL VAPOR DEPOSITION**, ANDREW R. MARTIN, Warren H. Finlay, Department of Mechanical Engineering, University of Alberta, Edmonton, Canada; Doug Vick, Michael J. Brett, Department of Electrical and Computer Engineering, University of Alberta, Edmonton, Canada.

**12:45 PM**

**Lunch**

**Wednesday 2:15 PM**

**Session 7: Platform**

## 7A International Consortium Atmospheric Research on Transport and Transformation (ICARTT) Symposium, III

Salon A

Richard Leaitch and Ann Middlebrook, chairs

7A1 2:15 **OBSERVATION OF BIOGENIC NUCLEATION EVENTS AT LOW TIDE IN NOVA SCOTIA, CANADA**, James Allan and and Michael Cubison, University of Manchester, United Kingdom, SUSANNE HERING, Aerosol Dynamics, Berkeley, CA, John Ogren, NOAA, Boulder, CO, Jose-Luis Jimenez and Peter DeCarlo, University of Colorado, Boulder, CO, Allen Goldstein and Dylan Millet, University of California, Berkeley, CA.

7A2 2:30 **APPLICATION OF THE CACM AND MPMPO MODULES USING THE CMAQ MODEL FOR THE EASTERN UNITED STATES**, JIANJUN CHEN, Robert Griffin, Huiting Mao, University of New Hampshire, Durham, NH

7A3 2:45 **A PARCEL MODEL STUDY OF SELECTED AIRBORNE MEASUREMENT CASES DURING THE ICARTT 2004 FIELD CAMPAIGN - CLOUD PROCESSING OF GASES AND AEROSOLS**, WANMIN GONG, W. Richard Leaitch, Nicole Shantz, Anne Marie Macdonald, Katherine L. Hayden, Kurt G. Anlauf, Desiree Toom-Sauntry, Amy Leithead, Shao-Meng Li, Sangeeta Sharma, J. Walter Strapp, Meteorological Service of Canada, Toronto, Ontario, Canada M3H 5T4

7A4 3:00 **EVALUATION OF A NEW CLOUD DROPLET FORMATION PARAMETERIZATION WITH IN SITU DATA FROM ICARTT**, CHRISTOS FOUNTOUKIS, School of Chemical and Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA; Nicholas Meskhidze, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA; Athanasios Nenes, Schools of Chemical and Biomolecular Engineering and Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA; William Conant, Environmental Science and Engineering, California Institute of Technology, Pasadena, CA; John H. Seinfeld, Environmental Science and Engineering and Chemical Engineering, California Institute of Technology, Pasadena, CA

7A5 3:15 **MIXING STATE OF CCN IN THE NORTHEASTERN UNITED STATES**, JEESSY MEDINA, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Laura Cottrell, Robert Griffin, University of New Hampshire, Durham, NH

7A6 3:30 **CLOUD PROCESSING OF THE CHICAGO URBAN PLUME**, W. RICHARD LEAITCH, Anne Marie Macdonald, Kurt G. Anlauf, Desiree Toom-Sauntry, Katherine L. Hayden, Wanmin Gong, Amy Leithead, Shao-Meng Li, J. Walter Strapp, Meteorological Service of Canada, Toronto, Ontario, Canada M3H 5T4

## 7B Secondary Organic Aerosol Chemistry

Salon B

Charity Coury and Ann Dillner, chairs

7B1 2:15 **SOA PRODUCTION FROM ISOPRENE: AQUEOUS-PHASE MECHANISMS**, ANNMARIE G. CARLTON, Barbara J. Turpin, Department of Environmental Science, Rutgers University; Katye Altieri, Sybil Seitzinger, Institute of Marine and Coastal Sciences, Rutgers University

7B2 2:30 **ORGANIC NITRATE PRODUCTION FROM A-PINENE OXIDATION BY O3 IN PRESENCE OF NO AND ITS INFLUENCE ON SOA FORMATION**, JIEYUAN ZHANG, Neil Donahue, Carnegie Mellon University, Pittsburgh, PA

7B3 2:45 **SECONDARY ORGANIC AEROSOL FORMATION FROM ISOPRENE OXIDATION**, JESSE H. KROLL, Nga L. Ng, Shane M. Murphy, Roya Bahreini, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

7B4 3:00 **AN UPGRADED ABSORPTIVE SECONDARY ORGANIC AEROSOL PARTITIONING MODULE FOR THREE-DIMENSIONAL AIR QUALITY APPLICATIONS**, BETTY K. PUN, Christian Seigneur, Atmospheric and Environmental Research, Inc., San Ramon, CA; James Pankow, Oregon Graduate Institute, Beaverton, OR; Robert Griffin, University of New Hampshire, Durham, NH; Eladio Knipping, EPRI, Palo Alto, CA

7B5 3:15 **HETEROGENOUS PARTICLE PHASE PRODUCTS FROM ALPHA-PINENE OZONE OXIDATION**, NADINE CZOSCHKE, Myoseon Jang, University of North Carolina

7B6 3:30 **OZONOLYSIS OF A-PINENE: TEMPERATURE DEPENDENCE OF SOA YIELDS**, RAVI KANT PATHAK, Neil Donahue, Spyros N. Pandis, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, USA; Charles Stanier, Chemical & Biochemical Engineering and IIHR Hydroscience and Engineering University of Iowa, Iowa City, IA, USA

## 7C Instrumentation Development and Characterization

Salon D

Da-Ren Chen and Keith Coffee, chairs

7C1 2:15 **EVALUATION OF ION MOBILITY SENSOR (IMS) FOR FIRE DETECTION**, CHAOLONG QI, Da-Ren Chen, Department of Mechanical and Aerospace Engineering, Joint Program in Environmental Engineering Science, Washington University in St. Louis, St. Louis, MO; Paul Greenberg, Microgravity Science Division, NASA-Glenn Research Center, Cleveland, OH

7C2 2:30 **LASAG (LOS ALAMOS SOLID AEROSOL GENERATOR)**, MURRAY E. MOORE, Los Alamos National Laboratory, Los Alamos, NM

7C3 2:45 **SIZE DETERMINATION AND MONITORING OF STABILITY OF MACROMOLECULES USING NANOAEROSOL MEASURING TECHNIQUES**, WLADYSLAW W. SZYMANSKI, Christian Laschober, Georg Reischl, Institute of Experimental Physics, University of Vienna, Vienna, Austria; Guenter Allmaier, Institute for Chemical Technology and Analysis, Technical University of Vienna, Vienna, Austria

7C4 3:00 **ONLINE MEASUREMENT OF AGGREGATE SURFACE AREA AND VOLUME DISTRIBUTION BY ELECTRICAL MOBILITY ANALYSIS**, ANSHUMAN AMIT LALL and Sheldon K. Friedlander, Department of Chemical Engineering, University of California, Los Angeles, CA

7C5 3:15 **A METHOD FOR AIRBORNE MEASUREMENTS OF WATER-SOLUBLE ORGANIC CARBON: PILS-TOC RESULTS FROM THE NOAA WP-3D DURING ICARTT**, AMY P. SULLIVAN, Richard E. Peltier, Rodney J. Weber, Georgia Institute of Technology, Atlanta, GA; Charles A. Brock, Joost de Gouw, John S. Holloway, Carsten Warneke, Adam Wollny, NOAA Aeronomy Laboratory and CIRES-University of Colorado, Boulder, CO

7C6 3:30 **PARTICLE SENSORS FOR THE TWENTY-FIRST CENTURY: MONITORING, CHARACTERIZATION, EXPOSURE ASSESSMENT AND BEYOND**, MICHAEL APTE, Lara Gundel, Yanbo Pang, Lawrence Berkeley National Laboratory, Berkeley, CA; Justin Black and Richard White, University of California, Berkeley, CA

## 7D Aerosol Formation And Growth

Salon E

M. Peters and Barbara Wyslouzil, chairs

7D1 2:15 **CLOUD FORMATION ON POLYMERIZED ORGANIC AEROSOL**, MARKUS PETTERS, Sonia Kreidenweis, Kirsten Kohler, Qiang Wang, Anthony Prenni, Paul DeMott, Colorado State University, Fort Collins, CO; Jefferson Snider, University of Wyoming, Laramie, WY

7D2 2:30 **MODELING AEROSOL FORMATION AND COMPOSITION FROM B-PINENE OZONOLYSIS USING GAS PHASE KINETICS AND GAS-PARTICLE PARTITIONING THEORY**, M. Jaoui,* R.M. Kamens, Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, NC, * Now at Alion Science and Technology, Inc. RTP, NC

7D3 2:45 **COMBINED NUCLEATION EXPERIMENTS ON N-NONANE USING A TWO VALVE EXPANSION CHAMBER AND A SUPERSONIC NOZZLE**, DAVID GHOSH, Judith Wölk, Reinhard Strey, Universität zu Köln, Köln, Germany; Yoojeong Kim, Worcester Polytechnic Institute, Worcester, MA; Murad Gharibeh, Shinobu Tanimura and Barbara E. Wyslouzil, The Ohio State University, Columbus, OH

7D4 3:00 **PROTECTION SCHEMES DURING PUMP-DOWN FOR CRITICAL SURFACE IN VACUUM ENVIRONMENTS**, JUNG H KIM, Christof Asbach, Se-Jin Yook, David Y.H. Pui, University of Minnesota, Minneapolis, MN; Heinz Fissan, IUTA, Germany; Kevin J. Orvek, Intel Corporation, Hudson, MA; Arun Ramamoorthy, Pei-Yang Yan, Intel Corporation, Santa Clara, CA

7D5 3:15 **THE EFFECT OF CONDENSATION ON THE BOUNDARY LAYER THICKNESS IN SUPERSONIC FLOW**, SHINOBU TANIMURA, Barbara E. Wyslouzil, Department of Chemical and Biomolecular Engineering, The Ohio State University, Columbus, OH; Mark Zahniser, Joanne Shorter, David Nelson, and Barry McManus, Aerodyne Research Inc., Billerica, MA

7D6 3:30 **SUPERSATURATION IN THE WYOMING CCN INSTRUMENT**, JEFFERSON SNIDER, University of Wyoming; Markus Petters, Colorado State University

## 7E ISAM/AAAR Symposium: Medical Aerosols And Modeling

Meeting Room 406

Yung Sung Cheng and Warren Finlay, chairs

7E1 2:15 **MEDICAL AEROSOLS AND THE MODERN CLINICIAN**, GERALD SMALDONE, Pulmonary/Critical Care, State University of New York at Stony Brook,NY
*(invited, 30-min presentation)*

7E3 2:45 **MODELS FOR AEROSOL DEPOSITION IN THE HUMAN LUNG: WHOLE LUNG VS. LOCAL SCALE MODELS**, WERNER HOFMANN, University of Salzburg, Salzburg, Austria
*(invited, 30-min presentation)*

7E5 3:15 **CHARACTERIZATION OF A NOVEL CONSTANT-OUTPUT POWDER AEROSOL GENERATOR**, MATTHEW J. SHAW, J. David Luedeke, Jason A. Curran, Battelle Memorial Institute, Columbus, OH

7E6 3:30 **SIMULATION OF ASYMMETRICAL AEROSOL DEPOSITION IN AN IDEALIZED MOUTH WITH A DRY-POWDER INHALER MOUTHPIECE INLET**, Edgar Matida, MARCEL ILIE,Carleton University,Ottawa, Canada Warren Finlay,University of Alberta, Edmonton,Canada Mohammad Golriz,Umea University.Umea,Sweden

**3:45 PM**

**Break**

Austin Grand Ballroom

**Wednesday 4:00 PM**
**Working Group Meetings**
Rooms 400, 404, 406, Salons A, D

**Wednesday 6:00 PM**
**Exhibitors Reception**
Austin Grand Ballroom

**Thursday 8:00 AM**
**Plenary Session**
Governor's Ballroom A - C

8:00 **Plenary Lecture: FROM ANCIENT ARTWORK TO MODERN FUNCTIONAL AEROSOL-MADE MATERIALS**, Sotiris E. Pratsinis, Institute of Process Engineering (IPE), Swiss Federal Institute of Technology

9:00 **Presentation of the Kenneth T. Whitby Award**

**Exhibits and Posters Open**
**9:00 AM - 3:00 PM**
Austin Grand Ballroom

**Thursday 9:15 AM**
**Session 8: Posters II - Breakfast**
Neil Donahue and Peter Adams, Chairs

**8A Aerosol Physics**
Austin Grand Ballroom Rows 1, 2

8PA1 **FORMATION AND EVOLUTION OF NANOPARTICLES IN THE VEHICULAR EXHAUST ON AND NEAR HIGHWAY**, HUA DU and Fangqun Yu Atmospheric Sciences Research Center, State University of New York at Albany, Albany, New York

8PA2 **2-DIMENSIONAL PARTICLE TRACKING IN VIRTUAL IMPACTORS**, SATYANARAYANAN SESHADRI Dr. John Haglund Dr. Andy McFarland Aerosol Technology Lab, Texas A&M University, TX

8PA3 **A SYSTEMATIC STUDY OF CHANGE OF THE MOBILITY DIAMETER AND SURFACE AREA OF AGGLOMERATES DURING SINTERING**, Kuk Cho, Chris Hogan and Pratim Biswas, Washington University, St. Louis, MO

8PA4 **NANOPARTICLE NUCLEATION AND CONDENSATION IN TURBULENT SHEAR FLOWS**, Sean Garrick, NATHAN MURFIELD, University of Minnesota, Minneapolis, MN

8PA5 **FAST ESTIMATIONS OF THE OPTICAL FIELDS INSIDE OF THE SPHERICAL AEROSOL**, Nick BELOV, Nina Belova, ATECH KFT, Moscow

8PA6 **VISCOUS SINTERING OF AEROSOL-WRITTEN NANOSTRUCTURED GLASS FILMS**, DAVID STOKER, Desidario Kovar, Michael F. Becker, John W. Keto, The Center for Nano- and Molecular Science and Technology and the Texas Materials Institute at The University of Texas at Austin, Austin, TX

8PA7 **NEDOYMIUM DOPED NANO-PARTICLES PRODUCED BY THE LASER ABLATION OF MICRO-PARTICLE AEROSOLS**, ROBERT MORGAN, Todd Ditmire, Univ Texas at Austin Physics Dept. Texas Center for High Intensity Laser Science, Austin Texas; John Keto Univ. Texas at Austin Physics Dept. Texas Materials Institute Center for Nano- and Molecular Science and Technology, Texas Center for High Intensity Laser Science, Austin, TX

8PA8 **EXPERIMENTAL EVALUATION OF CHARGED NANOPARTICLE AEROSOL PRODUCED BY LASER ABLATION OF A MICROPARTICLE AEROSOL**, CHONG HUANG ,Jan Neering, Desiderio Kovar, John W. Keto, Michael F. Becker Texas Materials Institute, The University of Texas at Austin, Austin, TX

8PA9 **LASER ASSISTED NANOPARTICLE AEROSOL FOCUSING FOR APPLICATION TO SUPERSONIC JET DIRECT WRITING**, CHANGYI LAI, Chong Huang, Desiderio Kovar, John W. Keto, Michael F. Becker, Texas Materials Institute, The University of Texas at Austin, Austin, TX

8PA10 **A MODEL FOR THE FORMATION OF LIQUID FUEL SPRAYS WITH ATOMIZING AIR**, DAVID J SCHMIDT, ExxonMobil Upstream Research Company, Houston, TX; Goodarz Ahmadi, Clarkson University, Potsdam, NY; William Kvasnak, Pratt-Whitney

8PA12 **DEPOSITION UNIFORMITYOF GENE GUN PARTICLES**, MENG-SHU CGANG, Kuang-Nan Chang, Chih-Chieh Chen, National Taiwan University, Taipei, Taiwan; Wen-Yinn Lin, National Taipei University of Technology, Taipei, Taiwan; Yu-Mei Kuo, Chung Hwa College of Medical Technology, Tainan, Taiwan.

8PA13 **COMPUTATIONAL MODELING OF LIQUID-GAS-SOLID THREE-PHASE FLOWS IN MICROGRAVITY**, XINYU ZHANG, Goodarz Ahmadi, Clarkson University, Potsdam, NY

8PA14 **ANGSTROM TURBIDITY PARAMETERS: AN EMPIRICAL RELATIONSHIP**, Ganesh K E , University of Mysore, Mysore, India Umesh T K , University of Mysore, Mysore, India Narasimhamurthy B , University of Mysore, Mysore, India

8PA15 **MICROSCOPE-VIDEO BASED SMOKE AND DUST MONITORING**, THORSTEN SCHULTZE, Ingolf Willms, University Duisburg-Essen, Campus Duisburg, Germany

8PA16 **SIZE DISTRIBUTION DYNAMICS OF A HYGROSCOPIC AEROSOL FLOWING THROUGH A CONSTANT WALL TEMPERATURE TUBE WITH COUPLED HEAT AND MASS TRANSFER EFFECTS: MODELING AND EXPERIMENTAL INVESTIGATION**, ALAN SHIHADEH, Rawad Saleh, Aerosol Research Laboratory, American University of Beirut, Lebanon

8PA17 **DETERMINING THE COLLECTION EFFICIENCY OF IMPINGERS (MODELS #7541 AND #7531)**, Richard Tuttle, PATIRICIA REUTHER, Gary Sparks Jr.

8PA18 **MULTIPHASE FLOW THROUGH POROUS MEDIA WITH APPLICATIONS TO CO2 SEQUESTRATION**, MELISSA RICHARDS, Josh Cook, Goodarz Ahmadi, Clarkson University, Department of Mechanical and Aeronautical Engineering, Potsdam, NY, Susan Powers, Clarkson University, Department of Civil and Environmental Engineering, Potsdam, NY, Duane H. Smith, National Energy Technology Center, US Department of Energy, Morgantown, WV

8PA19 **GAS-LIQUID DYNAMIC BEHAVIOR AND BUBBLE SIZE DISTRIBUTION IN 2D BUBBLE COLUMN**, WEI CHEN and Goodarz Ahmadi Department of Mechanical and Aeronautical Engineering Clarkson University, Potsdam NY 13699

8PA20 **NUMERICAL AND EXPERIMENTAL STUDY ON BUBBLE MOTION AND DEFORMATION IN A SIMPLE SHEAR FLOW**, WEI CHEN and Goodarz Ahmadi Department of Mechanical and Aeronautical Engineering Clarkson University, Potsdam NY 13699

8PA21 **THEORETICAL AND EXPERIMENTAL STUDIES OF NANOPARTICLE CHARGING IN A SOFT-X-RAY ENHANCED CORONA SYSTEM**, JINGKUN JIANG, Myong-Hwa Lee, Pratim Biswas, Washington University in St. Louis, St. Louis, MO

8PA22 **CHARACTERIZATION OF SEMICONDUCTOR CORE-SHELL NANOPARTICLES GENERATED BY LASER ABLATION OF MICROPARTICLES**, IGNACIO GALLARDO, Kay Hoffmann, Desiderio Kovar, John Keto, University of Texas at Austin, Austin, TX

8PA23 **AERODYNAMIC FORCES ON A SPHERE ATTACHED TO A WALL IN A LAMINAR BOUNDARY LAYER**, Lyle Sweeney, WARREN FINLAY, University of Alberta, Edmonton, Alberta, Canada

## 8B Indoor Aerosols

Austin Grand Ballroom Row 2

8PB1 **CONCENTRATIONS OF PARTICULATE ORGANIC SPECIES MEASURED IN INDOOR AND OUTDOOR ENVIRONMENTS DURING THE TAMPA ASTHMATIC CHILDREN'S STUDY (TACS)**, DAVID A. OLSON, Stephen R. McDow, Ron Williams, Carvin Stevens, National Exposure Research Laboratory, United States Environmental Protection Agency, Research Triangle Park, NC; John Turlington, Alion Science and Technology, Research Triangle Park, NC

8PB2 **IN-SITU CHARACTERISTICS OF FINE AND ULTRAFINE PARTICLES FROM THREE COMBUSTION SOURCES.**, JOAKIM PAGELS and Andreas Dahl Div. Aerosol Technology (EAT), Lund University, Lund, Sweden Erik Swietlicki, Div. Nuclear Physics, Lund University, Lund, Sweden

8PB3 **AN ASSESSMENT OF INDOOR AIR QUALITY IN HISPANIC IMMIGRANT HOUSING IN COMMERCE CITY, CO.**, Peter Scaramella, SHELLY L. MILLER, University of Colorado, Boulder, CO; Jill Litt, Carolyn DiGuiseppi, Sandra Diaz-Castillo, University of Colorado Health Sciences Center, Denver, CO; Fernando Pineda-Reyes, Diana Pineda-Ford, Harry A. Ford, Groundwork Denver, Denver, CO; Edward Hendrikson, Salud Family Health Clinic, Commerce City, CO.

8PB4 **INDOOR/OUTDOOR RELATIONSHIP OF PM2.5 DURING ACUTE WINTER INVERSIONS IN LOGAN, UTAH**, PHILIP J. SILVA, Eric Vawdrey, Mark Erupe, Department of Chemistry and Biochemistry, Utah State University, Logan, UT

## 8C Instrumentation

Austin Grand Ballroom Rows 3, 4

8PC1 **CHARACTERIZATION OF NEW BUTANOL-BASED CONDENSATION PARTICLE COUNTERS (TSI MODELS 3771 AND 3772)**, MELISSA FINK, Rob Caldow, Hee-Siew Han, Ed Johnson, Steve Olson, Mike Woessner, TSI Incorporated, Shoreview, MN

8PC2 **LABORATORY CHARACTERIZATION OF A MULTI-ANGLE LIGHT-SCATTERING SPECTROMETER**, WILLIAM DICK, Keung Woo, Mihai Chiruta, Francisco Romay, MSP Corporation, Shoreview, MN

8PC3 **COMPUTATIONAL FLUID DYNAMIC MODELING OF TWO PASSIVE SAMPLERS**, Suresh Dhaniyala, Thomas M. Holsen, JUSTIN THOMAS, Clarkson University, Potsdam, NY

8PC4 **A NEW INSTRUMENT FOR NEAR REAL-TIME SIZE-RESOLVED SUB-MICRON PARTICLE COMPOSITION**, Manish Ranjan, Graduate Student, Clarkson University Suresh Dhaniyala, Assistant Professor, Clarkson University

8PC5 **INSIGHTS INTO PARTICLE MOTION, AIR FLOW, AND THERMODYNAMIC FIELDS IN AN ICE NUCLEATION CHAMBER**, DEREK J. STRAUB, Susquehanna University, Department of Earth and Environmental Science, Selinsgrove, PA; David C. Rogers, National Center for Atmospheric Research, Boulder, CO; Anthony J. Prenni, Paul J. Demott, Colorado State University, Department of Atmospheric Science, Fort Collins, CO.

8PC6 **DEVELOPMENT AND PERFORMANCE OF CHARGED NANO PARTICLE COLLECTOR**, YONGJING ZHAO and Anthony S. Wexler, University of California-Davis

8PC7 **DESIGN, CONSTRUCTION AND EVALUATION OF A TWO-DIMENSIONAL AERODYNAMIC FOCUSING INLET FOR PARTICLE CHARACTERIZATION BY LASER METHODS**, XIHONG WU, Nicolo Omenetto, Jonathan Merten, Benjamin W. Smith, James D. Winefordner, University of Florida, Gainesville, FL

8PC8 **SAMPLING OF BIOLOGICAL COMPOUNDS FROM AEROSOLS AND THE PROSPECTS FOR INSTRUMENT MINIATURIZATION**, BERK OKTEM, Robert J.Cotter, Middle Atlantic Mass Spectrometry Laboratory, Johns Hopkins University School of Medicine, Baltimore, MD

8PC9 **EVALUATION OF ORGANIC CARBON ARTIFACTS WITH IMPROVE AND STN SAMPLERS**, Max Peterson, James O'Rourke, JAMES FLANAGAN, and R.K.M. Jayanty RTI International, Research Triangle Park, NC

8PC10 **ANALYTICAL ADVANCEMENT OF THE PHOTOIONIZATION AEROSOL MASS SPECTROMETER (PIAMS) FOR ORGANIC AEROSOL CHARACTERIZATION**, MATTHEW DREYFUS, Michael Tolocka, Murray Johnston, University of Delaware, Newark, DE

8PC11 **PARTICLE FOCUSING AT ATMOSPHERIC PRESSURES**, RAVI S CHAVALI, Goodarz Ahmadi - Clarkson university, Potsdam, NY 13699

8PC12 **ULTRASENSITVE MEASUREMENT OF AEROSOL LIGHT ABSORPTION BY THE PHOTOACOUSTIC METHOD**, W. PATRICK ARNOTT, Hans Moosmüller, Desert Research Institute, Reno NV; Jeffrey Brook, Environment Canada Air Quality Processes Research Division, Toronto CANADA

8PC13 **DEVELOPMENT OF A UNIFORM GROWTH PARTICLE COUNTER (UGPC) USING CONDENSATIONAL GROWTH AND ELECTRICAL MEASUREMENT TECHNIQUES**, SEUNG-BOK LEE, Gwi-Nam Bae, Kil-Choo Moon, Korea Institute of Science and Technology, Jun-Ho Ji, Samsung Electronics

8PC14 **PORTABLE AEROSOL SPECTROMETER FOR QUICK DIFFERENTIATION OF ABIOTIC AND BIOTIC MATERIAL**, UWE GOLZ, Frank Keidel, Roland Hagler, Hans Grimm, GRIMM Aerosol Technik GmbH & Co. KG, Dorfstr. 9, 83404 Ainring

8PC15 **CALIBRATION OF PHOTOACOUSTIC MEASUREMENTS OF AEROSOL LIGHT ABSORPTION USING THE OXYGEN A-BAND AND A TUNABLE DIODE LASER**, ALI ABU-RAHMAH, Hans Moosmüller, and W. Patrick Arnott, Desert Research Institute, University of Nevada System, Reno, NV

8PC16 **ION MOBILITY ANALYSIS OF PARTICULATE MATTER AND GAS PHASE PRECURSORS**, Mang Zhang, Anthony S. Wexler, University of California, Davis, CA

8PC17 **IN-LINE SAMPLE PREPARATION OF BIO-AEROSOL PARTICLES FOR AEROSOL MALDI MASS SPECTROMETRY**, J.C.M. MARIJNISSEN, M.A. Stowers, W.A. Kleefsman, Delft University of Technology A. L. van Wuijckhuijse, Ch.E. Kientz, O. Kievit, TNO Prins Maurits Laboratory

8PC18 **PERFORMANCE CHARACTERISTICS OF THE AEROSOL PARTICLE MASS ANALYZER**, NOBUHIKO FUKUSHIMA, Naoko Tajima, Kanomax Japan Inc., Suita, Japan; Kensei Ehara, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan; Keven J. Coakley, National Institute of Standards and Technology, Boulder, CO

8PC19 **CHARACTERIZATION OF AN AEROSOL FLOW TUBE-FTIR (AFT-FT) TECHNIQUE TO STUDY THE HETEROGENEOUS CHEMISTRY OF AEROSOLS**, CINDY DEFOREST HAUSER, Jamie Ferguson, Steve Tolson, Davidson College, Davidson, NC

8PC20 **UNDERSTANDING VIRTUAL IMPACTION BY CFD**, Marwan L. Charrouf, Richard V. Calabrese, and JAMES W. GENTRY, Department of Chemical Engineering, University of Maryland, College Park, MD, USA

8PC21 **COUNT AND MASS CORRELATION OF TWO APS 3321 INSTRUMENTS.**, Richard S. Tuttle, GARY L. SPARKS, JR., Patricia A. Reuther

8PC22 **CHARGED REDUCED ELECTROSPRAY SIZE SPECTROMETRY: THE APPLICATION OF AEROSOL SIZING INSTRUMENTATION TO THE ANALYSIS OF VIRUSES AND MEGADALTON MACROMOLECULES**, CHRISTOPHER J. HOGAN JR., Eric M. Kettleson, Bala Ramaswami, Da-Ren Chen, Pratim Biswas, Environmental Engineering Science, Washington University, St. Louis, MO.

8PC23 **3-D MODELING ON THE PERFORMANCE OF AN AIRBORNE COUNTERFLOW VIRTUAL IMPACTOR**, JUNHONG CHEN, Pengxiang, Wang, University of Wisconsin-Milwaukee, Milwaukee, WI; William C. Conant, Tracey A. Rissman, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

## 8D Chemistry

Austin Grand Ballroom Row 4

8PD1 **NANOPARTICLES GENERATED IN THE RESULT OF THE POLITETRAFLUOROETHILEN THERMAL DECOMPOSITION**, M.P. Anisimov, A.M. BAKLANOV, I.A. Zayko, and A.A. Onischuk

8PD2 **REACTIVE UPTAKE OF NO3 RADICALS BY PROXIES FOR ORGANIC-COATED AEROSOL PARTICLES**, JACKSON MAK, Daniel A. Knopf, Simone Gross, Lori M. Anthony, Allan K. Bertram, University of British Columbia, Vancouver, BC

8PD3 **SYNTHESIS AND CHARACTERIZATION OF MESOPOROUS CE-MN-MCM-41 MOLECULAR SIEVES**, Tai Gyu Lee, Byong Hoo Kim, Manickam Selvaraj, Department of Chemical Engineering, Yonsei University

8PD4 **DEPENDENCE OF WATER ACTIVITY, COMPOSITION, AND SIZE WITH NITRIC ACID REACTIVE UPTAKE**, THOMAS DAVID SAUL, Murray V. Johnston, University of Delaware, Department of Chemistry and Biochemistry, Newark, DE

8PD5 **INVESTIGATION OF HIGH MOLECULAR WEIGHT (>282 U) PRODUCTS FROM THE HETEROGENEOUS REACTION OF OZONE WITH OLEIC ACID PARTICLES**, James C. Zahardis, BRIAN W. LAFRANCHI and Giuseppe A. Petrucci Department of Chemistry, University of Vermont, Burlington, VT

8PD6 **UNCERTAINTIES IN THE THERMOCHEMICAL DATA FOR BINARY SULFURIC ACID-WATER CLUSTER IONS**, ALEXEY NADYKTO, Fangqun Yu; Atmospheric Sciences Research Center, State University of New York at Albany, Albany, NY

8PD7 **QUANTITATIVE LASER-INDUCED BREAKDOWN SPECTROSCOPY FOR AEROSOLS VIA INTERNAL CALIBRATION: APPLICATION TO THE OXIDATIVE COATING OF ALUMINUM NANOPARTICLES**, DIBYENDU MUKHERJEE, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN; Ashish Rai and Michael R. Zachariah, Department of Chemistry and Mechanical Engineering, University of Maryland, College Park, MD

8PD8 **HETEROGENEOUS REACTIONS BETWEEN DIESEL PARTICULATE MATTER AND OZONE**, Zhong Chen, ritt Holmén, Civil & Environmental Engineering, University of Connecticut, Storrs, CT

8PD9 **A NEW ANALYTICAL MODEL FOR PARTICLE DEPOSITION TO FORESTS**, F. Birsan, S.C. PRYOR, Indiana University, IN

8PD10 **TOPOLOGY OF THE NUCLEATION RATE SURFACES FOR LASER ABLATION OF CRYSTALS**, M.P. Anisimov, A.M. Baklanov, V.S. Akimov, and P.K. HOPKE

8PD11 **IMPACT OF RELATIVE HUMIDITY ON GAS-PARTICLE PARTITIONING FOR THE CYCLOHEXENE/OZONE SYSTEM: COMPARISON OF EXPERIMENTAL VS. THEORETICAL PREDICTIONS.**, QUENTIN MALLOY, Bethany Warren, Chen Song, David R. Cocker III, University of California, Riverside

8PD12 **THE EFFECT OF DISSOLVED INORGANIC SALTS ON THE FORMATION OF SECONDARY ORGANIC AEROSOLS FOR THE CYCLOHEXENE/OZONE SYSTEM**, BETHANY WARREN, Chen Song, David R. Cocker III, University of California, Riverside, CA

## 8E International Consortium Atmospheric Research on Transport and Transformation (ICARTT)

Austin Grand Ballroom Row 11

8PE1 **REGIONAL IMPACT OF THE OHIO RIVER VALLEY ON BOUNDARY-LAYER SO4 CONCENTRATIONS: RESULTS FROM INTEX-NA**, CHRIS HENNIGAN, Scott Sandholm, Rodney J. Weber, Rick Peltier, Greg Huey, Robert Stickel, Saewung Kim, Georgia Institute of Technology, Atlanta, GA

8PE2 **AN INVESTIGATION INTO AQUEOUS OXALATE PRODUCTION USING A PARTICLE-INTO-LIQUID SAMPLER (PILS) DURING ICARTT 2004**, ARMIN SOROOSHIAN, Fred J. Brechtel, Rick C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

8PE3 **AIRCRAFT MEASUREMENTS USING AN AEROSOL MASS SPECTROMETER DURING ICARTT**, KATHERINE HAYDEN, Desiree Toom-Sauntry, Richard Leaitch, Anne Marie Macdonald, Kurt Anlauf, Wanmin Gong, Amy Leithead, Shao-Meng Li, Sangeeta Sharma, Walter Strapp, Environment Canada, Toronto, ON

8PE4 **INVESTIGATION OF CARBONYLS IN BULK CLOUDWATER SAMPLES COLLECTED DURING ICARTT**, AMY LEITHEAD, Shao-Meng Li, Anne Marie Macdonald, W. Richard Leaitch, Desiree Toom-Sauntry , Kurt G. Anlauf, Katherine L. Hayden, Dave Halpin, J. Walter Strapp, Meteorological Service of Canada, ON, Canada

8PE5 **REAL-TIME FORECASTS OF PM2.5 AND ITS CHEMICAL COMPONENTS BY THE ETA-CMAQ MODEL DURING THE 2004 ICARTT STUDY**, SHAOCAI YU*, Rohit Mathur**, Daiwen Kang*, Kenneth Schere**, Brian Eder**, Jonathan Pleim**, Atmospheric Sciences Modeling Division, NERL, U.S. EPA, RTP, NC,**On assignment from Air Resources Laboratory, NOAA, RTP, NC, *On assignment from Science and Technology Corporation, Hampton, VA; Stuart A. McKeen, Aeronomy Laboratory, NOAA, Boulder, Colorado

8PE6 **SPECIATED ORGANIC AEROSOL COMPOSITION AT CHEBOGUE POINT, NOVA SCOTIA DURING ICARTT 2004 USING THERMAL DESORPTION AEROSOL GC/MS-FID (TAG)**, BRENT J. WILLIAMS, Allen H. Goldstein, University of California, Berkeley, CA; Nathan M. Kreisberg, Susanne V. Hering, Aerosol Dynamics Inc., Berkeley, CA

## 8F Aviation Emissions: APEX and Related Studies

Austin Grand Ballroom Row 11

8PF1 **STUDY OF THE EVOLUTION OF SOOT EMITTED BY AIRCRAFTS - EXPERIMENTAL DEVELOPMENT**, ANNE-LISE BRASSEUR, David Delhaye, ONERA, CHATILLON, FRANCE; Olivier Penanhoat, Sébatien Guedon, SNECMA MOTEUR VILLAROCHE, REAU, FRANCE

8PF2 **CHEMICAL CHARACTERIZATION OF THE GAS PHASE EMISSIONS FROM A COMMERCIAL AIRCRAFT JET ENGINE DURING PROJECT APEX**, JOHN KINSEY, Lee Beck, and Michael Hays, U. S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Research Triangle Park, NC Craig Williams, Russell Logan, Tom Balicki, and Yuanji Dong, ARCADIS-Geraghty & Miller, Durham, NC

## 8G Health Related Aerosols

Austin Grand Ballroom Row 5

8PG1 **USE OF AEROSOLS TO INCREASE RECOVERY OF EXHALED BREATH PROTEIN FROM UNANESTHETIZED PIGS**, OWEN MOSS, Earl Tewksbury, CIIT Centers for Health Research, Research Triangle Park, NC; Nathan Boggs, Joany Jackman, Johns Hopkins University Applied Physics Laboratory, Laurel, MD.

8PG2 **EFFECTS OF AMBIENT PARTICULATE SUSPENSION (APS) ON BARRIER PROPERTIES OF RAT ALVEOLAR EPITHELIAL CELL MONOLAYERS (RAECM)**, HARISH C. PHULERIA, Constantinos Sioutas, Departments of Civil & Environmental Engineering, University of Southern California, Los Angeles, CA, USA; Nazanin Yaghoobian, Kwang J. Kim, Zea Borok, Edward D. Crandall, Departments of Medicine, University of Southern California, Los Angeles, CA, USA

8PG3 **MODELING OF POWDER DEPOSITION IN ORO-PHARYNGEAL CAST DURING INSPIRATORY FLOWS**, ARKADIUSZ MOSKAL, Tomasz R. Sosnowski, Leon Gradon

8PG4 **THERMAL DESORPTION GC/MS ANALYSIS OF POLYCYCLIC AROMATIC HYDROCARBONS, N-ALKANES, HOPANES, AND STERANES IN ATMOSPHERIC AEROSOLS**, XINGHUA FAN, Jeffrey R. Brook, Environment, Toronto, ON, Canada

8PG5 **CONTAINING AIRBORNE RESPIRATORY INFECTIOUS DISEASE SPREAD**, WESLEY DEHAAN, Jeff Kastra, Karim Kokash, Matthew Brande, Robert Clarke and Wiwik Watanabe Pulmatrix Inc., Cambridge, MA

8PG6 **IN VITRO EXPERIMENTS ON INHALER ADAPTOR DESIGN**, Jinbo Wang, Ahmed Fadl, Pao Yang, Zongqin Zhang, University of Rhode Island, Kingston, Rhode Island; Yung Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

8PG7 **COMPUTER SIMULATION OF AEROSOL ORAL AIRWAY DELIVERY**, Jinbo Wang, Ahmed Fadl, Zongqin Zhang, University of Rhode Island, Kingston, Rhode Island; Yung Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

8PG8 **INVESTIGATE THE EFFECT OF DILUTION PROCESS ON THE DISTRIBUTION OF OC, EC AND SULFATE IN DIESEL PARTICULATE MATTER (DPM)**, Zifei Liu, MINGMING LU, Tim. Keener, Fuyan Liang, University of Cincinnati

8PG9 **USE OF STOKES NUMBER TO SCALE PARTICLE DEPOSITION EFFICIENCY CURVES FOR RAT, MONKEY AND HUMAN NASAL AIRWAYS**, Brian A. Wong and Julia S. Kimbell, CIIT Centers for Health Research

8PG10 **BIOAEROSOL MASS SPECTROMETRY (BAMS) FOR THE RAPID DETECTION OF INDIVIDUAL AIRBORNE HEALTH RELATED VEGETATIVE BACTERIA**, HERBERT J. TOBIAS, Lawrence Livermore National Laboratory, Livermore, California; Millie P. Schafer, National Institute for Occupational Safety and Health, Cincinnati, Ohio; Maurice Pitesky, David P. Fergenson, Joanne Horn, Matthias Frank, and Eric E. Gard, Lawrence Livermore National Laboratory, Livermore, California.

8PG11 **QUANTIFICATION OF AIRBORNE MYCOBACTERIUM TUBERCULOSIS IN HEALTH CARE SETTING USING REAL-TIME QPCR COUPLED TO AN AIR-SAMPLING FILTER METHOD**, Chih-Shan Li, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University Pei-Shih Chen, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University

8PG12 **INTRANASAL IMMUNIZATION PROTECTS MICE AGAINST INTRAPERITONEAL CHALLENGE WITH TICK-BORNE ENCEPHALITIS VIRUS**, Elena Goncharova, Evgeny Ryzhikov, Vasiliy Poryvaev, Leonid Bulychev, Amir Maksyutov, ALEXANDR RYZHIKOV, State Research Center of Virology and Biotechnology “Vector”, Koltsovo, Novosibirsk region, Russia

8PG13 **GENERATION OF VERY LOW DENSITY FIBROUS CARBON POWDERS (SINGLE-WALLED CARBON NANOTUBES AND PYROGRAF III)**, PAUL BARON, Gregory Deye, National Institute for Occupational Safety and Health, Cincinnati OH; Anna Shvedova, Vincent Castranova, National Institute for Occupational Safety and Health, Morgantown WV

8PG14 **INTERACTIONS BETWEEN ORGANIC AEROSOLS, OZONE AND EPITHELIAL CELLS**, CINDY DEFOREST HAUSER, Karen Bernd, Shari Barnett, Sandy Ockers, Davidson College, Davidson, NC

8PG15 **TOWARD DETERMINATION OF DROPLET COMPOSITION FOR AEROSOL DRUG DELIVERY DEVICES**, CARY PRESSER, Bradley S. Johnson, National Institute of Standards and Technology, Gaithersburg, MD

8PG16 **USE OF RADIOLABELED AEROSOL INHALATION DELIVERY AND INDUCED SPUTUM TECHNIQUES TO ASSESS IN-VIVO PARTICLE CLEARANCE AND UPTAKE BY AIRWAY MACROPHAGES**, WILLIAM D. BENNETT, Neil Alexis, John C Lay, Kirby L Zeman, Center for Environmental Medicine, Asthma and Lung Biology, UNC Chapel Hill, Chapel Hill, NC; Marianne Geiser and Nadine Kapp, Institute for Anatomy, University of Bern, Switzerland.

## 8H Combustion

Austin Grand Ballroom Row 6

8PH1 **PM EMISSIONS FROM BACKUP GENERATORS: METHOD 5 VS. ISO 8178**, ABHILASH NIGAM, Bill Welch, Kathalena Cocker, David R. Cocker III, University of California, Riverside, CA

8PH2 **EMISSIONS FROM THE LABORATORY COMBUSTION OF WILDLAND FUELS: CHARACTERIZATION OF PARTICLE MORPHOLOGY**, Rajan K. Chakrabarty, Hans Moosmüller, W. Patrick Arnott, John Walker, Desert Research Institute, University of Nevada System, Reno, NV ; Vladimir A. Kovalev, Ronald A. Sussot,Wei Min Hao, USFS Fire Sciences Laboratory, Missoula, MT

8PH3 **EMISSIONS OF NON-REGULATED POLLUTANTS FROM IN-USE DIESEL BACKUP GENERATORS**, Ajay K. Chaudhary, ANIKET A. SAWANT, Sandip D. Shah, J. Wayne Miller, David R. Cocker III, University of California, Riverside, CA

8PH4 **ON-BOARD PARTICLE NUMBER DISTRIBUTIONS FROM HYBRID-ELECTRIC AND CONVENTIONAL DIESEL BUSES AS A FUNCTION OF ROAD TYPE**, AURA C. DAVILA, Derek Vikara, Oliver Gao, Britt A. Holmen, University of Connecticut, Storrs, CT

8PH5 **STUDY OF FINE PARTICULATE MATTER EMISSIONS FROM LIGHT-DUTY GASOLINE VEHICLES**, JINGNAN HU, Jiming Hao, Lixin Fu, Department of Environmental Science and Engineering, Tsinghua University, Beijing, China

8PH6 **THE EMISSION OF PARTICLES FROM COAL-FIRED POWER PLANTS IN CHINA**, XINGMING GUO, Jiming Hao, Lei Duan, Honghong Yi, Xinghua Li, Department of Environmental Science & Engineering, Tsinghua University, Beijing, P.R.China

8PH7 **SYNTHESIS OF PHOTOCATALYTIC ACTIVE ANATASE PHASE TITANIA NANOPOWDER**, Ulrika Backman Unto Tapper Olli Jauhiainen JORMA JOKINIEMI

8PH8 **NANOPARTICLE FORMATION DURING METAL COMBUSTION**, Igor S. ALTMAN, National CRI Center for Nano Particle Control, Seoul National University, Seoul, Korea; School of Environmental Engineering, Griffith University, Brisbane, QLD, Australia; Igor E. Agranovski, School of Environmental Engineering, Griffith University, Brisbane, QLD, Australia; Mansoo Choi, National CRI Center for Nano Particle Control, Seoul National University, Seoul, Korea

8PH9 **SYNTHESIS OF LITHIUM-COBALT-NICKEL OXIDE NANOPARTICLES FROM SPRAYED DROPLETS OF THEIR AQUEOUS PRECURSOR IN A DIFFUSION FLAME REACTOR**, HEE-DONG JANG, Hankwon Chang, Yong-Jae Suh Nano-Materials Group, Korea Institute of Geoscience and Mineral Resources, Daejeon, KOREA

8PH10 **FINE PARTICLE AND TRACE ELEMENT EMISSIONS FROM COMBUSTION OF ANTHRACITE COAL IN POWER PLANT**, HONGHONG YI, Jiming Hao, Lei Duan, Xinghua Li, Xingming Guo, Tsinghua University, Beijing, China

8PH11 **COMPARISON OF SOOT VOLUME FRACTION DETERMINED BY A TEOM, A SMPS AND AN EXTINCTION-SCATTERING DEVICE IN THE INFRARED**, FRANCOIS-XAVIER OUF, Jacques Vendel, Institut de Radioprotection et de Sureté Nucléaire, Laboratoire de Physique et de Métrologie des Aérosols, Gif-sur-yvette, France Alexis Coppalle, Marc Weill, COmplexe de Recherche Interprofessionnelle en Aérothermochimie, Rouen, France

8PH12 **DEVELOPMENT OF A COMPACT DILUTION SAMPLING SYSTEM FOR STATIONARY COMBUSTION SOURCES**, Li XINGHUA, Hao Jiming, Duan Lei, Yi Honghong, Guo Xingming,Department of Environmental Science and Engineering, Tsinghua University,Beijing,China

8PH13 **AEROSOL GELS: A CARBON SOOT WITH NOVEL PROPERTIES FORMED INSIDE A CLOSED COMBUSTION CHAMBER**, RAJAN DHAUBHADEL, Flint Pierce, Amit Chakrabarti, Christopher Sorensen, Department of Physics, Kansas State University, Manhattan, KS, USA

8PH14 **RADIOCARBON IN PARTICULATE EMISSIONS FROM GASOHOL COMBUSTION IN SMALL ENGINES**, CHARLES LEWIS, James Braddock, William Lonneman, U.S. EPA, Research Triangle Park, NC; William Crews, BKI, Inc.; John Volckens, Colorado State University, Fort Collins, CO

8PH15 **REAL TIME DIESEL PARTICULATE FILTER EFFICIENCY MEASUREMENTS FROM SPECTRAL DATA**, Tim Hands, CHRIS NICKOLAUS, Jonathan Symonds, Cambustion Ltd, Cambridge, UK

## 8I Atmospheric Aerosols

Austin Grand Ballroom Rows 8, 9, 10, 11

8PI1 **THE ERRORS OF MEASUREMENTS OF TROPOSPHERIC BIOAEROSOL**, ALEXANDER BORODULIN, Alexander Safatov, SRC VB "Vector", Koltsovo, Novosibirsk region, Russia; Boris Belan, Mikhail panchenko, Institute of atmospheric Optics SB of the RAS, Tomsk, Russia

8PI2 **AN INTERCOMPARISON OF MEASUREMENT METHODS FOR CARBONACEOUS AEROSOL IN THE AMBIENT AIR IN NEW YORK CITY**, PRASANNA VENKATACHARI, Liming Zhou, Philip K. Hopke, Clarkson University, Potsdam, NY; James J. Schwab, Kenneth L. Demerjian, Olga Hogrefe, State University of New York, Albany, NY; Dirk Felton, Oliver V. Rattigan, NYS Department of Environmental Consrvation, NY.

8PI3 **SOURCE IDENTIFICATION OF AEROSOLS IN THE WESTERN UNITED STATES USING POSITIVE MATRIX FACTORIZATION**, JIN XU, Dave DuBois, Mark Green, Vic Etyemezian, Desert Research Institute, Las Vegas, NV; Marc Pitchford, NOAA Air Resource Laboratory, Las Vegas, NV

8PI4 **AEROSOL CLIMATOLOGY OVER THE CONTINENTAL AND COASTAL STATIONS IN INDIA**, RAJU N V, GLOBAL ACADEMY OF TECHNOLOGY, BANGALORE, INDIA

8PI5 **PREDICTED RESPONSES OF INORGANIC PM2.5 IN THE EASTERN UNITED STATES TO EMISSION CHANGES USING A THREE DIMENSIONAL CHEMICAL TRANSPORT MODEL (PMCAMX+)**, ALEXANDRA P. TSIBIDI, Vlassis A. Karydis, Spyros N. Pandis, Dept. of Chemical Engineering, University of Patras, Patras, Greece

8PI6 **IMPACTS OF SHIP DIESEL EMISSIONS TO AIRBORNE PM2.5 IN THE SAN DIEGO AREA**, JONG HOON LEE, Philip K. Hopke, Clarkson University, Potsdam, NY

8PI7 **SECONDARY ORGANIC AEROSOL FORMATION FROM THE OXIDATION OF MONOTERPENES BY THE CHLORINE ATOM**, XUYI CAI, Robert Griffin, University of New Hampshire, Durham, NH

8PI8 **DEVELOPMENT OF A PHOTOCHEMICAL CHAMBER FOR THE TOXICOLOGICAL EVALUATION OF COAL COMBUSTION EMISSIONS**, PABLO A. RUIZ, Joy E. Lawrence, Jack M. Wolfson, Stephen T. Ferguson, Tarun Gupta, Choong-Min Kang and Petros Koutrakis. Department of Environmental Health, Harvard School of Public Health, Boston MA 02215

8PI9 **UHAERO-INORGANIC MODULE: A NEW THERMODYNAMIC EQUILIBRIUM MODEL FOR MULTICOMPONENT INORGANIC AEROSOLS**, Neal R. Amundson, Alexandre Caboussat, Jiwen He, ANDREY MARTYNENKO, Department of Mathematics, University of Houston, TX; John H. Seinfeld, Department of Chemical Engineering, California Institute of Technology, Pasadena, CA; Kee-Youn Yoo, Department of Chemical Engineering, Seoul National University of Technology, Seoul, Korea

8PI10 **ANALYSIS AND IDENTIFICATION OF PRODUCTS FORMED DURING HYDROXYL RADICAL INITIATED PHOTO-OXIDATION OF ATMOSPHERICALLY RELEVANT HYDROCARBONS**, JANEEN CASEY, Michael Mozurkewich, Don Hastie, Chemistry Department and Centre for Atmospheric Chemistry, Toronto, Canada

8PI11 **AEROSOL FLUX MEASUREMENTS FROM THE AIRPLANE**, GINTAUTAS BUZORIUS, CIRPAS, Department of Research, NPS, CA, USA John Kalogiros, IERSD, National Observatory of Athens, Athens, Greece Varuntida Varutbangkul, California Institute of Technology, Department of Chemical Engineering, Pasadena, CA, USA.

8PI12 **FILTER EXTRACTION OF ORGANIC TRACER COMPOUNDS: POSSIBILITIES AND LIMITATIONS**, MICHAEL P HANNIGAN, Steven J Dutton, Gregory L Brinkman, Fatimah Matalkah, University of Colorado, Boulder, CO

8PI13 **VOLATILITY AND CHEMICAL CHARACTERISTICS OF PM IN THE PROXIMITY OF A LIGHT-DUTY VEHICLE FREEWAY**, THOMAS KUHN, Subhasis Biswas, Philip M. Fine, Michael Geller, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA

8PI14 **REGIONAL-SCALE MEASUREMENTS OF SMOKE-IMPACTED HAZE IN CALIFORNIA, OREGON AND WASHINGTON**, GAVIN MCMEEKING, Sonia Kreidenweis, Jacqueline Carrillo, Jeffrey Collett, Jr., Colorado State University, Fort Collins, CO; Melissa Lunden, Lawrence Berkeley National Laboratory, Berkeley, CA; Derek Day, William Malm, National Park Service

8PI15 **REACTIONS OF OXYGENATED VOCS IN UT/LS AEROSOLS: LABORATORY STUDIES**, LAURA T. IRACI and Rebecca R. Michelsen, Atmospheric Chemistry and Dynamics Branch, NASA Ames Research Center, Moffett Field, CA; Mads P. Sulbaek Andersen, also at Department of Chemistry, University of Copenhagen, Denmark

8PI16 **REAL TIME MEASUREMENT OF SILT LOADING OF PAVED ROADS IN SEOUL AND INCHEON, KOREA**, SEHYUN HAN, Ki-Won Jang, Young Min Son and Yongwon Jung, Department of Environmental Engineering, Inha University, Incheon, Korea; Ji-Hyung Hong, National Institute of Environmental Research, Korea

8PI17 **THE MAIN PRINCIPLES OF SEMI-EMPIRICAL THEORY OF STOCHASTIC CONDENSATION OF WATER VAPOUR IN THE ATMOSPHERE**, OLEG SKRYNYK, Volodymyr Voloshchuk, Ukrainian Hudrometeorological Research Institute

8PI18 **CHEMICAL SPECIATION OF PARTICLE-PHASE POLYCYCLIC AROMATIC HYDROCARBONS IN MUMBAI,INDIA**, RASHMI S PATIL CESE ,IIT Bombay, Mumbai,India S K Sahu and G G Pandit EAD, BARC,Mumbai,India

8PI19 **CHAMBER STUDIES OF SECONDARY ORGANIC AEROSOL FORMATION FROM THE PHOTOOXIDATION OF BIOGENIC COMPOUNDS**, NGA LEE NG, Jesse H. Kroll, Roya Bahreini, Melita D. Keywood, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA; Anita Lee, Allen H. Goldstein, University of California at Berkeley, Berkeley, CA

8PI20 **SECONDARY SULFATE PM2.5 IN THE GREAT SMOKY MOUNTAINS AREA**, EUGENE KIM, Philip K. Hopke, Clarkson University, Potsdam, NY

8PI21 **HETEROGENEOUS NUCLEATION OF ICE BY MINERAL DUST PARTICLES**, DANIEL A. KNOPF, University of British Columbia, Vancouver, BC, Thomas Koop, University of Bielefeld, Bielefeld, Germany

8PI22 **SEASONAL VARIATIONS OF TROPOSPHERIC OZONE OVER SAJAN MOUNTAIN RIDGE (SIBERIA, RUSSIA)**, VLADIMIR POTEMKIN, Limnological Institute, Irkutsk, Russia

8PI23 **SEMI-CONTINUOUS MEASUREMENTS OF WATER-SOLUBLE ORGANIC CARBON IN THE TOKYO METROPOLITAN AREA**, YUZO MIYAZAKI, Yutaka Kondo, Yuichi Komazaki, Nobuyuki Takegawa, Research Center for Advanced Science and Technology, University of Tokyo, Tokyo, Japan; Rodney J. Weber, Georgia Institute of Technology, Atlanta, GA

8PI24 **NEAR-REALTIME MEASUREMENTS OF SPATIAL DISTRIBUTION OF AMBIENT AEROSOL IN WILMINGTON, DELAWARE**, YILIN MA, Nitin Goel, Andrey Khlystov, Duke University, Durham, NC.

8PI25 **MASS TRANSFER EFFECTS IN HYGROSCOPIC MEASUREMENTS OF AEROSOL PARTICLES**, MAN NIN CHAN, Environmental Engineering Program, School of Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong; Chak K. Chan, Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong

8PI26 **SENSITIVITY OF CCN NUMBER TO TEMPORAL VARIABILITY OF AEROSOL SIZE DISTRIBUTION AND CHEMICAL COMPOSITION ESTIMATED USING HIGHLY TIME-RESOLVED DATA**, NITIN GOEL, Heidi Holder, Andrey Khlystov, Duke University, Durham, NC

8PI27 **NUMERICAL STUDY FOR EFFECTS OF WIND ON AEROSOL SAMPLERS**, KYOUNG SOO LIM, Young Ok Park, Fossil Energy & Environment Department, Korea Institute of Energy Research , Daejeon, South Korea, Kyoo Won Lee, Department of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, South Korea

8PI28 **NUCLEATION AND GROWTH OF SECONDARY PARTICLES FORMED FROM A GASEOUS MIXTURE OF SO2/H2O/AIR BY ULTRA-VIOLET PHOTOREACTION**, YOSHIKAZU KUGA, Toshiyuki Fujimoto, Kunika Hayashi, Tubasa Endoh, Takayuki Judo, Muroran Institute of Technology, Muroran, Japan

8PI29 **ORGANIC AEROSOL CHEMICAL SPECIATION USING SOFT IONIZATION METHODS IN AN AEROSOL MASS SPECTROMETER**, Megan Northway, Achim Trimborn, John Jayne, Timothy Onasch, Manjula Canagaratna, and DOUGLAS WORSNOP, Aerodyne Research, Inc., Billerica, MA; Darin Toohey and Jose Jimenez, University of Colorado, Boulder, CO

8PI30 **ESTIMATION OF SOURCE APPORTIONMENT OF PM2.5 USING THE PMF MODEL IN SAN FRANCISCO BAY AREA**, INJO HWANG, Jong Hoon Lee, and Philip K. Hopke, Clarkson University, Center for Air Resources Engineering and Science and Department of Chemical Engineering, Potsdam, NY

8PI31 **SUBMICRON AEROSOL SIZE DISTRIBUTION MEASUREMENTS IN THE CITY OF SEOUL, AND COASTAL AND MARINE ENVIRONMENTS OVER SOUTH KOREA**, Seong Soo Yum, Jong-Hwan Kim, Kyungsup Choi, Yonsei University, Seoul, Korea Sung-Nam Oh, Jae-Cheol Nam, Korea Meteorological Adminstration, Seoul, Korea

8PI32 **MID-MORNING BEHAVIOR OF CONDENSATION NUCLEI AT A MOUNTAIN-TOP DURING THE WINTERTIME**, EDWARD HINDMAN, The City College of New York, NYC, NY; Randolph Borys, University and Community College System of Nevada, Reno, NV

8PI33 **SAMPLING FROM HIGH-SPEED AIRCRAFT: NEW CORRELATIONS FOR ANISOKINETIC SAMPLING INLETS**, PATRICK EDDY and Suresh Dhaniyala, Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY, 13699

8PI34 **DIURNAL VARIATIONS FOR VERTICAL PROFILES OF PARTICLE SIZE DISTRIBUTIONS**, YEE-LIN WU, Geng-Hui Pan, Department of Environmental Engineering, National Cheng-Kung University, Tainan, Taiwan

8PI35 **PASSIVE AEROSOL SAMPLER FOR COARSE-MODE AEROSOL**, Darrell Sommerlatt, DAVID LEITH, Maryanne Boundy, University of North Carolina at Chapel Hill, Chapel Hill, NC

8PI36 **A SYSTEMATIC STUDY OF LIGHT-ABSORBING PRODUCT FORMATION IN SULFURIC ACID AEROSOLS**, BARBARA NOZIERE, Williams Esteve, University of Miami / RSMAS, FL

8PI37 **ABSORPTION COEFFICIENTS OF CARBONACEOUS AEROSOLS AT HIGH RELATIVE HUMIDITIES UTILIZING AN OPTICAL EXTINCTION CELL (OEC)**, SCOTT MEYERS, Tami C. Bond, University of Illinois Urbana-Champaign, Urbana, IL

8PI38 **THE MERCURY DISTRIBUTION IN AMBIENT AIR, THROUGHFALL, WET DEPOSITION, AND SOILS**, HYUN-DEOK CHOI, Thomas M. Holsen, Timothy Sharac, Soon-Onn Lai, Clarkson University, 8 Clarkson Ave., Potsdam, NY 13699

8PI39 **PMF SOURCE APPORTIONMENT FOR PM2.5 IN FLORIDA AND MISSISSIPPI**, Wei Liu, Yuhang Wang, Armistead Russell, Georgia Institute of Technology, Atlanta, GA; Eric S. Edgerton, Atmospheric Research and Analysis, Inc., Durham, NC.

8PI40 **AMBIENT AEROSOL CHARACTERIZATION IN OXFORD, OHIO AND COMPARISON WITH THE GREATER CINCINNATI AREA**, Bart Wojas, CATHERINE ALMQUIST, Paper Science and Engineering Department, Miami University, Oxford, OH

8PI41 **BINARY H2SO4-H2O HOMOGENEOUS NUCLEATION BASED ON KINETIC QUASI-UNARY NUCLEATION MODEL: LOOK-UP TABLES**, FANGQUN YU, State University of New York at Albany, Albany, NY

8PI42 **A RELATIVE RATES METHOD FOR EVALUATION OF ORGANIC AEROSOL AGING KINETICS**, KARA E. HUFF HARTZ, Emily Weitkamp, Amy M. Sage, Allen R. Robinson, and Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA

8PI43 **THE EFFECT OF AMMONIA ON NEW PARTICLE FORMATION: A KINETIC H2SO4-H2O-NH3 NUCLEATION MODEL CONSTRAINED BY LABORATORY MEASUREMENTS**, FANGQUN YU, State University of New York at Albany, ALbany, NY

8PI44 **ESTIMATES OF AQUEOUS-PHASE SULFATE PRODUCTION FROM TANDEM DIFFERENTIAL MOBILITY ANALYSIS**, JOSHUA SANTARPIA, Don Collins, Texas A&M University, College Station, TX; Dean Hegg, Kathleen Crahan, David Covert, University of Washington, Seattle, WA; Haflidi Jonsson, Gintautas Buzorius, Center for Interdisciplinary Remotely Piloted Aircraft Studies, Marina, CA

8PI45 **THE NIST-EPA INTERAGENCY AGREEMENT ON MEASUREMENTS AND STANDARDS FOR AEROSOL CARBON: SAMPLING REGIONAL PM2.5 FOR THE CHEMOMETRIC OPTIMIZATION OF THERMAL-OPTICAL ANALYSIS**, JOSEPH M. CONNY, Surface and Microanalysis Science Division, National Institute of Standards and Technology, Gaithersburg, MD; Gary Norris, National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, NC.

8PI47 **ACCOUNTING FOR REACTIVITY USING THE CHEMICAL MASS BALANCE TOOL: METHOD DEVELOPMENT AND APPLICATION TO SOURCE RESOLUTION OF VOLATILE ORGANIC COMPOUNDS IN HOUSTON TEXAS**, ANN WITTIG, CUNY City College of New York, New York, NY; David Allen, University of Texas, Austin, TX

8PI48 **ESTIMATION OF MERCURY LOADINGS TO LAKE ONTARIO IN LAKE ONTARIO ATMOSPHERIC DEPOSITION STUDY (LOADS)**, SOON-ONN Lai, Thomas M. Holsen, Clarkson University, Potsdam, NY; Young-Ji Han, Kangwon National University, Korea

8PI49 **DIRECT DRY DEPOSITION MEASUREMENTS OF MERCURY (HG) WITH WATER**, SOON-ONN LAI, Thomas M. Holsen, Timothy J. Sharac, Clarkson University, Potsdam, NY

8PI50 **SHORT-TIME SCALE, SIZE-RESOLVED ELEMENT CONCENTRATIONS IN PHOENIX, AZ**, ANN M. DILLNER, University of California, Davis, CA, Martin M. Shafer, University of WIsconsin, Madison, WI

8PI51 **DENVER AEROSOL SOURCES AND HEALTH (DASH) STUDY PRELIMINARY RESULTS**, STEVEN J DUTTON, Fatimah Matalkah, Catherine A Vos, Shelly L Miller, Michael P Hannigan, University of Colorado, Boulder, CO; Sverre Vedal, University of Washington, Seattle, WA

8PI52 **ESTIMATION OF ORGANIC MASS TO ORGANIC CARBON RATIOS USING SOURCE APPORTIONMENT DATA**, MIN-SUK BAE, James J. Schauer, Environmental Chemistry and Technology Program, University of Wisconsin-Madison, Madison, WI; Jay R. Turner, Chemical Engineering Department, Washington University, St. Louis, MO

8PI53 **MARKET SOLUTIONS TO HETEROGENEITY IN SO2 DAMAGES AND ABATEMENT COSTS**, VLADIMIR HLASNY, Michigan State University

8PI54 **A MICROWAVE PLASMA TORCH FOR THE STUDY OF ATMOSPHERIC AEROSOLS**, STEPHEN MANG and Sergey Nizkorodov, University of California, Irvine

8PI55 **COMPARISON OF CONTINUOUS SPECIATION MEASUREMENTS WITH AND WITHOUT A MANIFOLD INLET**, Allen L. Williams, Michael Caughey, David Gay, Clyde Sweet Illinois State Water Survey Rahmat Ulla and Purnendu K Dasgupta, Texas Tech University

8PI56 **CRITICAL DESIGN VALUE AND AIR POLLUTION RISK PREDICTION**, SHAO-HANG CHU, US EPA, RTP, NC

8PI57 **PM2.5 POLAR ORGANICS, POLYCYCLIC AROMATIC HYDROCARBONS, AND 14C MEASURED DURING THE 2003/2004 LIBBY, MONTANA WINTER**, TONY WARD, The University of Montana, Missoula, MT; Lynn R. Rinehart, Desert Research Institute, Reno, NV; Todd Lange, The University of Arizona, Tucson, AZ

8PI58 **ISOTOPE RATIOS OF METALS IN AIRBORNE PARTICLES FROM SINGLE-PARTICLE LASER ABLATION MASS SPECTROMETRY**, PETER T.A. REILLY, William A. Harris, Renwu Zhang, William B. Whitten, Oak Ridge National Lab, Oak Ridge, TN

8PI59 **THE EFFECTS OF CHEMICAL PROPERTIES ON TIME SCALES FOR EXPERIMENTS INVOLVING ORGANIC CONDENSATION ONTO PM**, SHING KONG, Lynn M. Hildemann, Stanford University, Stanford, CA

8PI60 **SAMPLING CORRECTION FACTORS AND VIABLE VIRUS PARTICLE SIZE DISTRIBUTION MEASUREMENTS FOR ULTRAFINE AND SUBMICROMETER VIRUS AEROSOL PARTICLES**, CHRISTOPHER J. HOGAN JR., Eric M. Kettleson, Myong-Hwa Lee, Bala Ramaswami, Largus T. Angenent, Pratim Biswas, Environmental Engineering Science, Washington University, St. Louis, MO.

8PI61 **GENERATION AND MEASUREMENT OF PARTICLE SIZE DISTRIBUTION OF ECTROMELIA VIRUS AEROSOL**, DIVEY SAINI, Mark Buller, St Louis University, St Louis, MO; Myonghwa Lee, Pratim Biswas, Washington University in St Louis, St Louis, MO

8PI62 **A FIELD STUDY OF NEW PARTICLE FORMATION IN THE MIDWEST UNITED STATES**, ALICIA KALAFUT, Charles Stanier, University of Iowa, Iowa City, IA Allen Williams, Illinois State Water Survey, University of Illinois, Champaign, IL

8PI63 **FLOWRATES, CUTPOINTS, AND CONCENTRATIONS IN THE IMPROVE NETWORK**, NICOLE HYSLOP, Warren White, Chuck McDade, University of California, Davis, CA

8PI64 **SUSPENSION VELOCITY MODEL FOR LARGE PARTICLES ENTRAINED IN THE ATMOSPHERIC CIRCULATION PATTERN THAT INCLUDES INERTIAL EFFECTS**, Kenneth Noll, OBATOSIN ALUKO, Illinois Institute of Technology, Chicago, IL

8PI65 **QUANTIFYING PM2.5 SOURCE CONTRIBUTIONS DURING CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY (CRPAQS) WITH RECEPTOR-BASED MODELS**, L.-W. Antony Chen, Judith C. Chow, John G. Watson, Desert Research Institute, Reno, NV, USA

8PI66 **CLIMATE-AIR POLLUTION INTERACTIONS DURING SUMMER AND WINTER: A SENSITIVITY STUDY**, JOHN P. DAWSON, Spyros N. Pandis, Peter J. Adams, Carnegie Mellon University, Pittsburgh, PA

8PI68 **BIOLOGICAL AND METAL AEROSOL SOURCE EMISSION RATES PRODUCED DURING LAND APPLICATION OF PROCESSED SEWAGE SLUDGE**, TANIA PAEZ-RUBIO, Abel Ramarui, Jeffrey Sommer, Ronald Calhoun, Jordan Peccia, Arizona State University, Tempe, AZ

8PI69 **OLIGOMER FORMATION IN SECONDARY ORGANIC AEROSOL DERIVED FROM THE PRIMARY PRODUCTS OF A-PINENE OZONOLYSIS**, KATHERINE J. HEATON; Michael Tolocka; Murray V. Johnston, University of Delaware, Newark, DE

8PI70 **THE CHEMICAL COMPOSITION OF FINE PARTICLES AND QUANTITATIVE RELATIONSHIP BETWEEN THE MASS CONCENTRATION AND METEOROLOGICAL CONDITION IN BEIJING**, JINGLI WANG, Institute of Urban Meteorology, CMA, Beijing, Xulin Liu, Beijing Meteorological Information and Network Center, Beijing, China

8PI71 **SEASONAL VARIABILITY IN THE OPTICAL PROPERTIES AT BIG BEND AND GUADALUPE MOUNTAINS NATIONAL PARKS**, Christopher L. Allen, Don R. Collins, Texas A&M University, College Station, TX

8PI72 **COMPARISON OF ACTIVE AND PASSIVE SAMPLERS FOR MONITORING AMBIENT AIR**, ZHONG-MIN WANG, David Leith, University of North Carolina at Chapel Hill, Chapel Hill, NC

8PI73 **EFFECT OF CONDENSABLE SPECIES ON SOOT PARTICLE MORPHOLOGY**, JAY SLOWIK, Jeong-Ho Han, Jennifer Kolucki, Paul Davidovits, Boston College, Chestnut Hill, MA; Leah Williams, Timothy Onasch, John Jayne, Charles Kolb, Douglas Worsnop, Aerodyne Research, Inc., Billerica, MA

8PI74 **STATUS OF THE IMPLEMENTATION OF THE DECOUPLED DIRECT METHOD FOR PARTICULATE MATTER IN A THREE-DIMENSIONAL AIR QUALITY MODEL**, BONYOUNG KOO, Greg Yarwood, Gary Wilson, Ralph Morris, ENVIRON International Corporation, Novato, CA; Alan M. Dunker, General Motors R&D Center, Warren, MI

8PI75 **STUDIES ON SOA FORMATION FROM OH-OXIDATION OF TOLUENE**, GANG CAO, Myoseon Jang, The University of North Carolina at Chapel Hill, Chapel Hill, NC

8PI76 **GAS/SOLID PARTITIONING OF CHLOROACETANILIDE AND DINITROANILINE HERBICIDES AS A FUNCTION OF RELATIVE HUMIDITY IN THE PRESENCE OF SURFACTANTS**, WENLI YANG, Britt A Holmén, University of Connecticut, Environmental Engineering Program, Storrs, CT

8PI77 **MEASUREMENTS OF HETEROGENEOUS ICE NUCLEI: RESULTS FROM INSPECT-II**, MATHEWS RICHARDSON, Paul DeMott, Sonia Kreidenweis, Anthony Prenni, Markus Petters, Department of Atmospheric Science, Colorado State University; Daniel Cziczo, Department of Environmental Sciences, Swiss Federal Institute of Technology; Jose Jimenez, Edward Dunlea, Department of Biochemistry, University of Colorado; Sarah Brooks, Department of Atmospheric Sciences, Texas A&M University; Jefferson Snider, Department of Atmospheric Science, University of Wyoming; Dan Murphy, Aeronomy Laboratory, National Oceanic and Atmospheric; Randolph Borys, Storm Peak Laboratory, Division of Atmospheric Science, Desert Research Institute; Chuck McDade, Crocker Nuclear Laboratory, University of California, Davis;

8PI78 **SINGLE DIAMETER REAL TIME ULTRAFINE NUMBER CONCENTRATION MEASUREMENTS AND RELATIONSHIPS TO METEOROLOGY AND TRAFFIC VOLUMES FOR A NORTHERN CALIFORNIA FREEWAY**, Kathy Nanzetta, Deb Niemeier, University of California; Britt Holmen, University of Connecticut

8PI79 **IN-SITU MEASUREMENTS OF AEROSOL MICROPHYSICAL PROPERTIES AND EVOLUTION IN NORTH CENTRAL OKLAHOMA IN MAY, 2003**, JIAN WANG, Brookhaven National Laboratory, Upton, NY; Robert Elleman, David Covert, University of Washington, Seattle, WA; Haflidi Jonsson, Naval postgraduate School, Monterey, CA

8PI80 **MODELING ANALYSIS OF THE IMPACT OF FIREWORK EMISSIONS ON PM2.5 LEVELS IN CORPUS CHRISTI, TEXAS**, Rohan Bakane, KURUVILLA JOHN, Texas A&M University - Kingsville, Kingsville, TX

8PI81 **ENVIRONMENTAL AEROSOL AND CARBON DIOXIDE CONCENTRATIONS DUE TO BIOMASS BURNING**, T. S. VERMA, T. A. Thomas, Department of Physics, University of Botswana, Pvt Bag 0022, Gaborone, Botswana

8PI82 **OLIGOMER FORMATION IN SECONDARY ORGANIC AEROSOL AQUEOUS PHASE REACTIONS**, KATYE E. ALTIERI, Sybil P. Seitzinger, Institute of Marine and Coastal Sciences, Rutgers, The State University of New Jersey, New Brunswick, NJ; Annmarie G. Carlton, Barbara J. Turpin, Department of Environmental Science, Rutgers, The State University of New Jersey, New Brunswick, NJ

8PI83 **INFLUENCE OF WOOD SMOKE EMISSIONS ON SECONDARY PARTICLE FORMATION IN HOUSTON, TEXAS**, BIRNUR BUZCU, Zhiwei Yue, Matthew P. Fraser, Civil and Environmental Engineering Department, Rice University, Houston, TX; Uarporn Nopmongcol, David T. Allen, Department of Chemical Engineering, University of Texas at Austin, Austin, TX.

8PI84 **ON THE RELATIVE IMPACTS OF ONROAD AND NONROAD HEAVY-DUTY DIESEL EMISSIONS**, DAVID R. COCKER III, Aniket A. Sawant, Abhilash Nigam, Sandip D. Shah, Ajay K. Chaudhary, Bill Welch, J. Wayne Miller, University of California, Riverside

## 8J Symposium: Combining Multiple Data Sources and Models to Create an Accurate, Global Scale Aerosol Picture

Austin Grand Ballroom Row 11

8PJ1 **ASSESSMENT OF GREENHOUSE GASES AND AEROSOL CLIMATE EFFECTS BY ASSIMILATION OF SATELLITE RADIANCE DATA INTO A GLOBAL CHEMISTRY AND AEROSOL MODEL**, Robert Bergstrom, Hong Guan, Howard Houben BAER Institute, Sonoma CA; Robert Chatfield, Philip Russell, NASA Ames Research Center, Moffett Field, CA

8PJ2 **WEB-ACCESSIBLE DATABASE WITH EMBEDDED ANALYTICAL TOOLS FOR THE MANAGEMENT AND VISUALIZATION OF AIR QUALITY DATA**, DR. ROBINSON KHOSAH, Charles Crawford, ATS-Chester Engineers, Pittsburgh, PA; Dr. Kevin Crist, Ohio University, Athens, OH; Dr. Kuruvilla John. Texas A&M University - Kingsville, Kingsville, TX

8PJ3 **EVALUATION OF A THREE-DIMENSIONAL CHEMICAL TRANSPORT MODEL (PMCAMX+) IN THE EASTERN UNITED STATES FOR ALL FOUR SEASONS**, VLASSIS A. KARYDIS, Alexandra P. Tsibidi, Spyros N. Pandis, Dept. of Chemical Engineering, University of Patras, Patras, Greece

8PJ4 **GLOBAL DISTRIBUTION OF AEROSOL INDEX CLIMATIC NORMS AND LONG TERM EVOLUTION**, IRYNA KALININA, Sergiy Snizhko, Department of Meteorology and Climatology,Kiev Shevchenko University, Kiev, Ukraine; Grigoriy Kruchenitsky, Central Aerologic Observatory, Moscow, Russia

8PJ5 **OPTICAL SCATTERING AND ABSORPTION CLOSURE FOR DRY AND HYDRATED AEROSOL AT THE GOSAN SUPERSITE DURING ACE-ASIA**, FRED J. BRECHTEL, Brechtel Mfg. Inc., Hayward, CA; Patrick Chuang, University of California at Santa Cruz, Santa Cruz, CA; Elizabeth Andrews, Anne Jefferson, NOAA CMDL, Boulder, CO; Gintautus Buzorius, CIRPAS, Marina, CA; Chang Jung, Kyung-In Women's College, Incheon, South Korea; Jiyoung Kim, Seoul National University, Seoul, South Korea; Steven Cliff, University of California at Davis, Davis, CA

8PJ6 **CHARACTERISTICS OF AEROSOL OBSERVED DURING SEVERE HAZE EVENTS OCCURRED IN JUNE AND OCTOBER 2004 OVER KOREA**, Youngjoon Kim, Kwonho Lee, Advanced Environmental Monitoring Research Center(ADEMRC), Gwangju Institute of Science & Technology (GIST), Gwangju, Korea Jinseok Han, Atmospheric Chemistry Division, Air Quality Research Department,National Institute of Environmental Research (NIER), Environmental Research Complex, Korea

8PJ7 **EVIDENTIARY SUPPORT OF POLLUTED CLOUDS IN THE SIERRA NEVADA: AEROSOL-CLOUD INTERACTIONS DOWNWIND OF METROPOLITAN COASTAL AREAS**, CRYSTAL REED, Don Collins, Texas A&M University, College Station, TX; Duncan Axisa, Southern Ogallala Aquifer Rainfall Program, Plains, TX; Daniel Rosenfeld, The Hebrew University of Jerusalem, Jerusalem, Israel

8PJ8 **EXPERIMENTAL AND NUMERICAL STUDIES OF NEAR-SOURCE FUGITIVE DUST TRANSPORT**, JOHN VERANTH, Department of Pharmacology and Toxicology, Scott Speckart, Eric Pardyjak, Department of Mechanical Engineering, University of Utah, Salt Lake City, UT, Vic Etyemezian, Desert Research Institute, Las Vegas, NV

**Thursday 11:00 AM**
**Session 9: Platform**

## 9A Urban/Regional Aerosols, I

Salon A

Michael Kleeman and Beth Wittig, chairs

9A1 11:00 **AN INTEGRATED SYNTHESIS OF KEY AND POLICY RELEVANT FINDINGS FROM EPA'S PM SUPERSITES PROGRAM AND RELATED STUDIES**, Paul A. Solomon, US Environmental Protection Agency, ORD/ NERL, Las Vegas, NV; Philip K. Hopke, Clarkson University, Potsdam, NY; John R. Froines, University of California Los Angeles, Los Angeles, CA

9A2 11:15 **SYNTHESIS OF SUPERSITE PROGRAM FINDINGS: REGIONAL TRANSPORT OF FINE PM**, Ann Wittig, CUNY City College of New York, New York, NY; Jay Turner, Washington University, St. Louis, MO; DAVID ALLEN, University of Texas, Austin, TX

9A3 11:30 **MODELING AIR QUALITY DURING THE CALIFORNIA REGIONAL PARTICULATE AIR QUALITY STUDY (CRPAQS) USING THE CIT/UCD SOURCE-ORIENTED AIR QUALITY MODEL – PART I: MODEL PERFORMANCE EVALUATION**, QI YING, Michael J. Kleeman, Dept of Civil and Environmental Engineering, UC Davis, Davis CA; Ajith Kaduwela, Planning and Technical Support Division, Air Resources Board, California Environmental Protection Agency, Sacramento, CA

9A4 11:45 **THE ROLE OF RESUSPENDED SOIL IN LEAD FLOWS IN THE CALIFORNIA SOUTH COAST AIR BASIN**, ALLISON HARRIS, Cliff Davidson, Carnegie Mellon University, Pittsburgh, PA

9A5 12:00 **THE IMPACT OF AMMONIA EMISSIONS ON ATMOSPHERIC PARTICULAR MATTER FORMATION IN TEXAS**, THOMAS PAVLOVIC, David Allen, Yosuke Kimura, Uarporn Nopmongcol, University of Texas at Austin, Austin, TX

9A6 12:15 **MODELING NEW PARTICLE FORMATION IN THE MEDITERRANEAN AREA**, RAFAELLA - ELENI P. SOTIROPOULOU1, Efthimios Tagaris1, Chris Pilinis1, Tatu Anttila2, Markku Kulmala3 1 Department of Environment, University of the Aegean, Mytilene, Greece 2 ICG-II: Troposphäre, Forschungszentrum Jülich, Germany 3 Department of Physical Sciences, University of Helsinki, Finland

## 9B Organic Aerosols

Salon B

Geoffrey Smith and Daniel Knopf, chairs

9B1 11:00 **USING AEROSOL MASS SPECTROMETRY TO STUDY RADICAL-INITIATED REACTIONS OF ORGANIC AEROSOL PARTICLES**, GEOFFREY D. SMITH, John D. Hearn and Kylee List, University of Georgia, Athens, GA

9B2 11:15 **PHOTOCHEMISTRY OF OXIDIZED ORGANIC AEROSOL PARTICLES**, JIHO PARK, Anthony Gomez, Maggie Walser, Ao Lin, Nicole Britigan, Sergey Nizkorodov, Department of Chemistry, University of California at Irvine, Irvine, CA

9B3 11:30 **HETEROGENEOUS REACTIONS OF O3 WITH MULTICOMPONENT AND MULTIPHASE MIXTURES CONTAINING OLEIC ACID**, DANIEL A. KNOPF, Lori M. Anthony, Allan K. Bertram

9B4 11:45 **MECHANISM OF OLEIC ACID OZONLYSIS ELUCIDATED BY COMPARISON STUDIES WITH METHYL OLEATE AND MIXED OLEIC-ACID/STEARIC-ACID PARTICLES**, Yasmine Katrib, Stephanie M. King, SCOT T. MARTIN, Division of Engineering and Applied Sciences, Harvard University, Cambridge MA, 02138, USA; Michihiro Mochida, Institute of Low Temperature Science, Hokkaido University, Sapporo, 060-0819, Japan; Paul Davidovits, Chemistry Department, Boston College, Chestnut Hill MA, 02467, USA; John T. Jayne, and Douglas R. Worsnop, Aerodyne Research, Inc., Billerica MA, 08121, USA

9B5 12:00 **FORMATION OF METHYL TETROLS IN SECONDARY ORGANIC AEROSOL FROM LABORATORY IRRADIATED ISOPRENE/ NOX/SO2/AIR MIXTURES**, Edward Edney, TADEUSZ KLEINDIENST, Michael Lewandowski, John Offenberg, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC; Mohammed Jaoui, Alion Science and Technology, Research Triangle Park, NC; Magda Claeys, Wu Wang, Department of Pharmaceutical Sciences, University of Antwerp (Campus Drie Eiken), B -2610 Antwerp, Belgium

9B6 12:15 **NEUTRAL AND ACIDIC FRACTIONS OF ORGANIC AEROSOL COMPLEX MIXTURES FROM PM2.5 IN THE NEW YORK CITY AREA**, MIN LI, Monica A. Mazurek, Department of Civil & Environmental Engineering, Center for Advanced Infrastructure and Transportation, Rutgers, The State University of New Jersey, Piscataway, NJ; Stephen R. McDow, Human Exposure and Atmospheric Sciences Division, National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, NC; Claire Belisle, Department of Civil & Environmental Engineering, Rutgers, The State University of New Jersey, Piscataway, NJ

## 9C Symposium: In-Cabin and Other Microenvironments, I

Salon D

Antonio Miguel and Kaarle Hameri, chairs

9C1 11:00 **CABIN AEROSOL EXPOSURES IN CONVENTIONAL SCHOOL BUSES WITH AND WITHOUT RETROFIT EMISSIONS CONTROLS**, L. BRUCE HILL, James Gooch, Clean Air Task Force, Boston, MA Neil Zimmerman, Purdue University, West Lafayette, IN

9C2 11:15 **PREDICTORS OF IN-VEHICLE ULTRAFINE PARTICULATE MATTER CONCENTRATIONS AND OTHER VEHICLE-RELATED POLLUTANTS ON LOS ANGELES FREEWAYS**, SCOTT FRUIN, Dane Westerdahl, California Air Resources Board, Sacramento, CA; Todd Sax, Secor International, Inc., Sacramento, CA; Philip L. Fine, Constantinos Sioutas, University of Southern California, Los Angeles

9C3 11:30 **IN-CABIN AND OUTDOOR NANOPARTICLES, AND ULTRAFINE PARTICLES I: SIZE DISTRIBUTION MEASUREMENTS ON LOS ANGELES ROADWAYS**, ANTONIO H. MIGUEL, Yifang Zhu, Arantza Eiguren-Fernandez, William Hinds, Southern California Particle Center and Supersite, University of California, Los Angeles, CA; Susanne V. Hering, Aerosol Dynamics Inc. Berkeley, CA; William W. Nazaroff, Department of Civil & Environmental Engineering, University of California, Berkeley, CA

9C4 11:45 **CHARACTERIZATION OF THE MECHANISM OF DIESEL PARTICULATE MATTER PENETRATION INTO SCHOOL BUSES**, DENNIS R. FITZ David V. Pankratz University of California, Riverside College of Engineering-Center for Environmental Research and Technology Riverside, CA Arthur M. Winer Kathleen Kozawa Eduardo Behrentz University of California, Los Angeles School of Public Health Los Angeles, CA Scott A. Fruin California Air Resources Board Sacramento, CA

9C5 12:00 **ASSESSING EXPOSURE TO AIR TOXICS IN MICROENVIRONMENTS DOMINATED BY MOBILE SOURCES**, Eric M. Fujita, David E. Campbell, Barbara Zielinska, William P. Arnott and Judith C. Chow, Desert Research Institute, Reno, NV

9C6 12:15 **IN-CABIN AND OUTDOOR NANOPARTICLES, AND ULTRAFINE PARTICLES II: COLLOCATED NUMBER CONCENTRATION MEASUREMENTS ON LOS ANGELES ROADWAYS**, ARANTZA EIGUREN-FERNANDEZ, Yifang Zhu, Antonio H. Miguel, William Hinds, Southern California Particle Center and Supersite, University of California, Los Angeles, CA; Susanne V. Hering, Aerosol Dynamics Inc. Berkeley, CA; William W. Nazaroff, Department of Civil & Environmental Engineering, University of California, Berkeley, CA.

## 9D PM Reactions/Water Uptake

Salon E

Jeffrey Roberts and Bethany Warren, chairs

9D1 11:00 **LABORATORY STUDY OF MINERAL DUST AEROSOL: HETEROGENEOUS CHEMISTRY AND PHASE TRANSITIONS**, VICKI GRASSIAN, Department of Chemistry, University of Iowa, Iowa City, IA

9D2 11:15 **IMPACT OF THE ORGANIC AEROSOL FRACTION ON AEROSOL HYGROSCOPICITY IN THE LOWER FRASER VALLEY: REGIONAL AIR QUALITY MODELLING RESULTS DURING THE PACIFIC 2001 FIELD PROGRAM**, CRAIG STROUD, Paul Makar, Michael Moran, Sunling Gong, Wanmin Gong, Richard Leaitch, Srinivasan Venkatesh, Air Quality Research Branch, Meteorological Service of Canada, Downsview, Ontario; Veronique Bouchet, Canadian Meteorological Centre, Meteorological Service of Canada, Dorval, Quebec; Yayne-Abeba Aklilu, Michael Mozurkewich, Department of Earth and Space Science and Centre for Atmospheric Chemistry, York University, Toronto, Ontario

9D3 11:30 **GAS-PHASE MOLECULAR HALOGEN PRODUCTION FROM SEA-SALT AEROSOL PARTICLES VIA INTERFACE REACTIONS: A MODELING STUDY**, JENNIE THOMAS, Angel Jimenez-Aranda, Barbara Finlayson-Pitts, Donald Dabdub

9D4 11:45 **UNDERSTANDING THE EFFLUORESCENCE OF SUPERSATURATED AEROSOLS USING FLUORESCENCE SPECTROSCOPY**, Man Yee Choi and CHAK K. CHAN, Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong

9D5 12:00 **CHARTING WATER-AEROSOL INTERACTIONS TO INFER CHEMICAL COMPOSITION AND AGING OF AMBIENT AEROSOLS**, SARA LANCE, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Matthew J. Dunn, James N. Smith, National Center for Atmospheric Research, Boulder, CO

9D6 12:15 **FORMATION OF HYDROXYL RADICAL FROM THE PHOTOLYSIS OF NITRITE, NITRATE, AND HYDROGEN PEROXIDE ON ICE**, CORT ANASTASIO and Liang Chu, Atmospheric Science Program, Department of Land, Air & Water Resources, University of California, Davis, CA

## 9E Instrumentation

Meeting Room 406

Suresh Dhaniyala and Matti Maricq, chairs

9E1 11:00 **FIELD MEASUREMENT DATA OBTAINED WITH A PORTABLE AEROSOL MEASUREMENT SYSTEM**, THOMAS PETRY 1); M. Richter 2); H. Grimm 1); T. Külz 2) 1) GRIMM Aerosol Technik GmbH & Co. KG, Dorfstr. 9, 83404 Ainring, Germany 2) GIP Messinstrumente, Muehlbecker Weg 18, 06774 Pouch, Germany

9E2 11:15 **RAPID CHECK OF CASCADE IMPACTOR CUT SIZES USING A POLYDISPERSE CHALLENGE AEROSOL**, VIRGIL A. MARPLE, Bernard Olson, Kumaragovindhan Santhanakrishnan, Particle Calibration Laboratory, University of Minnesota, Minneapolis, MN

9E3 11:30 **DESIGN AND EVALUATION OF A COARSE PERSONAL EXPOSURE MONITOR (CPEM)**, JONATHAN THORNBURG, Charles Rodes, Phil Lawless, J. Randall Newsome, RTI International, RTP, NC

9E4 11:45 **NUMERICAL CHARACTERIZATION OF THE FOCUSING PERFORMANCE OF AERODYNAMIC LENSES FOR NANOPARTICLES**, XIAOLIANG WANG, Ashok Gidwani, Steven L. Girshick, Peter H. McMurry, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN

9E5 12:00 **PARTICLE FOCUSING USING AERODYNAMIC LENS WITH SLITS**, RAVI S CHAVALI, Goodarz Ahmadi, Suresh Dhaniyala

9E6 12:15 **USING THE ELPI TO MEASURE PM MASS**, MATTI MARICQ, Ning Xu, and Richard Chase, Research and Advanced Engineering, Ford Motor Company, Dearborn, MI

**12:45 PM**

**Lunch**

**Thursday 2:00 PM**

**Session 10: Platform**

**10A Aerosols, Clouds and Climate, I**

Salon A

Athanasios Nenes and Timothy Raymond, chairs

10A1 2:00 **GLOBAL MODELING OF NITRATE AND AMMONIUM: HETEROGENEOUS INTERACTION OF AEROSOLS AND TROPOSPHERIC CHEMISTRY**, YAN FENG, Joyce E. Penner, Department of Atmospheric, Oceanic, and Space Sciences, University of Michigan, Ann Arbor, MI

10A2 2:15 **A MODELING STUDY OF PARTICULATE MATTER AND ITS SENSITIVITY TO EMISSIONS UNDER INFLUENCE OF CLIMATE AND EMISSION CHANGES**, KASEMSAN MANOMAIPHIBOON, Armistead G. Russell, Sergey L. Napelenok, Mehmet T. Odman (School of Civil and Environmental Engineering, Georgia Institute of Technology, GA) Jung-Hun Woo, Shan He, Praveen K. Amar (NESCAUM, MA) Lai-Yung Leung (Pacific Northwest National Laboratory, WA)

10A3 2:30 **SURFACE AND AIRCRAFT CCN MEASUREMENTS AND INSTRUMENT COMPARISONS**, JAMES G. HUDSON, Subhashree Mishra, Desert Research Institute, University of Nevada, Reno, NV, Seong Soo Yum, Yonsei, University, Seoul, South Korea

10A4 2:45 **CLOUD CONDENSATION NUCLEI (CCN) BEHAVIOR OF PURE ORGANIC AND MIXED ORGANIC/INORGANIC PARTICLES**, TRACEY A. RISSMAN, Fred J. Brechtel, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA

10A5 3:00 **STUDYING THE ACTIVATION BEHAVIOR OF MULTICOMPONENT ORGANIC AEROSOLS**, Ryan Morrison, Luz-Tereza Padro, ATHANASIOS NENES, Georgia Institute of Technology, Atlanta, GA

10A6 3:15 **GLOBAL EVALUATION OF CCN FORMATION BY DIRECT EMISSION OF SEA-SALT AND GROWTH OF ULTRAFINE SEA-SALT**, JEFFREY PIERCE, Peter Adams, Carnegie Mellon University, Pittsburgh, PA

10A7 3:30 **MESOSCALE AEROSOL MODELING FOR GLOBAL CLIMATE PREDICTION: MODELING THE AGING PROCESS OF SOOT**, NICOLE RIEMER, Marine Sciences Research Center, Stony Brook University, Stony Brook, NY; Heike Vogel, Bernhard Vogel, Institute for Meteorology and Climate Research, Forschungszentrum Karlsruhe, Germany;

## 10B Mobile Source Aerosols

Salon B

Fangqun Yu and Costas Sioutas, chairs

10B1 2:00 **INVESTIGATION OF ATMOSPHERIC AEROSOL MIXING STATES USING SCANNING TRANSMISSION X-RAY MICROSCOPY**, MARY GILLES, Alexei Tivanski, Chemical Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA; Bryan Marten, Lowell High School, San Francisco, CA; Lynn Russell, Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA.

10B2 2:15 **MEASUREMENTS OF SIZE-RESOLVED PARTICULATE ORGANIC TRACERS OF VEHICULAR EMISSIONS AT ROADSIDE AND TUNNEL LOCATIONS**, HARISH PHULERIA, Michael D. Geller, Constantinos Sioutas, Philip M. Fine, University of Southern California, Los Angeles, CA

10B3 2:30 **EXPERIMENTAL AND MATHEMATICAL ANALYSIS OF NANOPARTICLES IN THE ROADSIDE ENVIRONMENT**, Shuichi Kubo and Satoshi Yamazaki, Toyota Central R&D Labs. (TCRDL), Aichi, Japan; SATORU CHATANI and Hiroaki Minoura, Japan Petroleum Energy Center (JPEC), Tokyo, Japan and also TCRDL

10B4 2:45 **DIURNAL AND SEASONAL CHARACTERISTICS OF PARTICLE VOLATILITY AND CHEMICAL COMPOSITION NEAR A LIGHT-DUTY VEHICLE FREEWAY**, THOMAS KUHN, S. Biswas and C. Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA

10B5 3:00 **DISPERSION OF TRAFFIC EMISSIONS IN A ROADSIDE ENVIRONMENT: MOBILE LABORATORY MEASUREMENTS AND MODELLING**, LIISA PIRJOLA, Pauli Paasonen, Kaarle Hämeri, Tareq Hussein, University of Helsinki, Finland; Mia Pohjola, Ari Karppinen, Jari Härkönen, Jaakko Kukkonen, Finnish Meteorological Institute, Helsinki, Finland; Annele Virtanen, Tampere University of Technology, Tampere, Finland

10B6 3:15 **SIZE AND COMPOSITION OF PARTICULATE MATTER IN A FREEWAY ENVIRONMENT**, MICHAEL ROBERT, Chris Jakober, Michael Kleeman, Dept of Civil and Environmental Engineering, UC Davis, Davis CA

10B7 3:30 **IDENTIFICATION OF SOURCES TO AIRBORNE PM2.5 AT THE ST. LOUIS MIDWEST SUPERSITE**, JONG HOON LEE, Philip K. Hopke, Clarkson University, Potsdam, NY; Jay Turner, Washington University in St. Louis, St. Louis, MO; James Schauer, University of Wisconsin-Madison, Madison, WI

## 10C Symposium: In-Cabin and Other Microenvironments, II

Salon D

David Cocker and Antonio Miguel, chairs

10C1 2:00 **AEROSOL PROPERTIES IN PUBLIC TRANSPORTATION SYSTEM IN HELSINKI**, KAARLE HÄMERI, University of Helsinki and Finnish Institute for Occupational Health, Helsinki, Finland; Anne Hirsikko, Eija Vartiainen, University of Helsinki, Helsinki, Finland; Päivi Aarnio, Anu Kousa, Tarja Koskentalo, Helsinki Metropolitan Area Council, Helsinki, Finland; Tarja Yli-Tuomi, Matti Jantunen, National Public Health Institute, Kuopio, Finland; Timo Mäkelä, Risto Hillamo, Finnish Meteorological Institute, Helsinki, Finland; Mika Räisänen, Nordic Envicon Ltd, Helsinki, Finland

10C2 2:15 **NIGHT TIME CONCENTRATION AND SIZE DISTRIBUTION OF ULTRAFINE PARTICLES NEAR A MAJOR HIGHWAY IN LOS ANGELES**, YIFANG ZHU, William C. Hinds, Paul Mayo, University of California at Los Angeles, Los Angeles, CA; Thomas Kuhn , University of Southern California, Los Angeles, CA

10C3 2:30 **FROM PERSONAL EXPOSURE TRACKS TO COMMUNITY EXPOSURE MAPS: INTEGRATION OF GPS TECHNOLOGY WITH REAL-TIME PM MEASUREMENTS**, JOHN VOLCKENS, Kaila Benton-Vitz, Department of Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO

10C4 2:45 **ON-ROAD MEASUREMENT OF SIZE-RESOLVED AND VAPOR-PHASE PAH EMISSIONS FROM LIGHT- AND HEAVY-DUTY MOTOR VEHICLES**, Arantza Eiguren-Fernandez, Bill L. Grant, Paul R. Mayo, and ANTONIO H. MIGUEL, University of California, Los Angeles, CA.; Thomas W. Kirchstetter, Lawrence Berkeley National Laboratory, Berkeley, CA.; Robert R. Harley, University of California, Berkeley, CA.

10C5 3:00 **AITKEN MODE MEASUREMENTS WITH A NEW COMMERCIAL NANO-DMA IN COMBINATION WITH A HIGHLY SENSITIVE ELECTROMETER**, C. GERHART 1), T. Rettenmoser 1), M. Richter 2) and H. Grimm 1) 1) GRIMM AEROSOL Technik GmbH, Dorfstrasse 9, D-83404 Ainring, Germany. 2) G.I.P GmbH, Research Department, Mühlbecker Weg 38, 0671 Pouch, Germany.

10C6 3:15 **ESTIMATING AEROSOL SURFACE AREA IN THE AUTOMOTIVE INDUSTRY**, DOUGLAS E. EVANS, Andrew D. Mayard, National Institute for Occupational Safety and Health Division of Applied Research and Technology Cincinnati, OH, U.S.A. Thomas M. Peters and William A. Heitbrink The University of Iowa Department of Occupational and Environmental Health, Iowa City, IA, U.S.A.

10C7 3:30 **REAL-WORLD AND REAL-TIME PM EMISSIONS FROM HEAVY-DUTY DIESEL VEHICLES**, ANIKET A. SAWANT, David R. Cocker III, University of California, Riverside, CA

## 10D Aviation Emissions: APEX and Related Studies Symposium, I

Salon E

Chowen Wey and Phil Whitefield, chairs

10D1 2:00 **AIRCRAFT EMISSIONS STUDY – NASA APEX PROJECT**, CHOWEN CHOU WEY, ARL/NASA GRC, Cleveland, OH Changlie Wey, QSS/NASA GRC, Cleveland, OH

10D2 2:15 **CONCENTRATIONS AND CHARACTERISTICS OF PARTICLES WITHIN COMMERCIAL AIRCRAFT EXHAUST PLUMES**, B. E. ANDERSON, C. H. Hudgins, K. L. Thornhill, and E. L. Winstead, NASA Langley Research Center, Hampton, VA; H. Boudries, S. Herndon, J. Jayne, R. C. Miake-Lye, T. B. Onasch, and D. Worsnop Aerodyne Research, Inc., Billerica, MA

10D3 2:30 **MEASUREMENT OF SPECIATED HYDROCARBONS FROM A COMMERCIAL AIRCRAFT DURING THE NASA APEX EXPERIMENT**, S. HERNDON, J. Jayne, I. Mortimer, P. Yelvington, T. Onasch, J. Wormhoudt, D. Worsnop, R.C. Miake-Lye, Aerodyne Research, Inc., Billerica, MA, USA B. Knighton, Montana State University, MT, USA

10D4 2:45 **PM CHARACTERIZATION OF AIRCRAFT ENGINES – PROJECT APEX**, PHILIP WHITEFIELD, Donald Hagen, Prem Lobo, University of Missouri-Rolla, Rolla, MO

10D5 3:00 **CHARACTERIZATION OF THE FINE PARTICLE EMISSIONS FROM A COMMERCIAL AIRCRAFT JET ENGINE DURING PROJECT APEX: PHYSICAL CHARACTERIZATION RESULTS**, JOHN KINSEY, Lee Beck, and Michael Hays, U. S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Research Triangle Park, NC Craig Williams, Russell Logan, Tom Balicki, and Yuanji Dong, ARCADIS-Geraghty & Miller, Durham, NC

10D6 3:15 **CHARACTERIZATION OF THE FINE PARTICLE EMISSIONS FROM A COMMERCIAL AIRCRAFT JET ENGINE DURING PROJECT APEX: CHEMICAL CHARACTERIZATION RESULTS**, JOHN KINSEY, Lee Beck, and Michael Hays, U. S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Research Triangle Park, NC Craig Williams, Russell Logan, Tom Balicki, and Yuanji Dong, ARCADIS-Geraghty & Miller, Durham, NC

10D7 3:30 **PARTICULATE EMISSIONS OF COMMERCIAL AIRCRAFT MEASURED IN THE NASA APEX EXPERIMENT**, T. B. ONASCH, J. Jayne, I. P. Mortimer, P. Yelvington, S. Herndon, D. Worsnop, R. C. Miake-Lye, Aerodyne Research, Inc., Billerica, MA, USA; B. Knighton, Montana State University, MT,USA; B. Anderson, NASA Langley Research Center, Hampton VA, USA; P. Whitefield, D. Hagen, University of Rolla, Missouri, MI, USA;

## 10E Bioaerosols

Meeting Room 406

Sergey Grinshpun and Al Armendariz, chairs

10E1 2:00 **ENHANCEMENT OF CULTURABLE AIRBORNE BIOLOGICAL AGENT COLLECTION THROUGH UTILIZATION OF THEIR NATURAL ELECTRICAL CHARGE**, MAOSHENG YAO, Gediminas Mainelis, Rutgers, The State University of New Jersey, New Brunswick, NJ

10E2 2:15 **RELEASE OF FINE RESPIRABLE CHINESE ELM POLLEN FRAGMENTS INTO THE OUTDOOR AIR: AN ASSOCIATION WITH METEOROLOGICAL FACTORS**, ANN MIGUEL, Philip Taylor, Richard Flagan, James House, California Institute of Technology, Pasadena, CA; Michael Glovsky, Huntington Medical Research Institute, Pasadena, CA

10E3 2:30 **A NEW PROTOCOL FOR MEASURING ASPERGILLUS, A MOLD COMMONLY FOUND IN THE INDOOR AIR**, MARIAN GOEBES, Lynn Hildemann, Stanford University, Stanford, CA.

10E4 2:45 **POLLEN AND POLLEN-FRAGMENT RELEASE**, PHILIP TAYLOR, Gwenyth Card, Jennifer Fisher, James House, Michael Dickinson, and Richerd Flagan, California Institute of Technology, Pasadena, CA

10E5 3:00 **DEVELOPMENT AND APPLICATION OF REAL-TIME PCR TO QUANTIFY TOTAL BACTERIAL LOAD COLLECTED BY LIQUID AIR SAMPLERS**, HEYREOUN AN, Gediminas Mainelis, Lori A. White, Rutgers, The State University of New Jersey, New Brunswick, NJ

10E6 3:15 **ANTIMICROBIAL EFFICACY OF IODINATED FILTER MEDIA**, SHANNA RATNESAR-SHUMATE, Jin–Hwa Lee, Dale Lundgren, Chang–Yu Wu, Department of Environmental Engineering Sciences, University of Florida, Gainesville, FL Prinda Wanakule, Department of Agricultural and Biological Engineering Sciences, University of Florida, Gainesville, FL Matthew Blackburn, Department of Chemical Engineering, University of Florida, Gainesville, FL Samuel Farrah, Microbiology and Cell Sciences, University of Florida, Gainesville, FL Joseph Wander Air Force Research Laboratory, Tyndall AFB, Panama City, FL

10E7 3:30 **IDENTIFICATION OF BIO-AEROSOL ON-THE-FLY BY BIOLOGICAL ASSAY AND UV-LIF SPECTROSCOPY**, HERMES HUANG, Yong-Le Pan, Richard K. Chang Department of Applied Physics and Center for Laser Diagnostics, Yale University, New Haven, CT

**3:40 PM**

**Break**

Austin Grand Ballroom

**Thursday 4:00 PM**

**Session 11: Platform**

## 11A Aerosols, Clouds and Climate, II

Salon A

Jim Hudson and Andrey Khlystov, chairs

11A1 4:00 **PROCESSING OF ORGANIC POLLUTANTS BY FOGS AND CLOUDS**, JEFFREY COLLETT, JR., Sarah Youngster, Taehyoung Lee, Atmospheric Science Department, Colorado State University, Fort Collins, CO; Pierre Herckes, Chemistry Department, Arizona State University; Tempe, AZ

11A2 4:15 **ORGANIC AND INORGANIC COMPOSITION IN MARINE CLOUDS**, LYNN RUSSELL, Scripps Institution of Oceanography, La Jolla, CA; Cynthia Twohy, Oregon State University, Corvallis, OR; Monica Rivera, SciTec Inc, Princeton, NJ

11A3 4:30 **ARE ORGANIC SURFACTANTS UBIQUITOUS?**, AKUA ASA-AWUKU, Athanasios Nenes, Amy Sullivan, Chris Hennigan, Rodney Weber, Georgia Institute of Technology, Atlanta,GA; Song Gao , Richard C. Flagan, John H. Seinfeld, California Institute of Technology Pasedna, CA

11A4 4:45 **SHIP-BASED MEASUREMENTS OF THE AEROSOL BELOW THE SOUTHEASTERN PACIFIC STRATOCUMULUS DECK**, JASON TOMLINSON, Runjun Li, Don Collins, Texas A&M University, College Station, TX

11A5 5:00 **ON THE RELATIONSHIP BETWEEN F(RH) AND CLOUD CONDENSATION NUCLEI**, BARBARA ERVENS, Colorado State University/NOAA, Boulder, Colorado; Mike Cubison, CU, Boulder, CO; Betsy Andrews, CIRES/NOAA, Boulder, CO; Graham Feingold, NOAA, Boulder, CO; John A. Ogren, NOAA, Boulder CO; Jose-Luis Jimenez, CU Boulder/CIRES

11A6 5:15 **CCN ACTIVITY OF MIXED INORGANIC/ ORGANIC PARTICLES: LAB AND FIELD STUDIES**, JONATHAN ABBATT, Keith Broekhuizen, University of Toronto, Toronto, ON; Richard Leaitch, Meteorological Service of Canada, Toronto, ON

11A7 5:30 **PROPERTIES OF CLOUD CONDENSATION NUCLEI AND ICE NUCLEI IN WINTERTIME CLOUDS**, CYNTHIA TWOHY, Kathryn Bearden, Oregon State University, Corvallis, OR; Sonia Lasher-Trapp, Purdue University, West Lafayette, IN; Jorgen Jensen, National Center for Atmospheric Research, Boulder, CO

## 11B Source Sampling-Source Attribution

Salon B

Allen Robinson and Michael Hays, chairs

11B1 4:00 **EVALUATION OF A MODEL FOR PREDICTING THE FOSSIL-FUEL AND BIOGENIC CONTRIBUTIONS TO FINE PARTICULATE CARBON**, PRAKASH BHAVE, Shaocai Yu, National Oceanic and Atmospheric Administration, Research Triangle Park, NC; Charles Lewis, U.S. Environmental Protection Agency, Research Triangle Park, NC

11B2 4:15 **SOURCE CONTRIBUTIONS TO PRIMARY ORGANIC AEROSOL; COMPARISON OF THE RESULTS OF A SOURCE-RESOLVED MODEL AND THE CHEMICAL MASS BALANCE APPROACH**, TIMOTHY LANE, Robert Pinder, Manish Shrivastava, Allen L. Robinson, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA

11B3 4:30 **AN URBAN AIRPORT AS A SOURCE OF ULTRAFINE PARTICLES AND OTHER AIR POLLUTANTS FOR NEARBY COMMUNITIES**, DANE WESTERDAHL, Scott Fruin, California Air Resources Board, Sacramento, CA; Philip L. Fine, Costantinos Sioutas, University of Southern California, Los Angeles, CA

11B4 4:45 **PM 10 SOURCE APPORTIONMENT AT THREE URBAN BACK GROUND SITES IN THE WESTERN RUHR-AREA, GERMANY**, Thomas Kuhlbusch, Ulrich Quast, Klaus Schmidt, HEINZ FISSAN,IUTA e. V., Duisburg, Germany; Matthias Koch,ECOFYS, Cologne, Germany; Peter Bruckmann, Ulrich Pfeffer, State Environmental Protection Agency NRW, Germany

11B5 5:00 **CHARACTERIZATION OF GALLIUM CONTAINING PARTICLES AND IDENTIFICATION OF THEIR SOURCES DURING THE PITTSBURGH SUPERSITE EXPERIMENT: SINGLE PARTICLE ANALYSIS, PARTICLE MASS MEASUREMENTS AND GAUSSIAN PLUME DISPERSION MODELING**, KEITH J. BEIN, Yongjing Zhao, Anthony S. Wexler, University of California, Davis, CA; Natalie J. Pekney, Cliff I. Davidson, Carnegie Mellon University, Pittsburgh, PA; Murray V. Johnston, University of Delaware, Newark, DE

11B6 5:15 **USING SINGLE PARTICLE MASS SPECTRAL SOURCE SIGNATURES TO APPORTION AMBIENT PARTICLES**, LAURA G. SHIELDS, S. Toner, D. Sodeman, X. Qin, K. A. Prather, University of California, San Diego, La Jolla, CA

11B7 5:30 **SELECTION OF SOURCE PROFILES FOR CHEMICAL MASS BALANCE MODELING USING ORGANIC MOLECULAR MARKERS**, ALLEN L. ROBINSON, Neil M. Donahue, Carnegie Mellon University, Pittsburgh, PA; R. Subramian, University of Illinois, Urbana, IL; Wolfgang F Rogge, Florida International University, Miami, FL

## 11C Optical Instrumentation

Salon D

George Mullholland and Susanne Hering, chairs

11C1 4:00 **DUAL WAVELENGTH OPTICAL PARTICLE SPECTROMETER – PERFORMANCE AND ACCURACY OF A NEW APPROACH FOR OPTICAL PARTICLE MEASUREMENT**, WLADYSLAW W. SZYMANSKI, Artur Golczewski, Institute of Experimental Physics, University of Vienna, Vienna, Austria; Attila Nagy, Peter Gal, Aladar Czitrovszky, Research Institute for Solid State Physics and Optics, Hungarian Academy of Science, Budapest, Hungary

11C2 4:15 **A NANO-PARTICLE, WATER-BASED CONDENSATION PARTICLE COUNTER**, SUSANNE V. HERING, Aerosol Dynamics Inc., Berkeley, CA, Mark R. Stolzenburg, University of Minnesota, Minneapolis, MN, Frederick R. Quant, Derek R. Oberreit and Patricia B. Keady, Quant Technologies, LLC, Blaine, MN

11C3 4:30 **LASER INDUCED INCANDESCENCE APPLIED TO CARBON NANOTUBES AND NANOFIBERS**, RANDY L. VANDER WAL The National Center for Space Exploration Research (NCSER) c/o NASA-Glenn Cleveland, OH

11C4 4:45 **INTEGRATING NEPHELOMETER WITH LOW TRUNCATION ANGLE AND FAST TIME RESPONSE AND A NOVEL CALIBRATION SCHEME**, ALI ABU-RAHMAH, W. Patrick Arnott, and Hans Moosmüller, Desert Research Institute, University of Nevada System, Reno, NV

11C5 5:00 **MEASURING THE AEROSOL ASYMMETRY PARAMETER**, HANS MOOSMÜLLER and W. Patrick Arnott, Desert Research Institute, University of Nevada System, Reno, NV

11C6 5:15 **PERFORMANCE EVALUATION OF A RECENTLY DEVELOPED WATER-BASED CONDENSATION PARTICLE COUNTER**, SUBHASIS BISWAS, Philip M. Fine, Michael D. Geller, Constantinos Sioutas, University of Southern California, Department of Civil and Environmental Engineering, Los Angeles, California Susanne V. Hering, Aerosol Dynamics, Inc., Berkeley, California

11C7 5:30 **CERTIFICATION MEASUREMENTS FOR NEW 100 NM AND 60 NM NIST STANDARD REFERENCE MATERIALS**, GEORGE W. MULHOLLAND, Michelle K. Donnelly, Charles Hagwood, Scott R. Kukuck, National Institute of Standards and Technology, Gaithersburg, MD

## 11D Aviation Emissions: APEX and Related Studies Symposium, II

Salon E

Andreas Petzold and Chowen Wey, chairs

11D1 4:00 **COMPETING EFFECTS OF HYDROCARBON COMPOUNDS AND SULPHUR SPECIES ON THE CCN ACTIVATION OF COMBUSTION AEROSOL PARTICLES - RESULTS FROM THE PARTEMIS EXPERIMENT**, ANDREAS PETZOLD, Institut für Physik der Atmosphäre, Deutsches Zentrum für Luft- und Raumfahrt, Wessling, Germany Regina Hitzenberger, Institute for Experimental Physics, University of Vienna, Austria Hans Puxbaum, Institute for Chemical Technologies and Analytics, Vienna University of Technology, Austria Martin Gysel, Urs Baltensperger, Laboratory of Atmospheric Chemistry, Paul Scherrer Institute, Villigen PSI, Switzerland Xavier Vancassel, Atmospheric, Oceanic and Planetary Physics, University of Oxford, UK

11D2 4:15 **MICROPHYSICAL AND CHEMICAL PROPERTIES OF NANOPARTICLES EMITTED BY FLIGHT ENGINES**, CLAUS WAHL, German Aerospace Center - Institute of Combustion Technology, Stuttgart, Germany; Theo Rindlisbacher, Federal Office of Civil Aviation, Bern, Switzerland; Lars Hjelmberg, Hjelmco Oil AB, Sollentuna, Sweden

11D3 4:30 **CHARACTERIZATION OF AIRCRAFT ENGINE SOOT: UNIQUE PROPERTIES AND CLOUD IMPACT**, OLGA B. POPOVICHEVA, Natalia M.Persiantseva, Natalia K.Shonija, Moscow State University, Moscow, Russia;Benjamin Demirdjian, Daniel Ferry, Jean Suzanne, CRMC-N/CNRS, Marseille, France

11D4 4:45 **DETAILED CHEMICAL SPECIATION OF AIRCRAFT EXHAUST**, DAVID R. COCKER III, Aniket A. Sawant, J. Wayne Miller, University of California, Riverside

11D5 5:00 **PERFORMANCE EVALUATION FOR A FAST SCAN MOBILITY BASED PARTICULATE SPECTROMETER BASED ON THE APEX DATA SET**, DONALD HAGEN, Philip Whitefield, Prem Lobo, University of Missouri-Rolla, Rolla, MO

11D6 5:15 **MEASUREMENT OF TURBINE ENGINE PARTICULATE MASS EMISSIONS USING A TAPERED ELEMENT OSCILLATING MICROBALANCE (TEOM)**, EDWIN CORPORAN, Orvin Monroig, Propulsion Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base, OH Matthew DeWitt, David Ostdiek, Ben Mortimer, University of Dayton Research Institute, Dayton, OH

11D7 5:30 **GAS TURBINE SOOT MASS CONCENTRATION MEASUREMENTS BY LIGHT SCATTERING**, DONALD HOLVE, Jessica Chapman, Process Metrix, LLC, San Ramon, CA

## 11E Lung Deposition and Aerosol Modeling

Meeting Room 406

Chong Kim and Renee Anthony, chairs

11E1 4:00 **PARTICLE DEPOSITION MEASUREMENTS AND NUMERICAL SIMULATIONS IN FOUR PROXIMAL LUNG BIFURCATION MODELS WITH AN IDEALIZED MOUTH-THROAT**, YU ZHANG, Warren H. Finlay Department of Mechanical Engineering Aerosol Research Laboratory of Alberta University of Alberta Edmonton, Alberta, Canada

11E2 4:15 **DEPOSITION OF SPHERICAL AND FIBROUS PARTICLES IN TRACHEOBRONCHIAL REGION**, YUE ZHOU, Wei-Chung Su, Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

11E3 4:30 **DEPOSITION OF FIBER IN THE HUMAN NASAL AIRWAY**, WEI-CHUNG SU, Yung Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

11E4 4:45 **COMPUTER SIMULATION OF PARTICLE DEPOSITION IN HUMAN TRACHEOBRONCHIAL TREE WITH 3-D ASYMMETRIC BIFURCATION MODEL**, LIN TIAN, Goodarz Ahmadi, Philip K. Hopke, Clarkson University, Potsdam, NY; Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

11E5 5:00 **3D ANALYSIS OF FLOW AND NANO-SIZE PARTICLE TRANSPORT AND DEPOSITION IN A HUMAN NASAL CAVITY**, PARSA ZAMANKHAN, Goodarz Ahmadi, Department of Mechanical Engineering, Clarkson University,Philip K. Hopke, Department of Chemical Engineering, Clarkson University, Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM

11E6 5:15 **PNEUMONIC ALVEOLAR CAVITY TRANSPORT AND DEPOSITION DURING INHALATION**, IL SOO CHANG and Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY

11E7 5:30 **COMPARISON OF PARTICLE TRACKING ALGORITHMS IN COMMERCIAL CFD PACKAGES**, PAMELA SNYDER, Risa Robinson, Department of Mechanical Engineering, Rochester Institute of Technology, Rochester, NY; Mike Oldham, Department of Community and Environmental Medicine University of California, Irvine, Irvine, CA

**Friday 8:00 AM**

**Plenary Session**

Governor's Ballroom A - C

8:00 **Plenary Lecture: WHAT ARE WE LEARNING FROM FIELD MEASRUEMENTS WITH AEROSOL MASS SPECTROMETRY?**, Dr. Jose-Luis Jimenez, Department of Chemistry & Biochemistry and Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado-Boulder

9:00 **Presentation of the B. Y. H. Liu and Thomas Mercer Awards**

**9:15 AM**

**Coffee Break**

Austin Grand Ballroom

**Friday 9:30 AM**

**Session 12: Platform**

**12A Urban/Regional Aerosols, II**

Salon A

Gerald Spindler and Christian Carrico, chairs

12A1 9:30 **SIZE-SEGREGATED PHYSICAL-CHEMICAL CHARACTERIZATION OF PARTICLES IN THE URBAN BACKGROUND OF SAXONIAN LOW LANDS (GERMANY)**, GERALD SPINDLER, Erika Brüggemann, Thomas Gnauk, Achim Grüner, Hartmut Herrmann, Konrad Müller, Birgit Wehner, Leibniz-Institut für Troposphärenforschung e. V., Leipzig, Germany; Markus Wallasch, Umweltbundesamt, Dessau, Germany

12A2 9:45 **PARTICULATE PAHS AT SEOUL: EMISSIONS, AMBIENT SIZE DISTRIBUTION, AND DRY DEPOSITION**, JI YI LEE, Yong Pyo Kim, Ewha Womans University, Seoul, Korea, Chang Hee Kang, Cheju National University, Jeju, Korea

12A3 10:00 **RECONSTRUCTION OF ATMOSPHERIC PAH DEPOSITION TO PEATLANDS OF EASTERN CANADA**, Annekatrin Dreyer, MICHAEL RADKE, Christian Blodau, Department of Hydrology, University of Bayreuth, Germany; Jukka Turunen, Geological Survey of Finland (GTK), Kuopio Unit, P.O.Box 1237 (Neulaniementie 5), 70211 Kuopio, Finland

12A4 10:15 **PROPERTIES OF SIBERIAN FOREST FIRE SMOKE OBSERVED AT THE SUMMIT OF MT. FUJI (3776M), JAPAN**, NAOKI KANEYASU, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan; Yasuhito Igarashi, Meteorological Research Institute, Tsukuba, Japan; Hideshige Takada, Tokyo University of Agriculture and Technology, Fuchu, Japan; Robert Holler, Federal Environment Agency, Vienna, Austria

12A5 10:30 **SOURCE COMPARISONS OF PM2.5 MEASURED AT THE SPECIATION TRENDS NETWORK SITES ACROSS US**, EUGENE KIM, Philip Hopke, Clarkson University, Potsdam, NY

12A6 10:45 **GASEOUS AND PARTICULATE POLLUTANT TRANSPORT IN STREET CANYONS - A THREE-DIMENSIONAL MODELING STUDY**, KAMBIZ NAZRIDOUST, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam NY 13699-5725

### 12B Organic Aerosol Chemistry

Salon B

Katherine Heaton and Med Jaoui, chairs

12B1 9:30 **DETAILED ANALYSIS OF SECONDARY ORGANIC AEROSOL ORIGINATING FROM THE PHOTOOXIDATION OF D-LIMONENE IN THE PRESENCE OF NOX AND ARTIFICIAL LIGHT AND ITS IMPLICATION TO AMBIENT PM2.5**, M. JAOUI, Alion Science and Technology, Inc. Research Triangle Park, NC; T. E. Kleindienst, M. Lewandowski, J. Offenberg, E. O. Edney. National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC

12B2 9:45 **INVESTIGATIONS OF HETEROGENEOUS REACTIONS OF UNSATURATED FATTY ACIDS AND OZONE USING RAMAN SPECTROSCOPY OF SINGLE LEVITATED PARTICLES**, KING YIN LEE and Chak K. Chan, Department of Chemical Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong

12B3 10:00 **COMPUTATIONALLY EFFICIENT ACTIVITY COEFFICIENT ESTIMATION METHOD FOR USE IN LARGE-SCALE ATMOSPHERIC MODELING**, ELSA I. CHANG and James F. Pankow, Oregon Health & Science University, Department of Environmental & Biomolecular Systems, Beaverton, OR, USA.

12B4 10:15 **MODELING THE FORMATION OF HYDROPHILIC AND HYDROPHOBIC SECONDARY ORGANIC AEROSOLS FROM ANTHROPOGENIC AND BIOGENIC PRECURSORS**, BETTY PUN, Christian Seigneur, Atmospheric and Environmental Research, Inc., San Ramon, CA

12B5 10:30 **CHEMICAL REACTIONS AND ORGANIC AEROSOL: A UNIFIED FRAMEWORK**, NEIL M. DONAHUE, Allen L. Robinson, Kara E. Huff Hartz, Amy M. Sage, Emily A. Weitkamp, Carnegie Mellon University, Pittsburgh, PA

12B6 10:45 **MODELING OF SURFACE REACTIONS ON CARBONACEOUS ATMOSPHERIC PARTICLES DURING A WOOD SMOKE EPISODE IN HOUSTON, TEXAS**, UARPORN NOPMONGCOL, David T. Allen, Department of Chemical Engineering, University of Texas at Austin, Austin, TX Birnur Buzcu, Zhiwei Yue, Matthew Fraser, Department of Civil and Environmental Engineering, Rice University, Houston, TX

### 12C Indoor Aerosols, II

Salon D

Mark Sippola and Jonathan Thornburg, chairs

12C1 9:30 **INDOOR/OUTDOOR POLLUTION TRANSPORT AND INTERACTIONS – A LARGE EDDY SIMULATION**, KAMBIZ NAZRIDOUST, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY

12C2 9:45 **EFFECT OF IONIC AIR CLEANERS ON INDOOR-TO-OUTDOOR PARTICLE RATIOS IN RESIDENTIAL ENVIRONMENTS**, DAVID BERRY, Gediminas Mainelis, Donna Fennell, Rutgers University, New Brunswick, NJ

12C3 10:00 **IDENTIFICATION, CLASSIFICATION AND CORRELATION OF ULTRAFINE INDOOR AIRBORNE PARTICULATE MATTER WITH OUTDOOR VALUES**, NICK FACCIOLA, Iain Elliott, Darin Toohey, John Zhai, Shelly Miller, University of Colorado at Boulder

12C4 10:15 **FINE PARTICLE FORMATION RESULTING FROM CLEANING PRODUCTS AND AIR FRESHENERS IN THE PRESENCE OF OZONE**, Hugo Destaillats, Melissa Lunden, Brett Singer, Albert Hodgson, Lawrence Berkeley National Laboratory, Berkeley, CA; BEVERLY COLEMAN, William Nazaroff, University of California, Berkeley, CA; Charles Weschler, Rutgers University, NJ and Technical University of Denmark

12C5 10:30 **PARTICLE DEPOSITION ON HVAC HEAT EXCHANGERS**, JEFFREY SIEGEL, Department of Civil, Environmental, and Architectural Engineering, The University of Texas at Austin, Austin, TX

12C6 10:45 **FORMATION OF NANOPARTICLES IN INDOOR AIR AT AN INCREASED OZONE LEVEL**, SERGEY A. GRINSHPUN, Mika Toivola, Shu-Ann Lee, Tiina Reponen, University of Cincinnati, Cincinnati, OH

### 12D Aerosol Synthesis/Nucleation

Salon E

Philip Hopke and Amy Sage, chairs

12D1 9:30 **CHEMICAL VAPOR DEPOSITION OF GROUP IV OXIDES ON AEROSOLIZED SILICON NANOPARTICLES**, Amanda Nienow, Ying-Chih Liao, JEFFREY ROBERTS, Department of Chemistry, University of Minnesota, Minneapolis, MN

12D2 9:45 **GENERATION OF TAILORED MICROPARTICLES BY PHOTOPOLYMERIZATION OF MONODISPERSE DROPLETS**, Zhiqiang Gao, ASIT K. RAY, Department of Chemical Engineering, University of Kentucky, Lexington, KY

12D3 10:00 **FUNDAMENTAL APPROACH TO CORRECT THE HOMOGENEOUS NUCLEATION THEORY**, Igor S. ALTMAN, National CRI Center for Nano Particle Control, Seoul National University, Seoul, Korea; School of Environmental Engineering, Griffith University, Brisbane, QLD, Australia; Igor E. Agranovski, School of Environmental Engineering, Griffith University, Brisbane, QLD, Australia; Mansoo Choi, National CRI Center for Nano Particle Control, Seoul National University, Seoul, Korea

12D4 10:15 **ION-INDUCED NUCLEATION: DIPOLE-CHARGE ORIENTATION, SIGN PREFERENCE AND CHEMISTRY EFFECT**, ALEXEY NADYKTO, Fangqun Yu, Atmospheric Sciences Research Center, State University of New York at Albany, Albany, USA

12D5 10:30 **EXPERIMENTAL DETERMINATION OF THE EQUILIBRIUM VAPOR PRESSURE CURVE OF ARGON BELOW THE TRIPLE POINT**, AMEWU MENSAH, Jan Wedekind, Reinhard Strey, Judith Wölk, Universität zu Köln, Cologne, Germany

12D6 10:45 **THERMAL PLASMA SYNTHESIS OF ALUMINUM NANOPARTICLES**, BIN ZHANG, Bo Liu, Steven L. Girshick, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN

### 12E Aerosols and Health Effects, II

Meeting Room 406

Costas Sioutas and Gediminas Mainelis, chairs

12E1 9:30 **FE(II) IN PARTICULATE MATTER: ITS ENVIRONMENTAL HEALTH IMPLICATION AND AN ORIGIN IN COMBUSTION**, BING GUO, Ian M. Kennedy, University of California, Davis, CA

12E2 9:45 **TOTAL DEPOSITION OF INHALED PARTICLES IN THE RESPIRATORY TRACT OF HEALTHY ADULTS: A UNIFYING EMPIRICAL RELATIONSHIP WITH PARTICLE SIZE AND BREATHING PATTERN**, CHONG S. KIM, National Health and Environmental Effects Research Laboratory, US EPA, Research Triangle Park, NC; Shu-Chieh Hu, IIT Research Institute, Chicago, IL; Peter Jaques, Clarkson University, Potsdam, NY

12E3 10:00 **3-D CFD STUDY OF THE DYNAMICS OF A MEDICAL-AEROSOL HOOD INHALER**, Tal Shakked, David Katoshevski, Department of Biotechnology and Environmental Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel; David M. Broday, Faculty of Civil and Environmental Engineering Technion – Israel Institute of Technology, Haifa, Israel; Israel Amirav, Pediatric Department, Sieff Hospital, Safed, Israel

12E4 10:15 **INFLAMMATORY RESPONSE OF HUMAN AORTIC ENDOTHELIAL CELLS INDUCED BY METAL OXIDE NANOPARTICLES**, BING GUO, Ian M. Kennedy, Andrea Gojova, Abdul Barakat, University of California, Davis, CA

12E5 10:30 **RESPONSES OF SELECTED BIOLOGICAL MODELS TO MANUFACTURED NANOPARTICLES**, M.-D. Cheng, D. K. Thompson, B. H. Voy, D. K. Johnson, and B. Malone, Oak Ridge National Laboratory, POBox 2008, MS 6038, Oak Ridge, TN

12E6 10:45 **GENERATION OF DIESEL EXHAUST FOR HUMAN EXPOSURE**, DAVID R. COCKER III, Aniket A. Sawant, J. Wayne Miller, Tony Taliaferro, University of California, Riverside, CA; David Diaz-Sanchez, University of California, Los Angeles, CA; Henry Gong Jr., William S. Linn, Kenneth W. Clark, Los Amigos Research and Education Institute, Downey, CA

**11:00 AM**

**Coffee Break**

Austin Grand Ballroom

**Friday 11:15 AM**

**Session 13: Platform**

**13A Urban/Regional Aerosols, III**

Salon A

Ralph Morris and Eugene Kim, chairs

13A1 11:15 **DETERMINATION OF PARTICLE EFFECTIVE DENSITY IN URBAN ENVIRONMENTS WITH AN ELECTRICAL LOW PRESSURE IMPACTOR AND SCANNING MOBILITY PARTICLE SIZER**, MICHAEL GELLER, Subhasis Biswas, Constantinos Sioutas, University of Southern California, Los Angeles, California, USA; Henna Tuomenoja, Dekati Ltd., Tampere, Finland.

13A2 11:30 **URBAN-SCALE DIFFERENCES IN AEROSOL CONCENTRATION IN HAIFA, ISRAEL**, DAVID M. BRODAY, Nurit Hirshel, Tal Frieman, Faculty of Civil & Environmental Eng., Technion, Haifa, Israel

13A3 11:45 **IMPLEMENTATION OF A BAYESIAN INVERSE METHOD TO INORGANIC AEROSOL MODELING: MEXICO CITY METROPOLITAN AREA CASE STUDY**, FEDERICO M SAN MARTINI, Jose M. Ortega, Gregory J. McRae, Luisa T. Molina, Mario J. Molina, Massachusetts Institute of Technology, Cambridge, MA Edward Dunlea, Katja Dzepina, Jose-Luis Jimenez , University of Colorado - Boulder, Boulder, CO Joanne H. Shorter, Manjula R. Canagaratna, Scott C. Herndon, Timothy B. Onasch, John T. Jayne, Mark S. Zahniser, Douglas R. Worsnop, Charles E. Kolb, Aerodyne Research, Inc., Billerica, MA Dara Salcedo, Universidad Autónoma del Estado de Morelos, Cuernavaca, México Nancy A. Marley and Jeffrey S. Gaffney, Argonne National Laboratory, Argonne, IL Michel Grutter, National Autonomous University of Mexico, Mexico City, Mexico

13A4 12:00 **THE ORIGIN OF WATER SOLUBLE PARTICULATE IRON IN THE ASIAN ATMOSPHERIC OUTFLOW**, P. Y. CHUANG, University of California Santa Cruz, Santa Cruz, CA; R. M. Duvall, M. M. Shafer, J. J. Schauer, University of Wisconsin-Madison, Madison, WI

13A5 12:15 **SOURCE APPORTIONMENT OF ALPHA–PINENE PHOTOOXIDATION PRODUCTS IN DUKE FOREST, NORTH CAROLINA**, Matthew P. Fraser, SHAGUN BHAT, Civil and Environmental Engineering Department, Rice University, Houston, TX

13A6 12:30 **TEMPORAL VARIATIONS OF ELEMENTAL CARBON IN TOKYO**, YUTAKA KONDO, Yuichi Komazaki, Yuzo Miyazaki, Nobuhiro Moteki, Michimori Nogami, Nobuyuki Takegawa, Seiji Deguchi, Masato Fukuda, Takuma Miyakawa, Yu Morino, Daisuke Kodama, Research Center for Advanced Science and Technology, University of Tokyo, Tokyo, Japan

## 13B Optical Properties

Salon B

Jay Turner and Charity Coury, chairs

13B1 11:15 **BUILDUP OF AEROSOL LOADING OVER THE INDIA OCEAN DURING THE MONSOON TRANSITION.**, CRAIG CORRIGAN, V. Ramanathan, Scripps Institution of Oceanography, La Jolla, CA J. Schauer, University of Wisconsin, Madison, WI G. Carmichael, University of Iowa, Iowa City, IA

13B2 11:30 **IN-SITU MEASUREMENTS OF AEROSOLS FROM MOTOR VEHICLES IN THE CALDECOTT TUNNEL**, A.G. Hallar, A.W. Strawa, , K. Bokarius, NASA AMES Research Center; T.W. Kirchstetter,Lawrence Berkeley National Laboratory; R. A. Harley, University of California Berkeley

13B3 11:45 **OPTICAL SATURATION EFFECTS ON AETHALOMETER RESPONSE**, Bradley Goodwin, JAY TURNER, Washington University, St. Louis, MO

13B4 12:00 **HOW BIOGENIC EMISSIONS AFFECT AEROSOL CONCENTRATIONS AND RADIATIVE FORCING IN THE MEDITERRANEAN AREA**, RAFAELLA - ELENI P. SOTIROPOULOU, Efthimios Tagaris, Chris Pilinis, University of the Aegean, Dept. of Environment, Mytilene, Greece

13B5 12:15 **OPTICAL PROPERTIES OF ASIAN OUTFLOW AEROSOLS MEASURED ON AN ISLAND (CHICHI-JIMA) IN THE WESTERN PART OF NORTH PACIFIC OCEAN**, NAOKI KANEYASU, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan; Masataka Shiobara, National Institute of Polar Research, Japan; Toshiyuki Murayama, Tokyo University of Marine Science and Technology, Tokyo, Japan

13B6 12:30 **ANNUAL APPLICATION OF REGIONAL PARTICULATE MATTER PHOTOCHEMICAL GRID MODELS TO THE CENTRAL US TO SUPPORT THE REQUIREMENTS OF THE REGIONAL HAZE RULE**, RALPH MORRIS, Bonyoung Koo, Gerard Mansell and Greg Yarwood, ENVIRON International Corporation, Novato, CA; Gail Tonnesen, Chao-Jung Chien and Mohammed Omary, University of California at Riverside, Riverside, CA

## 13C Mass Spectrometry Instrumentation

Salon D

Jim Smith and Eugene Kim, chairs

13C1 11:15 **REAL-TIME MEASUREMENT OF THE MASS AND COMPOSITION OF PARTICLES**, KENNETH C. WRIGHT, Peter T. A. Reilly, and William B. Whitten. Oak Ridge National Laboratory, Oak Ridge, TN

13C2 11:30 **LIBS FOR QUANTITATIVE ANALYSIS OF AEROSOLS**, DAVID W. HAHN, Vince Hohreiter, University of Florida, Gainesville, FL

13C3 11:45 **AEROSOL MALDI MASS SPECTROMETRY FOR ANALYSIS OF BIOAEROSOL**, M.A. STOWERS, J.C.M. Marijnissen, W.A. Kleefsman, Delft University of Technology A. L. van Wuijckhuijse, Ch.E. Kientz, O. Kievit, TNO Prins Maurits Laboratory

13C4 12:00 **MASS SPECTROMETRY OF INDIVIDUAL SUB-10 NM DIAMETER PARTICLES AND MOLECULES**, Shenyi Wang and MURRAY JOHNSTON, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE

13C5 12:15 **REAL-TIME MEASUREMENT OF ELEMENTAL COMPOSITION OF AEROSOLS – BEYOND LIBS**, M.-D. Cheng and R. W. Smithwick, III, Oak Ridge National Laboratory, PO Box 2008, MS 6038, Oak Ridge, TN

13C6 12:30 **CHARACTERIZING THE ORGANIC COMPONENT OF ULTRAFINE AEROSOL USING TEMPERATURE-PROGRAMMED THERMAL DESORPTION CHEMICAL IONIZATION MASS SPECTROMETRY**, MATTHEW J. DUNN, University of Colorado and National Center for Atmospheric Research, Boulder, CO; James N. Smith, Katharine F. Moore, Hans R. Friedli, Fred L. Eisele, National Center for Atmospheric Research, Boulder, CO; Peter H. McMurry, University of Minnesota, Minneapolis, MN; Jose-Luis Jimenez, University of Colorado, Boulder, CO

## 13D Combustion Particle Measurement And Evaluation

Salon E

John Veranth and Matti Maricq, chairs

13D1 11:15 **DEFINITION, QUANTIFICATION AND IMPLICATIONS OF SOOT NANOSTRUCTURE**, RANDY L. VANDER WAL, The National Center for Space Exploration Research, (NCSER) c/o NASA-Glenn, Cleveland OH

13D2 11:30 **RELATIVE EMISSIONS IMPACTS OF IN-USE AND EXPERIMENTAL DIESEL FUELS**, ANIKET A. SAWANT, Abhilash Nigam, Thomas D. Durbin, J. Wayne Miller, David R. Cocker III, University of California, Riverside, CA

13D3 11:45 **POLYCYCLIC AROMATIC HYDROCARBONS IN DIESEL PARTICULATE MATTER**, DABRINA D DUTCHER, David B Kittelson, Peter H McMurry– Mechanical Engineering, University of Minnesota, Minneapolis MN

13D4 12:00 **COMPARISON BETWEEN SULFATE AND HYDROCARBON DRIVEN NANOPARTICLE FORMATION PROCESSES IN DIESEL EXHAUST**, JYRKI MÄKELÄ, Kati Vaaraslahti, Topi Rönkkö, Mikko Lemmetty, Jyrki Ristimäki, Annele Virtanen and Jorma Keskinen, Tampere University of Technology, Tampere, Finland

13D5 12:15 **EFFECTS OF PERFORATED TUBE DILUTION IN COMBUSTION AEROSOL STUDIES**, ERKKI LAMMINEN, Pirita Mikkanen, Dekati Ltd., Tampere, Finland; Jouni Pyykönen, VTT Prosessit, Helsinki, Finland; Jyrki Ristimäki, Jorma Keskinen, Tampere University of Technology, Tampere, Finland; Mirella Miettinen, Jorma Jokiniemi, University of Kuopio, Kuopio, Finland

13D6 12:30 **MEASUREMENT OF SOOT PARTICLE SIZE DISTRIBUTIONS FROM A WELL STIRRED REACTOR-PLUG FLOW REACTOR**, Lenhert, D., National Institute of Standards and Technology Donovan, M., National Institute of Standards and Technology Mulholland, G.W., National Institute of Standards and Technology Yozgatligil, A., University of Maryland Zachariah, M., University of Maryland

## 13E Aerosol Measurement Techniques

Meeting Room 406

Michael Hannigan and Delbert Eatough, chairs

13E1 11:15 **INTRA-COMMUNITY SPATIAL VARIATION OF SIZE-FRACTIONATED PM MASS, OC, EC AND ELEMENTS IN LONG BEACH, CA**, MARGARET KRUDYSZ, John Froines, University of California, Los Angeles, CA; Constantinos Sioutas, Philip M. Fine, University of Southern California, Los Angeles, CA

13E2 11:30 **CLOSURE BETWEEN SEMI-CONTINUOUS MEASUREMENT OF PM2.5 MASS AND COMPOSITION**, DELBERT J. EATOUGH, Brett D. Grover, Justin Cannon and Norman L. Eatough, Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT

13E3 11:45 **MEASUREMENT EQUIVALENCE AND COMPARABILITY BETWEEN FILTER-BASED DATA AND SEMI-CONTINUOUS PM2.5 SPECIATION MONITORS FOR CARBON, SULFATE, AND NITRATE**, Paul Roberts, Hilary Hafner, David Vaughn; Sonoma Technology, Inc, Petaluma, CA

13E4 12:00 **COLLECTION AND CHARACTERIZATION OF COARSE, FINE, AND ULTRAFINE PARTICULATE MATTER USING AN INNOVATIVE PASSIVE AIR SAMPLER**, DAVID LEITH, University of North Carolina, Chapel Hill, NC; Jeff Wagner, California Department of Health, Berkeley, CA; Tom Peters, University of Iowa, Iowa CIty, IA; Gary Casuccio,RJ Lee Group, Pittsburg,PA; Tom Merrifield, BGI Instruments, Waltham,MA

13E5 12:15 **IMPROVED DETECTION OF ORGANIC COMPOUNDS WITH THE USE OF PTV-GC-MS**, MICHAEL P HANNIGAN, Steven J Dutton, Catherine A Vos, University of Colorado, Boulder, CO; Gregory K Brown, Larry B Barber, United States Geological Survey, Boulder, CO

13E6 12:30 **A VIRTUAL CYCLONE CONCENTRATOR FOR DIFFERENTIAL AEROSOL PASSBAND SAMPLING**, DAVID ALBURTY, Pamela Murowchick, Jason Downing, James Balarashti, Midwest Research Institute, Kansas City, MO