AAAR ’04 Annual Conference

SUNDAY, OCTOBER 03, 2004
5:00 PM – 9:00 PM
Registration
TBA Student Orientation

MONDAY, OCTOBER 04, 2004
7:00 AM – 8:00 PM
Registration
8:00 AM – 9:40 AM
Tutorials 1-4
10:00 AM – 11:40 AM
Tutorials 5-8
12:00 PM – 5:00 PM
Exhibitor Set Up
12:00 PM – 5:00 PM
Poster #1 Set-Up
1:00 PM – 2:40 PM
Tutorials 9-12
3:00 PM – 4:40 PM
Tutorials 13-16
6:00 PM – 8:00 PM
Exhibits & Poster #1 Sneak Peek & Welcome Reception

TUESDAY, OCTOBER 05, 2004
7:00 AM – 6:30 PM
Registration
8:00 AM – 9:00 AM
Plenary Session #1
RECENT ASPECTS OF INHALED PARTICLES DOSIMETRY, Wolfgang G. Kreyling,
GSF-National Research Center for Environment & Health, Institute for Inhalation
Biology, Network Focus Aerosols and Health, Neuherberg- Munich, Germany.
9:00 AM – 6:30PM
Exhibits and Posters Open

TUESDAY, OCTOBER 05, 2004
9:20 AM – 10:50 AM
Platform Session 1

9:20 AM – 10:50 AM
1A. Special Symposia: Microdosimetry & Targeting of Inhaled Particles and Drug
Aerosols, Microdosimetry Assessment: mathematical and computational models

1A1 MICRODOSIMETRIC COMPARISONS FOR PARTICLES IN ANIMALS AND
HUMANS: AN OVERVIEW OF CURRENT KNOWLEDGE AND FUTURE NEEDS,
F. Miller, CIIT Centers for Health Research.

1A2 MICRODOSIMETRY IN A RHYTHMICALLY EXPANDING 3-DIMENSIONAL
ALVEOLAR MODEL, AKIRA TSUDA, Physiology Program, Harvard School of Public
Health, Boston, MA; Shimon Haber, Department of Mechanical Engineering, Technion,
Haifa, Israel.

1A3 COMPUTATIONAL ANALYSIS OF MICRO- AND NANO- PARTICLE
DEPOSITION IN HUMAN TRACHEOBRONCHIAL AIRWAYS, ZHE ZHANG,
Clement Kleinstreuer, Department of Mechanical and Aerospace Engineering, North
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Carolina State University, Raleigh, NC; Chong S. Kim, National Health and Environmental Effects Research Laboratory, US EPA, Research Triangle Park, NC.

1A4 A COMPUTATIONAL MODEL OF PARTICLE DEPOSITION IN A HUMAN NOSE COMPARED WITH MEASUREMENTS IN A NASAL REPLICA, BRIAN WONG, Bahman Asgharian, Julia Kimbell, CIT Centers for Health Research, Research Triangle Park, NC; James Kelly, UC Davis, Davis, CA.

1PA POSTER PREVIEW, This session ends with a brief presentation of posters from Session IPA(one minute each).

9:20 AM – 10:50 AM

1B. Instrumentation

1B1 A LAMINAR-FLOW, WATER-BASED CONDENSATION PARTICLE COUNTER, SUSANNE V. HERING and Mark R. Stolzenburg, Aerosol Dynamics Inc., Frederick R. Quant and Derek Oberreit, Quant Technologies, LLC.

1B2 EXTERNAL TO THE TRAP VAPORIZATION AND IONIZATION FOR REAL-TIME QUANTITATIVE PARTICLE ANALYSIS, PETER T. A. REILLY, William A. Harris, Kenneth C. Wright, William B. Whitten, J. Michael Ramsey, Oak Ridge National Laboratory, Oak Ridge, TN.

1B3 PARTICLE DETECTION EFFICIENCIES OF AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER DURING THE NORTH ATLANTIC MARINE BOUNDARY LAYER EXPERIMENT (NAMBLEX), MANUEL DALL’OSTO, Roy M. Harrison, David C. S. Beddows, Robert P. Kinnesley, Division of Environmental Health and Risk Management, University of Birmingham, Edgbaston, Birmingham, B15 2TT, U.K. (Manuel Dall’Osto, md266@bham.ac.uk); Evelyn J. Freney, Mat R. Heal, Robert J. Donovan, School of Chemistry, University of Edinburgh, West Mains Road, Edinburgh, EH9 3JJ, U.K.

1B4 MAPPING THE PERFORMANCE OF A NEW CONTINUOUS-FLOW CCN COUNTER, SARA LANCE, Jeessy Medina, Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA; Gregory Roberts, Scripps Institution of Oceanography, La Jolla, CA.

1PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session IPB(one minute each).

9:20 AM – 10:50 AM

1C. Aerosol Chemistry I

1C1 THE STRUCTURE OF BINARY NANODROPLETS FROM SMALL ANGLE NEUTRON SCATTERING EXPERIMENTS, BARBARA WYSLOUZIL, The Ohio State University, Columbus, OH; Gerald Wilemski, University of Missouri - Rolla, Rolla, MO; Reinhard Strey, Universitaet zu Koeln, Koeln, Germany.

1C2 A NEW TECHNIQUE FOR ESTIMATING THE PRIMARY AND OXYGENATED ORGANIC AEROSOL MASS CONCENTRATIONS AND SIZE DISTRIBUTIONS WITH HIGH TIME RESOLUTION BASED ON AEROSOL MASS SPECTROMETRY, QI ZHANG, Jose L. Jimenez, University of Colorado-Boulder, CO; M. Rami Alfarra, James D. Allan, Hugh Coe, The University of Manchester, UK; Douglas R. Worsnop, Manjula R. Canagaratna, Aerodyne Research Inc, MA.

1C3 EVIDENCE OF POLYMERISATION AND OXIDATION OF SECONDARY ORGANIC AEROSOLS FORMED FROM ANTHROPOGENIC AND BIOGENIC PRECURSORS IN A SMOG CHAMBER USING AN AERODYNE AEROSOL MASS SPECTROMETER, M. RAMI ALFARRA, Hugh Coe School of Earth Atmospheric and Environmental Science; Sackville St.; Manchester M60 1QD; UK Dwane Paulsen, Josef
Dommen, Andre S.H. Prevot, Urs Baltensperger Laboratory of Atmospheric Chemistry, Paul Scherrer Institute, CH-5232 Villigen PSI, Switzerland.

1C4 VAPOR PRESSURES OF CARBOXYLIC ACIDS IN SOLID AND LIQUID MATRICES MEASURED USING A THERMAL DESORPTION PARTICLE BEAM MASS SPECTROMETER, SULEKHA CHATTOPADHYAY, Paul Ziemann, Air Pollution Research Center, University of California, Riverside, CA.

1PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 1PC(one minute each).

9:20 AM – 10:50 AM

1D. Special Symposium: Aerosols and Climate Change/Indirect Effects, Cloud Droplet Interactions

1D1 PARAMETERIZATION OF CLOUD DROplet FORMATION IN GLOBAL CLIMATE MODELS: LINKING ACTIVATION WITH COLLISION-COALESCEENCE PROCESSES., ATHANASIOS NENES, Georgia Institute of Technology.

1D2 SENSITIVITY OF CCN ACTIVATION TO KINETIC PARAMETERS, PATRICK CHUANG, UC Santa Cruz, Santa Cruz, CA.

1D3 EVALUATION OF A NEW CLOUD DROPLET FORMATION PARAMETERIZATION WITH IN-SITU DATA FROM NASA CRYSTAL-FACE AND CSTRIPRE, NICHOLAS MESKHIDZE, Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA; Athanasios Nenes, Earth and Atmospheric Science and Chemical and Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA; William C. Conant, John H. Seinfeld, Departments of Environmental Science and Engineering and Chemical Engineering, California Institute of Technology, Pasadena, CA.

1D4 MEASUREMENTS OF WINTERTIME CLOUD-AEROSOL INTERACTIONS AT THE JUNGFRAUJOCH MOUNTAIN-TOP SITE IN THE SWISS ALPS, KEITH BOWER, Michael Flynn, Martin Gallagher, James Allan, Jonathon Crosier, Thomas Choularton, Hugh Coe, Rachel Burgess, The Physics Department, UMIST, PO Box 88, Sackville Street, Manchester M60 1QD, United Kingdom, Urs Baltensperger, Ernerst Weingartner, Laboratory of Atmospheric Chemistry Paul Scherrer Institut (PSI), 5232 Villigen, Switzerland, Stephan Mertes, Institut fur Tropospharenforschung (IFT), Leipzig, Germany, Johannes Schneider, Max-Plank-Institut fur Chemie (MPI), Mainz, Germany.

1PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 1PD(one minute each).

9:20 AM – 10:50 AM

1E. Source/Emissions Characterization 1

1E1 SOURCE CONTRIBUTIONS TO THE REGIONAL DISTRIBUTION OF SECONDARY PARTICULATE MATTER IN CALIFORNIA, QI YING, Anthony Held, Michael J. Kleeman, University of California, Davis CA.

1E2 SOURCE APPORTIONMENT OF PRIMARY ORGANIC CARBON IN THE PITTSBURGH REGION USING MOLECULAR MARKERS AND DIFFERENT RECEPTOR MODELS, R Subramanian, ALLEN ROBINSON, Carnegie Mellon University, Pittsburgh, PA; Anna Bernardo-Bricker, Wolfgang Rogge, Florida International University, Miami, FL.

1E3 ASSESSMENT OF SOURCE CONTRIBUTIONS TO URBAN AMBIENT PM2.5 IN DETROIT, MICHIGAN, MASAKO MORISHITA, Gerald J. Keeler, Frank J. Marsik, J. Timothy Dvonch, Li-Hao Young, Ali S. Kamal, The University of Michigan, Ann Arbor, MI; James G. Wagner, Jack R. Harkema, Michigan State University, East Lansing, MI.
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1E4 TRANSPORT OF AIR POLLUTANTS TO TONTO NATIONAL MONUMENT: A 13 YEAR HISTORICAL STUDY OF AIR TRAJECTORY AND AEROSOL CLUSTER ANALYSIS, CHARITY COURY, Ann Dillner, Department of Chemical and Materials Engineering and Department of Civil and Environmental Engineering, Arizona State University, Tempe, AZ.

1PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 1PE(one minute each).

TUESDAY, OCTOBER 05, 2004

11:10 AM – 12:40 PM Platform Session 2

11:10 AM – 12:40 PM

2A. Special Symposia: Microdosimetry & Targeting of Inhaled Particles and Drug Aerosols, Microdosimetry Assessment: mathematical and computational models

2A1 DOSIMETRIC CONCEPTS OF PARTICLE LUNG INTERACTIONS, WOLFGANG G. KREYLING Manuela Semmler Winfried Möller Francesca Alessandrini Shinji Takenaka Holger Schulz.

2A2 DEPOSITION OF SPHERICAL AND FIBER AEROSOLS IN HUMAN ORAL AND UPPER TRACHEOBRONCHIAL AIRWAYS, YUNG SUNG CHENG, Wei-Chung Su, Yue Zhou, Lovelace Respiratory Research Institute, Albuquerque, NM.

2A3 MICRODOSIMETRY OF METHACHOLINE REVEALS INTERPLAY OF MORPHOLOGY AND PHYSIOLOGY IN PULMONARY HYPERSENSITIVITY, OWEN MOSS, Earl Tewksbury, CIIT Centers for Health Research, Research Triangle Park, NC, Michael DeLorme, DuPont Haskell Laboratory, Newark, DE.

2A4 SEQUENTIAL TARGETED BOLUS DELIVERY METHOD FOR ASSESSING REGIONAL DEPOSITION DOSE IN HUMAN LUNGS, CHONG S. KIM, US EPA National Health and Environmental Effects Research Laboratory, RTP, NC; Shu-Chieh Hu, IIT Research Institute, Chicago, IL.

2PA POSTER PREVIEW, This session ends with a brief presentation of posters from Session 2PA(one minute each).

11:10 AM – 12:40 PM

2B. Mobility Sizing Instrumentation

2B1 DEVELOPMENT OF A MULTIPLE-STAGE DMA, Weiling Li and DA-REN CHEN, Department of Mechanical Engineering, Joint Program in Environmental Engineering Science, P.O. Box 1185, Washington University in St. Louis, St. Louis, MO.


2B3 A FAST SCAN SMPS FOR TRANSIENT SIZE DISTRIBUTIONS OF PARTICULATE MATTER EMITTED FROM DIESEL VEHICLES, SANDIP SHAH, David Cocker, University of California, Riverside, CA.

2B4 CHARACTERIZING PARTICLE MORPHOLOGY AND DENSITY BY COMBINING MOBILITY AND AERODYNAMIC DIAMETER MEASUREMENTS WITH APPLICATION TO PITTSBURGH SUPERSITE DATA, PETER F. DECARLO, Qi Zhang, Jose L. Jimenez, University of Colorado at Boulder; Douglas R. Worsnop, Aerodyne Research Inc.; Jay Slowik, Paul Davidovits, Boston College.
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2PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 2PB(one minute each).

11:10 AM – 12:40 PM

2C. Aerosol Chemistry II

2C1 FORMATION OF SECONDARY ORGANIC AEROSOL FROM THE REACTION OF STYRENE WITH OZONE IN THE PRESENCE AND ABSENCE OF AMMONIA AND WATER, KWANGSAM NA, Chen Song, David Cocker, University of California, Riverside, CA.

2C2 A MODEL FOR PREDICTING ACTIVITY COEFFICIENTS OF NEUTRAL COMPOUNDS IN LIQUID PARTICULATE MATTER CONTAINING ORGANIC COMPOUNDS, WATER, AND DISSOLVED INORGANIC SALTS, GARNET B. ERDAKOS, James F. Pankow, OGI School of Science & Engineering at OHSU, Department of Environmental and Biomolecular Systems, Beaverton, OR; John H. Seinfeld, California Institute of Technology, Department of Chemical Engineering, Pasadena, CA.

2C3 HETEROGENEOUS CONVERSION OF CARBONATE AEROSOL IN THE ATMOSPHERE: EFFECTS ON CHEMICAL AND OPTICAL PROPERTIES, Amy Preszler Prince, Paul Kleiber, Vicki H. Grassian, MARK A. YOUNG Department of Chemistry, Department of Physics and Astronomy, Optical Science and Technology Center, Center for Global and Regional Environmental Research, University of Iowa, Iowa City, IA 52242.

2C4 EFFECT OF DMSO ON IRON SPECIATION IN PHOTOCHEMICAL SIMULATION EXPERIMENTS, ANNE M. JOHANSEN, Jennifer M. Key, Central Washington University, Ellensburg, WA.

2PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 2PC(one minute each).

11:10 AM – 12:40 PM

2D. Special Symposium: Aerosols and Climate Change/Indirect Effects, Modeling of Indirect Effects

2D1 GACP AEROSOL CLIMATOLOGY: STATUS AND PRELIMINARY COMPARISON WITH MODIS AND MISR, IGOR GEOGDZHAYEV, Columbia University/NASA GISS, Michael Mishchenko, NASA Goddard Institute for Space Studies, Li Liu, Columbia University/NASA GISS.

2D2 GFDL GCM SIMULATIONS OF THE INDIRECT RADIATIVE EFFECTS OF AEROSOLS, YI MING, V. Ramaswamy, Geophysical Fluid Dynamics Laboratory, Princeton, NJ.


2D4 A COMPARISON OF AEROSOL OPTICAL PROPERTY MEASUREMENTS MADE DURING THE DOE AEROSOL INTENSIVE OPERATING PERIOD AND THEIR EFFECTS ON REGIONAL CLIMATE, A. W. STRAWA, A.G. Hallar, NASA Ames Research Center; Mail Stop 245-4, Moffett Field, CA W.P. Arnott, Atmospheric Science Center, Desert Research Institute, 2215 Raggio Parkway, Reno NV D. Covert, R. Elleman, Department of Atmospheric Science, University of Washington, 408 ATG Building, Seattle, WA J. Ogren, NOAA Climate Monitoring and Diagnostics Laboratory,
2PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 2PD (one minute each).

11:10 AM – 12:40 PM

2E. Source/Emissions Characterization 2

2E1 DETERMINING THE MAJOR SOURCES OF PM2.5 IN PITTSBURGH USING POSITIVE MATRIX FACTORIZATION AND UNMIX, NATAILIE PEKNEY, Dept. of Civil and Environmental Engineering, Carnegie Mellon University, 5000 Forbes Ave., Porter Hall 119, Pittsburgh, PA 15213. Cliff Davidson, Dept. of Civil and Environmental Engineering and Public Policy, Carnegie Mellon University, 5000 Forbes Ave., Porter Hall 119, Pittsburgh, PA 15213.

2E2 ON-ROAD SIZE-RESOLVED ULTRAFINE PARTICULATE EMISSION FACTORS FOR DIESEL AND GASOLINE-POWERED VEHICLES, K. MAX ZHANG, Anthony S. Wexler, Debbie A. Niemeier, University of California, Davis, CA; Yifang Zhu, William C. Hinds, University of California, Los Angeles, CA; Constantinos Sioutas, University of Southern California, Los Angeles, CA.

2E3 SOURCES OF PM10 METAL EMISSIONS FROM MOTOR VEHICLE ROADWAYS, GLYNIS C. LOUGH, James J. Schauer, Martin M. Shafer, University of Wisconsin-Madison, Madison, WI.


2PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 2PE (one minute each).

TUESDAY, OCTOBER 05, 2004

12:40 PM – 2:00 PM Lunch

TUESDAY, OCTOBER 05, 2004

2:00 PM – 3:30 PM Platform Session 3

2:00 PM – 3:30 PM

3A. Drug Delivery


3A2 TARGETED AEROSOL DRUG DELIVERY: IMAGINATIONS AND POSSIBILITIES, Zongqin Zhang, University of Rhode Island.

3A3 INVESTIGATING REDUCED DRUG DELIVERY FROM METERED-DOSE INHALERS DURING MECHANICAL VENTILATION, ANDREW R. MARTIN, Warren H. Finlay, Daniel Y. Kwok, University of Alberta, Edmonton, AB, Canada.
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3A4 CASCADE IMPACTION COMBINED WITH RAMAN SPECTROSCOPY PROVES CHEMICAL HOMOGENEITY OF SPRAY DRIED AEROSOLS FOR PULMONARY DRUG DELIVERY, JENIFER LOBO, Reinhard Vehring, Nektar Therapeutics, San Carlos, CA.

3PA POSTER PREVIEW, This session ends with a brief presentation of posters from Session 3PA(one minute each).

2:00 PM – 3:30 PM

3B. Aerosol Sampling Techniques

3B1 COLLIMATED PARTICLE BEAM PRODUCTION USING SLITS, Ravi Sankar Chavali, Goodarz Ahmadi, Suresh Dhaniyala , Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY.

3B2 EXPERIMENTAL OBSERVATIONS OF PARTICLE FOCUSING IN AN OFVC-IMPACTOR, DANIEL RADER, Sandia National Laboratories, Albuquerque, NM.

3B3 A NEW AEROSOL MINI-CONCENTRATOR FOR USE IN CONJUNCTION WITH LOW FLOW-RATE CONTINUOUS AEROSOL INSTRUMENTATION, PHILIP FINE, Harish Phuleria, Subhasis Biswas, Michael Geller, Constantinos Sioutas, University of Southern California, Los Angeles, CA.

3B4 A COMPARATIVE STUDY OF AIRBORNE AEROSOL SAMPLE INLET PERFORMANCE, DAVID C. ROGERS, Allen Schanot, National Center for Atmospheric Research, Research Aviation Facility, Boulder, CO; Peter Liu, Jefferson R. Snider, University of Wyoming, Dept. Atmospheric Science, Laramie, WY.

3PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 3PB(one minute each).

2:00 PM – 3:30 PM

3C. Vehicular Exhaust and PM Analyzers

3C1 PERFORMANCE OF AN ENGINE EXHAUST PARTICLE SIZER SPECTROMETER, ROBERT CALDOW, Jeremy J. Kolb, Larry S. Berkner, TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126-3996; Aadu Mirme, University of Tartu, Tähe 4, 51010 Tartu, Estonia.

3C2 ON-ROAD MEASUREMENT OF AUTOMOTIVE PM EMISSIONS WITH IN-PLUME AND CROSS-PLUME SYSTEMS, CLAUDIO MAZZOLENI, Hampden Kuhns, Hans Moosmüller, Nicholas Nussbaum, Oliver Chang, Djordje Nikolic, Peter Barber, Robert Keislar, and John Watson, Desert Research Institute, University of Nevada System, Reno, NV.


3C4 CONTINUOUS VOLATILE FRACTION MEASUREMENT IN PM10 AND PM2.5, Thomas Petry, Hans Grimm, GRIMM Aerosol Technik GmbH & Co. KG, Ainring, Germany; Matthias Richter, GIP Messinstrumente, Pouch, Germany; Gerald Schindler, Leibniz-Institut für Troposphärenforschung e.V., Leipzig, Germany.

3PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 3PC(one minute each).

2:00 PM – 3:30 PM

3D. Special Symposium: Aerosols and Climate Change/Indirect Effects, Aerosol Optical Properties
3D1 STUDIES OF AEROSOL PHYSICAL PROPERTIES IN THE ARCTIC REGION OF SPITSBERGEN, TYMON ZIELINSKI Institute of Oceanology, Polish Academy of Sciences Powstańców Warszawy 55, 81-712 Sopot, Poland.

3D2 DIRECT AND INDIRECT FORCING BY ANTHROPOGENIC AEROSOLS IN THE, GRACIELA RAGA Darrel Baumgardner Jose Carlos Jimenez.

3D3 HYGROSCOPICITY AND OPTICAL PROPERTIES OF ORGANIC-SEA-SALT INTERNAL MIXTURES AND THEIR CONSEQUENCES FOR CLIMATE, C. A. RANDLES, *Atmospheric and Oceanic Sciences Program Princeton University, Princeton, NJ; V. Ramaswamy*, NOAA Geophysical Fluid Dynamics Laboratory, Princeton, NJ; L. M. Russell, Scripps Institution of Oceanography University of California San Diego, La Jolla, CA.

3D4 MEASUREMENTS OF THE INDIRECT EFFECT OF AEROSOL PARTICLES ON STRATIFORM CLOUDS, CYNTHIA TWOHY, William Tahnk, Oregon State University, Corvallis, OR; Markus Petters, Jefferson Snider, University of Wyoming, Laramie, WY; Bjorn Stevens, University of California, Los Angeles, CA; Melanie Wetzel, Desert Research Institute, Reno, NV; Lynn Russell, Scripps Institute of Oceanography, La Jolla, CA; Jean-Louis Brenguier, Meteo-France, Toulouse, France.

3PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 3PD(one minute each)...

2:00 PM – 3:30 PM

3E Particle Transport

3E1 THERMOPHORETIC FORCE AND VELOCITY OF NANOPARTICLES IN FREE MOLECULE REGIME, ZHIGANG LI, Hai Wang, Department of Mechanical Engineering, University of Delaware, DE.

3E2 SLIP CORRECTION MEASUREMENTS OF CERTIFIED PSL NANOPARTICLES USING A NANO-DMA FOR KNUDSEN NUMBER FROM 0.5 TO 83, JUNG KIM, David Pui, University of Minnesota, Minneapolis, MN; George Mulholland, National Institute of Standards and Technology, Gaithersburg, MD.

3E3 ASPIRATION EFFICIENCY OF A THIN-WALLED PROBE AT RIGHT ANGLES TO THE WIND, LAURIE BRIXEY, ManTech Environmental Technologies, Research Triangle Park, NC; Douglas Evans, James Vincent, University of Michigan, Ann Arbor, MI.

3E4 SUPPRESSION OF PARTICLE DEPOSITION IN TUBE FLOW BY THERMOPHORESIS, Jyh-Shyan Lin, CHUEN-JINN TSAI, National Chiao Tung University, Hsinchu, Taiwan..

3PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 3PE(one minute each)...

TUESDAY, OCTOBER 05, 2004

3:45 PM – 4:30 PM AAAR Annual Business Meeting

TUESDAY, OCTOBER 05, 2004

4:30 PM – 6:30 PM Poster Session #1 & Orderves

4:30 PM – 6:30 PM
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1PA. Special Symposia: Microdosimetry & Targeting of Inhaled Particles and Drug Aerosols, Microdosimetry Assessment: mathematical and computational models

1PA1 POSSIBILITIES FOR HYPERTONIC SODIUM CHLORIDE SOLUTION USE TO TREAT AND IMPROVEMENT OF DIAGNOSTICS IN PATIENTS WITH RESPIRATORY ORGAN DISEASES, VYACHESLAV KOBYLYANSKY, Olga Bushkovskaya, Tatiana Petrova, Central Medical Unit N22 of the Ministry of Public health of Russia; Research Institute for Pulmonology of the State Medical University named after I.P. Pavlov, Saint-Petersburg, Russia.

1PA2 COMPARISON OF EXPERIMENTAL MEASUREMENTS WITH MODEL CALCULATIONS OF PARTICLE DEPOSITION EFFICIENCIES IN THE HUMAN, MONKEY AND RAT NASAL AIRWAYS, BRIAN WONG, Bahman Asgharian, Julia Kimbell, CIIT Centers for Health Research, Research Triangle Park, NC; James Kelly, UC Davis, Davis, CA.

1PA3 ANALYSIS OF REGIONAL DEPOSITION PATTERNS OF COARSE PARTICLES IN HUMAN NASAL PASSAGES USING COMPUTATIONAL FLUID DYNAMICS MODELING, JEFFRY SCHROETER, Bahman Asgharian, Julia Kimbell, CIIT Centers for Health Research, Research Triangle Park, NC.

1PA4 NUMERICAL SIMULATION OF INSPIRATORY AIRFLOW AND NANO-PARTICLE DEPOSITION IN A REPRESENTATIVE HUMAN NASAL CAVITY, HUAWEI SHI, CLEMENT KLEINSTREUER, ZHE ZHANG, NC STATE UNIVERSITY, RALEIGH, NC CHONG KIM, NATIONAL HEALTH AND ENVIRONMENTAL EFFECTS RESEARCH LABORATORY, U.S. EPA.

4:30 PM – 6:30 PM

1PB. Instrumentation

1PB1 APPARENT SIZE SHIFTS IN MEASUREMENTS OF DROPLETS WITH THE AERODYNAMIC PARTICLE SIZER AND THE AEROSIZER, PAUL BARON, Gregory Deye, Anthony Martinez and Erica Jones, National Institute for Occupational Safety and Health, Cincinnati, OH.

1PB2 A TOOL TO DESIGN AND EVALUATE AERODYNAMIC LENS SYSTEMS, XIAOLIANG WANG, Peter H. McMurry, Department of Mechanical Engineering, University of Minnesota, 111 Church St. S.E., Minneapolis, MN 55455; Frank Einar Kruis, Process and Aerosol Measurement Technology, University Duisburg-Essen, D-47047 Duisburg, Germany.

1PB3 COMPRESSIBLE FLOW THROUGH AERODYNAMIC LENSES, Ravi Sankar Chavali, Goodarz Ahmadi, Brian Helenbrook, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY.

1PB4 MATCHED AERODYNAMICS LENSES, Prachi Middha, Department of Mechanical Engineering, University of Delaware, Newark, DE 19716; ANTHONY S. WEXLER, Departments of Mechanical and Aeronautical Engineering, Civil and Environmental Engineering, and Land, Air and Water Resources, University of California, Davis, CA 95616.

1PB5 COUNTING EFFICIENCY OF THE AERODYNAMIC PARTICLE SIZER, THOMAS PETERS, University of Iowa, Iowa City, IA; John Volckens, U.S. EPA, National Exposure Research Laboratory, MD E205-3, RTP, NC 27711.

1PB6 WIDE RANGE PARTICLE MEASUREMENT FROM 5 NM to 20 µM, Hans Grimm, Thomas Petry, Grimm Aerosol Technik GmbH, Ainring, Germany.

1PB7 MODELING, LABORATORY, AND FIELD RESULTS FOR A BEAM WIDTH PROBE DESIGNED FOR MEASURING PARTICLE COLLECTION EFFICIENCY IN THE AERODYNE AEROSOL MASS SPECTROMETER, J. ALEX HUFFMAN, Allison
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1PB8 FLOW DYNAMICS AND PARTICLE TRAJECTORIES IN AN ICE NUCLEATION CHAMBER, DEREK J. STRAUB, Susquehanna University, Department of Geological and Environmental Science, Selinsgrove, PA 17870; David C. Rogers, National Center for Atmospheric Research, Boulder, CO 80307; Paul J. Demott, Anthony J. Prenni, Colorado State University, Department of Atmospheric Science, Fort Collins, CO 80523.

1PB9 CCN SPECTRAL COMPARISONS AT LOW SUPERSATURATIONS, JAMES G. HUDSON, Desert Research Institute, Reno, NV; Seong Soo Yum, Yonsei University, Seoul, Korea.

1PB10 DESIGN AND EVALUATION OF A LARGE SCALE PARTICLE GENERATOR FOR DIAL HEPA FILTER TEST FACILITY, R. Arun Kumar, John Etheridge, KRISTINA HOGANCAMP, John Luthe, Brian Nagel, Olin Perry Norton, Michael Parsons, Donna Rogers, Charles Waggner, Diagnostic Instrumentation and Analysis Laboratory - Mississippi State University, Starkville, MS.

1PB11 UNIVERSAL SIZE DISTRIBUTION AEROSOL GENERATION USING CONDENSATION MONODISPERSE AEROSOL GENERATOR, KUANG-NAN CHANG, Chih-Chieh Chen, National Taiwan University, Taipei, Taiwan; Sheng-Hsiu Huang, Institute of Occupational Safety and Health, Taipei, Taiwan.

4:30 PM – 6:30 PM

1PC. Aerosol Chemistry I

1PC1 DETERMINATION OF SECONDARY ORGANIC AEROSOL PRODUCTS FROM GAS AND PARTICLE PHASE REACTIONS OF TOLUENE, DI HU, Richard Kamens and Myoseon Jang Department of Environmental Sciences and Engineering, the University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.

1PC2 MODELING THE INTERACTION OF A HIGH INTENSITY PULSED LASER WITH NANOPIERCLES IN THE SINGLE PARTICLE MASS SPECTROMETRY, KIHONG PARK, Michael R. Zachariah, Co-laboratory on NanoParticle Based Manufacturing and Metrology, University of Maryland and National Institute of Standards and Technology, MD; Donggeun Lee, School of Mechanical Engineering, Pusan National University, Busan, Korea; Howard M. Milchberg, Institute for Physical Science and Technology, University of Maryland, MD.

1PC3 CHARACTERISTICS OF PHOTOCHEMICAL OXIDATION OF AMBIENT DICARBOXYLIC ACIDS, Li-Ming Yang, Bhowmick Madhumita Ray, LIYA E. YU, National University of Singapore, Singapore.

1PC4 THE EFFECTS OF LOAD ON ORGANIC SPECIES IN DIESEL PARTICULATE MATTER (DPM), FUYAN LIANG, Mingming Lu, Tim. C. Keener, Zifei Liu, University of Cincinnati, Cincinnati, OH.

1PC5 KINETICS OF ATMOSPHERIC PROCESSING OF ORGANIC PARTICULATE MATTER: A RELATIVE RATES APPROACH, KARA E. HUFF HARTZ, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA; Emily A. Weitkamp, Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA; Amy M. Sage, Department of Chemistry, Carnegie Mellon University, Pittsburgh, PA; Albert A. Presto, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA; Allen L. Robinson, Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA; Neil M. Donahue, Department of Chemical Engineering and Chemistry, Carnegie Mellon University, Pittsburgh, PA.
1PC6 NIGHTTIME LAGRANGIAN MEASUREMENTS OF AEROSOLS AND OXIDANTS IN THE BOSTON URBAN PLUME: POSSIBLE EVIDENCE OF HETEROGENEOUS LOSS OF OZONE, RAHUL A. ZAVERI, Carl M. Berkowitz, John M. Hubbe, Pacific Northwest National Laboratory, Richland, WA; Stephen R. Springston, Brookhaven National Laboratory, Upton, NY; Fred J. Brechtel, Brechtel Manufacturing Inc., Hayward, CA; Timothy B. Onasch, John T. Jayne, Aerodyne Research Inc., Billerica, MA.

1PC7 REDUCING THE MASTER CHEMICAL MECHANISM FOR REGIONAL MODELLING OF SECONDARY ORGANIC AEROSOL FORMATION, ADAM G. XIA, Diane V. Michelangeli, Centre for Atmospheric Chemistry & Department of Earth and Space Science and engineering, York University, Toronto, ON, Canada; Paul Makar, Air Quality Modelling and Integration Division, Meteorological Service of Canada, Toronto, ON, Canada.

4:30 PM – 6:30 PM
1PD. Special Symposium: Aerosols and Climate Change/Indirect Effects, Cloud Droplet Interactions

1PD1 EFFECTS OF FILM FORMING COMPOUNDS ON THE GROWTH OF GIANT CCN: IMPLICATIONS FOR CLOUD MICROPHYSICS AND THE AEROSOL INDIRECT EFFECT, JEESSY MEDINA, Athanasios Nenes. Georgia Institute of Technology, Atlanta, GA.

1PD2 THE EFFECTS OF DISSOLUTION KINETICS ON CLOUD DROPLET ACTIVATION, AKUA ASA-AWUKU, Athanasios Nenes, Georgia Institute of Technology.

1PD3 CONTINUED DEVELOPMENT OF A CLOUD DROPLET FORMATION PARAMETERIZATION FOR GLOBAL CLIMATE MODELS, CHRISTOS FOUNTOUKIS, Georgia Institute of Technology, Atlanta-GA; Athanasios Nenes, Georgia Institute of Technology, Atlanta-GA.

1PD4 STUDY ON FOUR TYPES OF NUCLEATION EVENTS AT REMOTE COASTAL ENVIRONMENT, JIAN WEN, Anthony S Wexler, University of California, Davis, CA.

1PD5 THE CLIMATE RESPONSE OF ANTHROPOGENIC SOOT, ACCOUNTING FOR SOOT-ES FEEDBACK TO SNOW AND SEA ICE ALBEDO, Mark Jacobson, Stanford University.

1PD6 STUDY OF CCN PROXY BASED ON OPTICALLY EFFECTIVE SIZES AND ITS RELATION TO A SATELLITE AEROSOL INDEX, VLADIMIR KAPUSTIN, Antony Clarke, Yohei Shinozuka, Steven Howell, Vera Brekhovskikh, School of Ocean and Earth Science and Technology, University of Hawaii, Honolulu, HI; Teruyuki Nakajima, Center for Climate System Research Center, University of Tokyo, Japan; Akiko Higurashi, National Institute for Environmental Studies, Ibaraki, Japan.

1PD7 SEVERE WEATHER PHENOMENA WATERSPOUT AS A RESULT OF THE OCEAN'S SKELETAL STRUCTURES AND AS A SPECIAL TYPE OF AEROSOL-DUSTY PLASMA, VALENTIN A. RANTSEV-KARTINOV. Institute for Nuclear Fusion, Russia.

4:30 PM – 6:30 PM
1PE. Source/Emissions Characterization 1

1PE1 MEASUREMENT OF THE SIZE DISTRIBUTION AND CHEMICAL COMPOSITION OF RURAL ATMOSPHERIC NANOPARTICLES, MATTHEW J. DUNN, Katharine Moore, Fred L. Eisele, James N. Smith, National Center for Atmospheric Research, Boulder, CO; Ajaya Ghimire, Mark Stolzenberg, Peter H. McMurry, University of Minnesota, Minneapolis, MN.
PARTICLE FORMATION AND GROWTH DOWNWIND OF POINT AND AREA SOURCES IN THE NORTHEASTERN U.S., CHARLES BROCK, National Oceanic and Atmospheric Administration Aeronomy Laboratory and University of Colorado Cooperative Institute for Research in Environmental Sciences, Boulder, CO.

ON THE ERRORS OF ATMOSPHERIC POLLUTANT SOURCE PARAMETER_DEFINITION WITH THE USE OF THE EXPERIMENTAL DATA ON THE UNDERLYING SURFACE DEPOSIT DENSITY, Oxana Botalova, ALEXANDER BORODULIN, Svetlana Koltyarova, SRC VB "Vector", Koltovo, Novosibirsk region, Russia.

SOURCE IDENTIFICATION OF THE SECONDARY SULFATE AEROSOLS IN THE EASTERN U.S. UTILIZING TEMPERATURE RESOLVED CARBON FRACTIONS, EUGENE KIM, Philip K. Hopke, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY.


HOUSTON OZONE PRECURSOR STUDY: SPATIAL AND TEMPORAL ANALYSES AND RECONCILIATION OF VOLATILE ORGANIC COMPOUND SOURCES IN THE HOUSTON SHIP CHANNEL AREA, Steven G Brown, Hilary R. Hafner, PAUL T. ROBERTS, Sonoma Technology, Inc, Petaluma, CA; Eugene Kim, Department of Civil and Environmental Engineering, Clarkson University; Phillip K. Hopke, Department of Chemical Engineering, Clarkson University.

APPLICATION OF WEIGHT ABSOLUTE PRINCIPAL COMPONENT ANALYSIS TO THE ANALYSIS OF ATMOSPHERIC AEROSOL SIZE DISTRIBUTION DATA, TAK-WAI CHAN, Michael Mozurkewich, Department of Chemistry and Centre of Atmospheric Chemistry, York University.

SOURCE APPORTIONMENT OF AMBIENT FINE PARTICULATE MATTER IN CORPUS CHRISTI, TEXAS AND IDENTIFICATION OF SOURCE CONTRIBUTION LOCATION BY USING UNMIX AND POTENTIAL SOURCE CONTRIBUTION FUNCTION, Ranjith Dandanayakula, Myoungwoo Kim, Alvaro Martinez, Kuruvilla John, Department of Environmental and Civil Engineering, Texas A&M University – Kingsville, Kingsville, TX.

INVESTIGATION OF THE RELATIONSHIP BETWEEN CHEMICAL COMPOSITION AND SIZE DISTRIBUTION OF AIRBORNE PARTICLES BY PARTIAL LEAST SQUARE (PLS) AND POSITIVE MATRIX FACTORIZATION (PMF), LIMING ZHOU, Philip K. Hopke, Center for Air Resources Engineering and Science and Department of Chemical Engineering, Clarkson University Charles O. Stanier, Spyros N. Pandis, Department of Chemical Engineering, Carnegie Mellon University John M. Ondov, J. Patrick Pancras, Department of Chemistry and Biochemistry, University of Maryland at College Park.

RECEPTOR MODELING FOR HIGHLY-TIME (HOURLY AND 24-HOURLY) RESOLVED SPECIES: THE BALTIMORE SUPER-SITE., David Ogulei, Clarkson University.

INTER-COMPARISON OF SOURCE-ORIENTED AND RECEPTOR-ORIENTED MODELS FOR THE APPORTIONMENT OF AIRBORNE PARTICULATE MATTER, Anthony Held, Qi Ying, MICHAEL J. KLEEMAN, University of California, Davis.

ASSESSMENT OF THE MAJOR CAUSES OF HAZE IN THE CLASS I AREAS OF THE WESTERN UNITED STATES., JIN XU, Dave DuBois, Mark Green, Dan Freeman, Vic Etyemezian, Desert Research Institute, Las Vegas, NV; Marc Pitchford, NOAA Air Resource Laboratory, Las Vegas, NV.
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4:30 PM – 6:30 PM

2PA. Special Symposia: Microdosimetry & Targeting of Inhaled Particles and Drug Aerosols, Microdosimetry Assessment: mathematical and computational models

2PA1 THEORETICAL ANALYSIS OF THE EFFECTS OF BREATHING PATTERNS ON PARTICLE DEPOSITION IN HUMAN LUNGS, Jung-Il Choi, Center for Environmental Medicine, Asthma and Lung Biology, University of North Carolina at Chapel Hill, Chapel Hill, NC; Chong S. Kim, National Health and Environmental Effects Research Laboratory, US EPA, Research Triangle Park, NC.

2PA2 EVALUATION OF FOUR MEDICAL NEBULIZERS UNDER LOW TEMPERATURE, YUE ZHOU, Lovelace Respiratory Research Institute, Albuquerque, NM; Amit Ahuja, University of New Mexico, Albuquerque, NM; Clinton M. Irvin, Dean Kracko, Jacob D. McDonald, Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM.

2PA3 AIRFLOW AND PARTICLE DEPOSITION IN THE HUMAN LUNG, BAHMAN ASGHARIAN, Owen Price, CIIT Centers for Health Research, Research Triangle Park, NC.

2PA4 TARGETED NASAL DRUG DELIVERY USING A COMPUTATIONAL FLUID DYNAMICS MODEL OF THE HUMAN NASAL AIRWAYS, JEFFRY SCHROETER, Julia Kimbell, Bahman Asgharian, Owen Price, CIIT Centers for Health Research, Research Triangle Park, NC; Colin Dickens, Jeremy Southall, Bespak, Milton Keynes, MK12 5TS, UK.

4:30 PM – 6:30 PM

2PB. Mobility Sizing Instrumentation

2PB1 A NEW DECONVOLUTION SCHEME TO RECOVER THE TRUE DMA TRANSFER FUNCTION FROM TDMA CURVES, WEILING LI and Da-Ren Chen, Department of Mechanical Engineering, Joint Program in Environmental Engineering Science, P.O. Box 1185, Washington University in St. Louis, St. Louis, MO.

2PB2 MEASUREMENTS OF ULTRAFINE AGGREGATE SURFACE AREA DISTRIBUTIONS BY ELECTRICAL MOBILITY ANALYSIS, ANSHUMAN AMIT LALL and Sheldon K. Friedlander, Department of Chemical Engineering, University of California, Los Angeles, CA.

2PB3 ELECTRICAL AEROSOL SPECTROMETER, Manish Ranjan, Clarkson University.

2PB4 PERFORMANCE OF A SCANNING MOBILITY PARTICLE SIZER AT PRESSURES BETWEEN 780 - 450 MB., PETER LIU, Terry Deshler, University of Wyoming, Laramie, WY.

2PB5 AN EVALUATION OF A SCANNING MOBILITY PARTICLE SIZER WITH NIST-TRACEABLE PARTICLE SIZE STANDARDS, J. Vasiliou, Duke Scientific Corporation.


2PB7 PERFORMANCE EVALUATION OF THE NEW WIDE-RANGE PARTICLE SPECTROMETER, Suresh Dhaniyala, JASON RODRIGUE, Clarkson University Mechanical & Aeronautical Engineering Department, Potsdam, NY; Philip K. Hopke, Clarkson University Civil Engineering Department, Potsdam, NY.
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2PB8 CHARGE DISTRIBUTION PRODUCED BY UNIPOLAR DIFFUSION CHARGING OF FINE AEROSOLS, KINGSLEY REAVELL, Jonathan Symonds, Cambustion Ltd, Cambridge, UK; George Biskos, Department of Engineering, University of Cambridge, UK.

2PB9 DESIGN, PERFORMANCE AND APPLICATION OF THE WIDE-RANGE PARTICLE SPECTROMETER, William Dick, FRANCISCO ROMAY, Keung Woo, Jugal Agarwal, Benjamin Liu, MSP Corporation, Shoreview, MN.

2PB10 RESEARCH OF GLASS FIBER BEHAVIOR IN FIBER LENGTH CLASSIFIER, Philip Hopke, ZUOCHENG WANG, Clarkson University, Potsdam, NY; Paul Baron, Gregory Deye, National Institute for Occupational Safety and Health, Cincinnati, OH; Yung-Sung Cheng, Lovelace Respiratory Research Institute Albuquerque, NM (This research is supported by the US NIOSH grant RO1OH03900).

2PB11 SIZE-DEPENDENT CHARGING EFFICIENCIES AND CHARGE DISTRIBUTIONS FOR NANOPARTICLES DOWNSTREAM OF A UNIPOLAR CHARGER: APPLICATION TO SIZE-DEPENDENT SAMPLING, AJAYA GHIMIRE, Mark Stolzenburg, Peter McMurry, University of Minnesota, Minneapolis, MN; Jim Smith, Katharine Moore, National Center for Atmospheric Research, Boulder, CO; Hiromu Sakurai, NMI/AIST, Tsukuba, Ibaraki, Japan.

4:30 PM – 6:30 PM

2PC. Aerosol Chemistry II

2PC1 SODIUM NITRATE PARTICLES: PHYSICAL AND CHEMICAL PROPERTIES DURING HYDRATION AND DEHYDRATION. IMPLICATIONS FOR AGED SEA SALT AEROSOLS., R.C. Hoffman and B.J. Finlayson-Pitts University of California, Irvine, Department of Chemistry, Irvine, CA, 92697-2025 A. LASKIN W.R. Wiley Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, P.O.B. 999, MSIN K8-88, Richland, WA 99352.


2PC3NUCLEATION AND GROWTH MODES OF TITANIA NANOPARTICLES GENERATED BY A CVD METHOD, CHANSOO KIM, Okuyama Kikuo, Manabu Shimada, Hiroshima University, Higashi-Hiroshima, Japan; Koichi Nakaso, Kyushu University, Fukuoka, Japan.

2PC4 CHEMISTRY OF SECONDARY ORGANIC AEROSOL FORMATION FROM THE REACTIONS OF LINEAR ALKENES WITH OH RADICALS, KENNETH DOCHERTY, Paul Ziemann, Air Pollution Research Center, University of California, Riverside, CA.

2PC5 IMPACT OF HYDROCARBON TO NOX RATIO (HC:NOX) ON SECONDARY ORGANIC AEROSOL FORMATION, CHEN SONG, Kwangsam Na, David Cocker, University of California, Riverside, CA.

2PC6 INFLUENCE OF IRRADIATION SOURCE ON SOA FORMATION POTENTIAL, BETHANY WARREN, Chen Song, David Cocker, University of California, Riverside, CA.

4:30 PM – 6:30 PM

2PD. Special Symposium: Aerosols and Climate Change/Indirect Effects, Modeling of Indirect Effects
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2PD1 RETRIEVAL OF THE SINGLE SCATTERING ALBEDO OF ATMOSPHERIC AEROSOLS, Bryan M. Karpowicz and Irina N. Sokolik, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA.

2PD2 A ROBUST PARAMETERIZATION OF CLOUD DROPLET ACTIVATION, YI MING, Geophysical Fluid Dynamics Laboratory, Princeton, NJ.

2PD3 THE ROLE OF AEROSOLS IN DRIZZLE FORMATION, PAMELA LEHR, Ulrike Lohmann, Dalhousie University, Halifax, NS, Canada; Richard Leaitch, Meteorological Service of Canada, Toronto, ON, Canada.

2PD4 SPRINGTIME CLOUD CONDENSATION NUCLEI MEASUREMENTS IN THE WEST COAST OF KOREAN PENINSULA, SEONG SOO YUM, Yonsei University, Seoul, Korea James G. Hudson, Desert Research Institute, Reno, Nevada, USA.

2PD5 ACID-CATALYSED ORGANIC REACTIONS CHANGE THE OPTICAL PROPERTIES OF ATMOSPHERIC SULPHURIC ACID AEROSOLS, BARBARA NOZIERE, William Esteve, University of Miami / RSMAS.

2PD6 SIMULATION OF GLOBAL SIZE DISTRIBUTION OF CARBONACEOUS AEROSOLS AND MINERAL DUST, KAIPing CHEN, Peter Adams, Department of Civil and Environmental Engineering, Carnegie Mellon University, Pittsburgh, PA.

2PD7 MASS SPECTROMETRIC ANALYSIS OF ICE AND SUPERCOOLED CLOUD RESIDUALS DURING CLACE-3, JOHANNES SCHNEIDER, Saskia Walter, Nele Hock, Cloud Physics and Chemistry Department, Max Planck Institute for Chemistry, Mainz, Germany; Joachim Curtius, Stephan Borrmann, Institute for Atmospheric Physics, Johannes Gutenberg University, Mainz, Germany; Stephan Mertes, Institute for Tropospheric Research, Leipzig, Germany; E. Weingartner, B. Verheggen, J. Cozic, and U. Baltensperger, Laboratory for Atmospheric Chemistry, Paul Scherrer Institute, Villigen, Switzerland.

4:30 PM – 6:30 PM

2PE. Source/Emissions Characterization 2

2PE1 SOURCE IDENTIFICATION OF AMBIENT AEROSOLS THROUGH ATOFMS DATA, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering, and Center for Air Resources Engineering and Science, Clarkson University, PO Box 5708, Potsdam, NY 13699-5708; Xueying Qin, Kimberly A. Prather, Department of Chemistry and Biochemistry, University of California, San Diego, La Jolla, CA 92093-0314.

2PE2 IMPLICATIONS OF SOURCE AND METEOROLOGICAL EFFECTS ON AMBIENT ULTRAFINE PARTICLES IN DETROIT FROM CORRELATION AND PRINCIPLE COMPONENT ANALYSIS, LI-HAO YOUNG, Department of Environmental Health Sciences, University of Michigan, Ann Arbor, MI; Gerald J. Keeler, Department of Environmental Health Sciences and Department of Atmospheric, Oceanic, and Space Sciences, University of Michigan, Ann Arbor, MI.

2PE3 AEROSOL SOURCE APPORTIONMENT BY POSITIVE MATRIX FACTORIZATION BASED ON SINGLE PARTICLE MASS SPECTRAL DATA, JONG HOON LEE, Weixiang Zhao, Philip K. Hopke, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY 13699, USA; Kimberly A. Prather, Department of Chemistry and Biochemistry, University of California at San Diego, La Jolla, CA 92093, USA.

2PE4 PM2.5 SOURCE AND SOURCES CONTRIBUTIONS IN NEW YORK CITY, Youjun Qin, Philip K. Hopke, Eugene Kim, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY 13699-5708, USA.
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2PE5 PM SOURCE ATTRIBUTION APPORTIONMENT USING ORGANIC SIGNATURES IN THE PASO DEL NORTE AIRSHED, CRISTINA JARAMILLO, JoAnn Lighty, Henk Meuzelaar, Department of Chemical Engineering, University of Utah, Salt Lake City, UT.


2PE7 SOURCE IDENTIFICATION AND SPATIAL DISTRIBUTION OF FINE PARTICLES MEASURED AT THE SPECIATION TRENDS NETWORK SITES IN NEW YORK AND VERNOM, US, Eugene Kim, Philip K. Hopke, Youjun Qin, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY.

2PE8 PI-SWERL: A NOVEL METHOD FOR QUANTIFYING WINDBLOWN DUST EMISSIONS, Djordje Nikolic, Hampden Kuhns, Hans Moosmuller, Jin Xu, John Gillies, Sean Ahonen, VIC ETYMEZIAN, Division of Atmospheric Sciences, Desert Research Institute, Las Vegas, NV, USA; Marc Pitchford, NOAA, Las Vegas, NV, USA.

2PE9 SIZE DISTRIBUTIONS OF ELEMENTS AND CLUSTER ANALYSIS USED TO IDENTIFY SOURCES OF PARTICULATE MATTER, ANN M. DILLNER, Arizona State University, Tempe, AZ, James J. Schauer, University of Wisconsin, Madison, WI, Glen R. Cass, deceased.

2PE10 THE POTENTIAL SOURCE-RECEPTOR RELATIONSHIP OF HG EVENT-BASED WET DEPOSITION AT POTSDAM, NY, SOON-ONN LAI, Thomas M. Holsen, Philip K. Hopke, Clarkson University, Potsdam, NY.

4:30 PM – 6:30 PM

3PA. Drug Delivery

3PA1 DEVELOPMENT OF ÔCLUSTER BOMBSÖ FOR NANOPARTICLE LUNG DELIVERY, WARREN FINLAY, Zhaolin Wang, Leticia Ely, Raimar Loebenberger, Wilson Roa, Jeffrey Sham, Yu Zhang, University of Alberta, Edmonton, Canada.

3PA2 PHARMACEUTICAL PARTICLE ENGINEERING ACHIEVES HIGHLY DISPERSIBLE POWDERS FOR PULMONARY DRUG DELIVERY, REINHARD VEHRING, Willard R. Foss, David Lechuga-Ballesteros, Mei-Chang Kuo.

3PA3 PRESERVING PROTEINS AND PEPTIDES DURING SPRAY DRYING OF INHALABLE PHARMACEUTICAL POWDERS, WILLARD R. FOSS, Reinhard Vehring, Nektar Therapeutics, San Carlos, CA.

3PA3 DYNAMICS OF A MEDICAL AEROSOL HOOD INHALER, Tal Shakked, DAVID KATOSHEVSKI, Department of Biotechnology and Environmental Engineering, Institute for Applied Biosciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel; David M. Broday, Faculty of Civil and Environmental Engineering, Technion I.I.T., Haifa, Israel; Israel Amirav, Pediatric Department, Sefad Hospital, Sefad, Israel.

3PA4 NEW DATA ON AEROSOL PARTICLES DEPOSITION IN RESPIRATORY TRACTS OF LABORATORY ANIMALS, ALEXANDER S. SAFATOV, Oleg V. Pyankov, Alexander N. Sergeev, Sergei A. Kiselev, Elena I. Ryabchikova, Vladimir S. Toporkov, Victor A. Yashin, Nikolai M. Belyaev, Larissa N. Shishkina, Artem A. Sergeev, Alexander V. Zhukov, Vladimir A. Zhukov, Institute of Aerobiology, State Research Center of Virology and Biotechnology “Vector”, Koltsovo, Novosibirsk Region, Russia.

3PA5 IN VITRO INHALER AEROSOL DEPOSITION IN A NEW HIGHLY IDEALIZED MOUTH-THROAT MODEL, Kyle Gilbertson, Warren Finlay, YU ZHANG, Edgar Matida.
3PA6 AIRFLOW AND PARTICLE DEPOSITION IN THE LUNG AT MICROGRAVITY AND HYPERGRAVITY ENVIRONMENTS, BAHMAN ASGHARIAN, Owen Price, CIIT Centers for Health Research.

3PA6 DEVELOPMENT OF SOFTWARE TO ESTIMATE DEPOSITION FRACTIONS OF AEROSOLS IN HUMAN RESPIRATORY TRACT USING ICRP'S MODEL, Kazutoshi Suzuki, National Institute for Environmental Studies.

3PA7 DISTRIBUTION OF AIRFLOW AND PARTICLE DEPOSITION IN MORPHOMETRIC MODELS OF AGE-SPECIFIC HUMAN LUNGS, OWEN PRICE, Bahman Asgharian, CIIT Centers for Health Research, Research Triangle Park, NC, USA.

3PA8 COMPARISON OF CFD PREDICTED FLOW FIELD AND PARTICLE DEPOSITION WITH EXPERIMENTALLY MEASURED FLOW FIELD (PIV) AND PARTICLE DEPOSITION IN A THREE-GENERATION LUNG MODEL, Adam Pruyne, RISA ROBINSON, Department of Mechanical Engineering, Rochester Institute of Technology, Rochester, NY, Michael Oldham, Department of Community and Environmental Medicine, University of California, Irvine, CA.

3PA9 AIRFLOW AND PARTICLE TRANSPORT IN A HUMAN NOSE, PARSAMANKHAN, Goodarz Ahmadi, Philip K. Hopke, Clarkson University, Potsdam, NY, 13699-5725, Y.S. Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM 87108, P.A. Baron, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226.

4:30 PM – 6:30 PM

3PB. Aerosol Sampling Techniques

3PB1 PERFORMANCE EVALUATION OF STANDARD AND NON-STANDARD SAMPLING SYSTEMS, Erkki Lamminen, PIRITA MIKKANEN, Johanna Ojanen, Dekati Ltd., Tampere, Finland.

3PB2 PARTICULATE DISSEMINATION FLOW TUBE FOR QUANTIFYING BIOAEROSOL SAMPLER COLLECTION EFFICIENCY, DAVID ALBURTY, Andrew Page, Midwest Research Institute, Kansas City, MO; Freeman Swank, Sceptor, Kansas City, MO.

3PB3 PERSONAL RESPIRABLE SAMPLER CONTAINING FOUR IMPACTORS ARRANGED IN PARALLEL, SAULIUS TRAKUMAS, Peter M. Hall, Donald L. Smith, SKC Inc., Eighty Four, PA.

3PB4 DIRECT EVALUATION OF SOME TYPES OF STATIONARY AND PORTABLE ULTRASOUND INHALATORS FOR THE DETERMINATION OF THEIR PERSPECTIVES IN RUSSIAN MARKET, VYACHESLAV KOBYLYANSKY, Medical Sanitary Unit N122 of the Ministry of Public Health of Russia, Scientific-Practical Center on Introduction and Distribution of Medical Devices, Saint-Petersburg, Russia.

3PB5 INCREASING THE SINGLE PARTICLE COUNTING RANGE OF A CONDENSATION PARTICLE COUNTER, FREDERICK R. QUANT, Derek R. Oberreit, Quant Technologies LLC, Blaine, MN; Mark R. Stolzenburg, University of Minnesota, Minneapolis, MN.

3PB6 A LOW POWER CONSUMPTION AUTOMATIC AEROSOL MEASUREMENT SYSTEM AND ITS APPLICATION AT THE FINNISH ANTARCTIC MEASUREMENT STATION ABOA, AKI VIRKKULA, Risto Hillamo, Finnish Meteorological Institute, Air Quality Research, FIN-00880 Helsinki, Finland Pasi Aalto, Markku Kulmala, Aerosol and Environmental Physics Laboratory, University of Helsinki, FIN-00014 University of Helsinki, Finland.
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3PB7 DESIGN AND EVALUATION OF THE LOVELACE QUAD-TRACK DIFFUSION DRYER, LARRY E. BOWEN, Lovelace Respiratory Research Institute, Albuquerque, NM.

3PB8 AN IDEAL PRE-FILTER FOR GAS ANALYZERS, CHRISTOF ASBACH, University of Minnesota, Minneapolis, MN Thomas A.J. Kuhlbusch, Institut fuer Energie- und Umwelttechnik, Duisburg, Germany Heinz Fissan, University Duisburg-Essen, Campus Duisburg, Germany.

3PB9 SIZE CHANGE OF COLLOIDAL NANOPARTICLES DISPERSED BY ELECTROSPRAY IN A HEATED FLOW, Kikuo Okuyama, Wuled Lenggoro, HYE MOON LEE, Chan Soo Kim, Manabu Shimada, Hiroshima University, Japan.

3PB10 AIR JET INDUCED RELEASE RATES OF SPHERICAL PARTICLES FROM CLOTH AND PLANAR SURFACES, ROBERT FLETCHER, Greg Gillen, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899; Erin Ferguson, Clemson University, Chemistry Department, Clemson, SC 29632.

3PB11 DISTRIBUTION OF GAS HOLDUP IN A BUBBLE COLUMN, Wei Chen and Goodarz Ahmadi Department of Mechanical and Aeronautical Engineering Clarkson University Potsdam, NY 13699.

4:30 PM – 6:30 PM

3PC. Vehicular Exhaust and PM Analyzers

3PC1 MEASUREMENT OF IN-USE VEHICLE PARTICULATE MATTER EXHAUST USING EXTRACTIVE IN-PLUME MONITORING, Hampden Kuhns, CLAUDIO MAZZOLENI, Hans Moosmüller, Nicholas Nussbaum, Oliver Chang, Judith Chow, Peter Barber, and John Watson, Desert Research Institute, Reno, NV.

3PC2 ON-ROAD ENGINE EXHAUST MEASUREMENTS USING AN EEPS SPECTROMETER, ROBERT CALDOW and Jeremy J. Kolb, TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126-3996.

3PC3 PM MASS MEASUREMENT: AEROSOL INSTRUMENTS VERSUS FILTERS, MATTI MARICQ, Ning Xu, Richard Chase.

3PC4 CRUISER: A ROAD VEHICLE BASED MOBILE MEASUREMENT SYSTEM, GANG LU, Cris Mihele, Jeff Brook. Environment Canada, Toronto, Ontario, Canada.

3PC5 AN ULTRAVIOLET LIDAR AND TRANSMISSOMETER FOR THE ON-ROAD MEASUREMENT OF AUTOMOTIVE PARTICLE EMISSIONS, Hans Moosmüller, CLAUDIO MAZZOLENI, Peter Barber, Hampden Kuhns, Robert Keislar, John Watson, Desert Research Institute, University of Nevada System, Reno, NV.

3PC6 METHOD VALIDATION AND FIELD DEPLOYMENT OF THE THERMO MODEL 5020 CONTINUOUS SULFATE ANALYZER, GEORGE A. ALLEN, NESCAUM, Boston, MA Bradley P. Goodwin, Jay R. Turner, Environmental Engineering Program, Washington University, St. Louis, MO.


3PC8 DESIGN AND PERFORMANCE OF LORI-10, A 10 LPM CASCADE IMPACTOR, ROBERT GUSSMAN, BGI Inc., Waltham MA; David Leith, Maryanne G. Boundy, University of North Carolina, Chapel Hill, NC.
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3PC9 RECENT IMPROVEMENTS AND LABORATORY/FIELD INVESTIGATIONS WITH THE MOBILE SINGLE PARTICLE ANALYSIS AND SIZING SYSTEM, SPASS, DANIEL MIRA SALAMA, Paolo Cavalli, Nicole Erdmann, Carsten Gruening, Jens Hjorth, Niels R. Jensen, Frank Raes, European Commission Joint Research Center, Institute for Environment and Sustainability, T.P. 290, I-21020 Ispra (VA), Italy.

3PC10 LABORATORY AND FIELD EVALUATION OF CRYSTALLIZED DOW 704 OIL ON THE PERFORMANCE OF THE PM2.5 WINS FRACTIONATOR, ROBERT VANDERPOOL, Lee Byrd, Russell Wiener, Elizabeth Hunike, USEPA, RTP, NC, 27711; Mike Labickas, Alan Leston, State of CT Dept. of Environmental Protection, Hartford, CT, 06106; Christopher Noble, Sanjay Natarajan, Robert Murdoch, RTI International, RTP, NC, 27709.

3PC11 COMPARISON OF PARTICULATE MEASUREMENT METHODS IN LABORATORY FLAMES, Yingwu Teng, Matthew F. Chandler, UMIT O. KOYLU, Donald E. Hagen, Philip D. Whitefield, University of Missouri - Rolla, MO.

4:30 PM – 6:30 PM

3PD. Special Symposium: Aerosols and Climate Change/Indirect Effects, Aerosol Optical Properties

3PD1 DERIVED OPTICAL AND CLOUD NUCLEATING PROPERTIES OF BIOMASS BURNING AEROSOL FROM THE MAY, 2003 FIRES IN THE YUCATAN, YONG SEOB LEE, Don R. Collins, Texas A&M University, College Station, TX; Graham Feingold, NOAA Environmental Technology Laboratory, Boulder, CO.

3PD2 THERMAL AND OPTICAL ANALYSES OF CARBONACEOUS PARTICLES, JONGMIN LEE, Tami C. Bond, University of Illinois at Urbana-Champaign, Urbana, IL.

3PD3 GLOBAL RADIATIVE FORCING OF COUPLED TROPOSPHERIC OZONE AND AEROSOLS IN A UNIFIED GENERAL CIRCULATION MODEL, HONG LIAO, John H. Seinfeld, California Institute of Technology, Pasadena, CA; Peter J. Adams, Carnegie Mellon University, Pittsburgh, PA; Loretta J. Mickley, Harvard University, Cambridge, MA.


3PD5 TROPOSPHERE-TO-STRATOSPHERE TRANSPORT OF MATERIALS BY NATURAL AND FIRE-INDUCED DEEP CONVECTIVE STORMS, PAO K. WANG Department of Atmospheric and Oceanic Sciences University of Wisconsin-Madison Madison, WI.

3PD6 THE FIELD AEROSOL MEASUREMENTS NEEDED TO COMPLIMENT SATELLITE MULTI-ANGLE AEROSOL MEASUREMENTS, RALPH KAHN, and the MISR Team, Jet Propulsion Laboratory / Cal. Tech., Pasadena, CA.

3PD7 FLUCTUATIONS OF AN AEROSOL MASS CONCENTRATION AND THEIR RELATION WITH MESOSCALE VARIATIONS IN BOTTOM ATMOSPHERIC LAYER, Khutorova Olga Germanovna, Kazan State University.

4:30 PM – 6:30 PM

3PE. Particle Transport
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3PE1 THE INFLUENCE OF THE RETARDED VAN DER WAALS FORCES ON THE DEPOSITION OF SUBMICRON AEROSOL PARTICLES IN HEPA-FILTERS, VASILY KIRSCH, Institute of Physical Chemistry of Russian Academy of Sciences, Moscow, 119991, Leninskii Pr., 31.

3PE2 CFD SIMULATIONS OF INERTIAL BEHAVIOR IN VIRTUAL IMPACTORS AND AEROSOL REACTORS, Marwan Charrouf, Richard V. Calabrese, JAMES W. GENTRY, M.B. (Arun) Ranade, Lu Zhang, Department of Chemical Engineering, University of Maryland, College Park, MD 20742.

3PE3 DRAG FORCE, DIFFUSION COEFFICIENT, AND ELECTRIC MOBILITY OF NANOPARTICLES IN LOW-DENSITY GASES, HAI WANG, Zhigang Li, Department of Mechanical Engineering, University of Delaware, Newark, DE.

3PE4 AERODYNAMIC PARTICLE FOCUSING SYSTEM ASSISTED BY RADIATION PRESSURE, SANGBOK KIM; Hyungho Park; Sangsoo Kim, KAIST, Deajon, Korea.

3PE5 A MODEL FOR DROPLET DISTORTION EFFECTS IN AERODYNAMIC PARTICLE SIZING INSTRUMENTS, David J. Schmidt, ERIC GESSNER, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY 13699-5725; Paul A. Baron, National Institute for Occupational Safety and Health, 4676 Columbia Parkway, Cincinnati, OH 45226.

3PE6 AN INTERACTIVE WEB-BASED COURSE-SEQUENCE FOR PARTICLE TRANSPORT Ú A COMBINED RESEARCH AND CURRICULUM DEVELOPMENT PROJECT, GOODARZ AHMADI, David J. Schmidt, John McLaughlin, Cetin Cetinkaya, Stephen Doheny-Farina, Jeffrey Taylor, Suresh Dhaniyala, Clarkson University, Potsdam, NY 13699; Fa-Gung Fan, Xerox Corporation, Rochester, NY 14580.

3PE7 FLOW AND ELECTRIC FIELDS IN CORONA DEVICES WITH MOVING BOUNDARY, PARSZAMANKHAN, Goodarz Ahmadi, 1Department of Mechanical and Aeronautical Engineering Clarkson University, Potsdam, NY, 13699-5725 Fa-Gung Fan, J.C. Wilson Center for Research and Technology Xerox Corporation, Webster, NY, 14580.

3PE8 SAMPLING FROM MOBILE PLATFORMS: COMPUTATIONAL INVESTIGATIONS, Anita Natarajan, SURESH DHANIYALA, Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY, 13699.

3PE9 CALIBRATION OF A MICROPARTICLE SAMPLING SYSTEM FOR INTERPLANETARY PROBES, THOMAS SZAREK and Patrick F. Dunn, Particle Dynamics Laboratory, University of Notre Dame, Notre Dame, IN; Francesca Esposito, Instituto Nazionala di Astrofisica, Osservatorio Astronomico di Capodimonte, Naples, Italy.

TUESDAY, OCTOBER 05, 2004

7:00 PM – Membership and Alumni dinners

WEDNESDAY, OCTOBER 06, 2004

3:00 AM – 2:00 PM Poster #1 Move Out

WEDNESDAY, OCTOBER 06, 2004

7:00 AM – 5:30 PM Registration
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WEDNESDAY, OCTOBER 06, 2004

8:00 AM – 9:00 AM  Plenary Session #2

PARTICULATE MATTER MODELING AND RECONCILING PM SOURCE
APPORTIONMENT METHODS, Armisted G. (Ted) Russell, Georgia Institute of
Technology.

WEDNESDAY, OCTOBER 06, 2004

9:00 AM – 8:00PM  Exhibits Open

WEDNESDAY, OCTOBER 06, 2004

9:20 AM – 10:50 AM  Platform Session 4

9:20 AM – 10:50 AM

4A.  Special Symposia: Microdosimetry & Targeting of Inhaled Particles and Drug
Aerosols, Microdose-response Relationship

4A1  MICRODOSIMETRY OF INHALED PARTICLES: DOSE-RESPONSE
RELATIONSHIPS DEFINED BY SITE-SPECIFIC LUNG CHANGES, KENT
PINKERTON, Alan Buckpitt, Charles Plpoper, School of Veterinary Medicine, University
of California, Davis, CA.

4A2  DISTRIBUTION AND CLEARANCE OF INHALED PARTICLES AT THE
ULTRASTRUCTURAL LEVEL, MARIANNE GEISER, Nadine Kapp, Peter Gehr,
Institute of Anatomy, University of Bern, Bern, Switzerland; Samuel Schürch, Department
of Physiology and Biophysics, The University of Calgary, Calgary, Canada.

4A3  LUNG CELL RESPONSES TO PM2.5 PARTICLES FROM DESERT SOILS, JOHN
VERANTH, Garold Yost, University of Utah, Salt Lake City, UT.

4A4  THE RESPIRATORY TRACT AS PORTAL OF ENTRY FOR INHALED NANO-
SIZED PARTICLES, GÜNTER OBERDÖRSTER, University of Rochester, Rochester,
NY.

9:20 AM – 10:50 AM

4B.  Combustion and Environmental Particle Formation I

4B1  CHARACTERIZATION OF THE FINE PARTICLE EMISSIONS FROM A CFM56
COMMERCIAL AIRCRAFT ENGINE, JOHN KINSEY, Lee Beck, Michael Hays, U. S.
Environmental Protection Agency, Office of Research and Development, National Risk
Management Research Laboratory, Research Triangle Park, NC 27711 Craig Williams,
Russell Logan, Tom Balicki, Yuanji Dong, ARCADIS-Geraghty & Miller, Durham, NC
27709.

4B2  COMPREHENSIVE CHARACTERIZATION OF PARTICULATES SAMPLED FROM
THE EXHAUSTS OF INTERNAL COMBUSTION ENGINES, Adam K. Neer, UMIT O.
KOYLU, University of Missouri-Rolla, Rolla, MO.

4B3  PARTICULATE AND SPECIATED SEMI-VOLATILE ORGANIC COMPOUND
(SVOC) EMISSIONS FROM ON-ROAD DIESEL VEHICLE OPERATION, SANDIP
SHAH, Temitope Ogunyoku, David Cocker, University of California, Riverside, CA.
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4B4 CHEMICAL AND PHYSICAL PROPERTIES OF SUB-MICRON PARTICLE EMISSION FROM A DIESEL ENGINE, MICHAEL ALEXANDER, Jian Wang, Yong Cat, Alla Zelenyuk, Pacific NW National Laboratory, Richland, WA, John Storey, Oak Ridge National Laboratory; Oak Ridge, TN, Jay Slowik, Boston College, Chestnut Hill, MA, Jay Slowik, Peter DeCarlo, Jose Jimenez, University of Colorado, Boulder, CO, Douglas Worsnop, Aerodyne Research, Inc., Billerica, MA.

4PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 4PB(one minute each).

9:20 AM – 10:50 AM

4C. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol I

4C1 SEARCH: THE BEGINNING OF AN AEROSOL CLIMATOLOGY FOR THE SOUTHEASTERN U.S., Eric Edgerton, ARA, Inc.

4C2 SEARCHING FOR SECONDARY CARBON IN SEMI-CONTINUOUS OBSERVATIONS, Charles Blanchard, Envair, Albany, CA; GEORGE HIDY, Envair/Aerochem, Placitas, NM.

4C3 SPATIAL AND TEMPORAL VARIATIONS OF THE MAJOR SOURCES OF PRIMARY FINE ORGANIC CARBON AND PM2.5 IN THE SOUTHEASTERN UNITED STATES, MEI ZHENG, Lin Ke, School of Earth and Atmospheric Science, Georgia Institute of Technology, Atlanta, GA; Sun-Kyoung Park, School of Civil and Environmental Engineering, Georgia Institute of Technology, GA; Eric Edgerton, Atmospheric Research & Analysis, Inc., Cary, NC; Armistead Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, GA.

4C4 CONTINUOUS MONITORING OF FINE MASS AND COMPOSITION IN THE SMOKIES: DIURNAL AND SEASONAL LEVELS OF MAJOR PM2.5 AEROSOL CONSTITUENTS, ROGER L. TANNER, Myra L. Valente, Solomon T. Bairai, Ralph J. Valente, Kenneth J. Olszyna, Tennessee Valley Authority, Muscle Shoals, AL; Jim Renfro, National Park Service, Gatlinburg, TN.

4PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 4PC(one minute each).

9:20 AM – 10:50 AM

4D. Carbonaceous Aerosols I

4D1 CONCENTRATIONS, TIME VARIATIONS, SIZE DISTRIBUTIONS, AND MASS SPECTRA OF ESTIMATED PRIMARY AND OXYGENATED AEROSOLS IN MULTIPLE URBAN, RURAL, AND REMOTE LOCATIONS FROM AMS DATA, JOSE L. JIMENEZ, Qi Zhang, Katja Dzepina, and Alice Delia, University of Colorado-Boulder, CO; Frank Drewnick, Max Plank Institute, Mainz, Germany; Silke Weimer, and Ken Demerjian, SUNY-Albany, NY; Rami Alfarra, James Allan, Hugh Coe, and Keith Bower, UMIST, Manchester, UK; Manjula R. Canagaratna, Douglas R. Worsnop, Timothy Onasch, Hacene Boudries, and John T. Jayne, Aerodyne Research, Billerica, MA.

4D2 ANALYSIS OF WATER SOLUBLE SHORT CHAIN ORGANIC ACIDS IN AMBIENT PARTICULATE MATTER, RAMYA SUNDER RAMAN and Philip K Hopke, Clarkson University, Potsdam, NY.

4D3 POLARITY AND MOLECULAR WEIGHT/CARBON WEIGHT OF THE PITTSBURGH ORGANIC AEROSOL, ANDREA POLIDORI, Barbara Turpin, Ho-Jin Lim, Lisa Totten, Rutgers University, Environmental Sciences, New Brunswick, NJ; Cliff Davidson, Carnegie Mellon University, Pittsburgh, PA.
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4D4 IMPROVING ORGANIC AEROSOL MODELS BY COMBINING TRADITIONAL AND TEMPERATURE-RAMPED SMOG CHAMBER EXPERIMENTS: ALPHA PINENE OZONOLYSIS CASE STUDY, CHARLES STANIER, Carnegie Mellon University, Pittsburgh, PA (Currently at the University of Iowa, Iowa City, IA); Spyros Pandis, University of Patras, Patra, Greece, and Carnegie Mellon University, Pittsburgh, PA.

4PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 4PD(one minute each).

9:20 AM – 10:50 AM
4E. Cloud Condensation Nuclei/Hygroscopicity

4E1 CCN ACTIVITY, WETTING, AND MORPHOLOGY OF AEROSOLS USING AN ENVIRONMENTAL SCANNING ELECTRON MICROSCOPE, TIMOTHY RAYMOND, Ryan Johngrass, Bucknell University, Lewisburg, PA.

4E2 CLOUD CONDENSATION NUCLEI ACTIVATION OF SINGLE-COMPONENT AND SECONDARY ORGANIC AEROSOL, KARA HUFF HARTZ, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA; Thomas Rosenoern, Department of Chemistry, University of Copenhagen, Copenhagen, Denmark; Timothy M. Raymond, Department of Chemical Engineering, Bucknell University, Lewisburg, PA; Shaun R. Ferchak, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA; Merete Bilde, Department of Chemistry, University of Copenhagen, Copenhagen, Denmark; Spyros N. Pandis, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA and Department of Chemical Engineering, University of Patras, Patra, Greece.

4E3 HYGROSCOPIC PROPERTIES OF THE AEROSOL MEASURED AT THE ATMOSPHERIC RADIATION MEASUREMENT SOUTHERN GREAT PLAINS SITE, ROBERTO GASPARINI, Runjun Li, Don R. Collins, Texas A&M University, College Station, TX; Richard A. Ferrare, National Aeronautics and Space Administration, Hampton, VA.

4E4 HYGROSCOPICITY OF SMOKE AEROSOLS FROM SEVERAL DIFFERENT FOREST FUELS, DEREK E. DAY, CIRA Colorado State Univ, William C. Malm, National Park Service, Christian Carrico, Guenter Engling, Atmospheric Science Dept Colorado State Univ.

4PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 4PE(one minute each).

WEDNESDAY, OCTOBER 06, 2004

11:10 AM – 12:40 PM Platform Session 5

11:10 AM – 12:40 PM
5A. Special Symposia: Microdosimetry & Targeting of Inhaled Particles and Drug Aerosols, Targeted Delivery of Aerosol Drugs

5A1 POSSIBILITIES AND LIMITATIONS FOR TARGETING OF PHARMACEUTICAL AEROSOLS, A R Clark.

5A2 IN VITRO AND IN VIVO DOSE DELIVERY CHARACTERISTICS OF LARGE POROUS PARTICLES, CRAIG DUNBAR, Mark DeLong, Alkermes, Inc., Cambridge, MA 02139.

5A3 USING COMPUTER MODELLING OF THE NASAL PASSAGES TO OPTIMISE NASAL DRUG DELIVERY DEVICES, COLIN DICKENS, Richard Harrison, Joseph
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Sargent, Jeremy Southall, Bespak, Milton Keynes, UK; Julia Kimbell, Bahman Asgharian, Rebecca Segal, Jeffry Schroeter, Frederick Miller, CIIT Centers for Health Research, NC, US.

5A4 TARGETING THE LUNGS: DEPOSITION AND FLUID MOTION MEASUREMENTS IN REALISTIC MOUTH-THROAT REPLICA, WARREN H. FINLAY, Biljana Grgic, Anthony Heenan, University of Alberta, AB; Andrew Pollard, Queen’s University, ON; Patricia K. P. Burnell, GlaxoSmithKline, UK.

11:10 AM – 12:40 PM

5B. Filtration

5B1 CFD MODELING OF FILTER FIBERS WITH NON-CIRCULAR CROSS SECTIONS, PETER C. RAYNOR, Seung Won Kim, University of Minnesota, Minneapolis, MN.

5B2 APPLICATION OF RESIN WOOL FILTERS TO DUST RESPIRATORS, Hisashi Yuasa, Kazushi Kimura, Koken Ltd, Saitama, Japan; YOSHI&12288; OTANI and Hitoshi Emi, Kanazawa University, Kanazawa, Japan.

5B3 RETENTION OF BIOAEROSOLS AND DISINFECTION CAPABILITY OF A RELEASE-ON-DEMAND IODINE/RESIN PRODUCT, SHANNA RATNESAR-SHUMATE, Chang-Yu Wu, Dale Lundgren, Department of Environmental Engineering Sciences, University of Florida, Gainesville, FL; Samuel Farrah, Department of Microbiology and Cell Sciences, University of Florida, Gainesville, FL; Prinda Wanakule, Department of Agricultural and Biological Engineering, University of Florida, Gainesville, FL; Joseph Wander, Air Force Research Laboratory, Tyndall Air Force Base, Panama City, FL.

5B4 EVALUATION OF EMISSION RATES FROM HEPA FILTERS AS A FUNCTION OF CHALLENGE CONDITIONS, R. Arunkumar, J. Etheridge, J. C. Luthe, B. A. Nagel, O. P. Norton, M. Parsons, D. Rogers, K. Umfress, and C. A. WAGGONER.

5PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 5PB(one minute each).

11:10 AM – 12:40 PM

5C. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol II

5C1 EVIDENCE OF SECONDARY AEROSOL FORMATION FROM PHOTOOXIDATION OF MONOTERPENES IN THE SOUTHEASTERN UNITED STATES, MOHAMMED JAOU, Eric Corse, ManTech Environmental Technology, Inc., Research Triangle Park, NC; Tadeusz Kleindienst, Michael Lewandowski, John Offenberg, Edward Edney, U.S. Environmental Protection Agency, Research Triangle Park, NC.

5C2 AEROSOL FLUXES ABOVE A PINE FOREST AS INFLUENCED BY THE FORMATION OF SECONDARY BIOGENIC AEROSOL, EIKO NEMITZ, David Anderson, Centre for Ecology and Hydrology (CEH), Edinburgh, U.K.; Brad Baker, Atmospheric Sciences, South Dakota School of Mines, SD; Thomas Karl, Craig Stroud, Alex B. Guenther, Atmospheric Chemistry Division, NCAR, Boulder, CO; Jose-Luis Jimenez, Alex Huffman, Alice Delia, University of Colorado / CIRES, Boulder, CO; Manjula Canagaratna, Douglas Worsnop, Aerodyne Research Inc., Billerica, MA.

5C3 RADIOCARBON MEASUREMENT OF THE BIOGENIC CARBON CONTRIBUTION TO PM-2.5 AMBIENT AEROSOL NEAR TAMPA FL, CHARLES LEWIS, U.S. EPA, Research Triangle Park, NC; David Stiles, ManTech Environmental Technology, Inc., Research Triangle Park, NC; Thomas Atkeson, Florida Dept. of Environmental Protection, Tallahassee, FL.
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5C4 CHEMICAL CHARACTERIZATION OF ATMOSPHERIC AEROSOL IN SUPPORT OF ARIES HEALTH STUDY: PARTICLE AND MULTIPHASE ORGANICS, BARBARA ZIELINSKA, Hazem El-Zanan, Desert Research Institute, Reno, NV; D.Alan Hansen, EPRI, Palo Alto, CA.

5PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 5PC(one minute each).

11:10 AM – 12:40 PM

5D. Carbonaceous Aerosols II

5D1 SPECIATION OF ORGANICS IN PM-2.5 FOR THE NEW YORK CITY AREA, MIN LI, Department of Civil & Environmental Engineering, 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, Environmental Characterization and Apportionment Branch, U.S. EPA, Research Triangle Park, NC.

5D2 SYNTHESIS OF SOURCE APPORTIONMENT ESTIMATES OF ORGANIC AEROSOL IN THE PITTSBURGH REGION, ALLEN ROBINSON, R. Subramanian, Tim Gaydos, Spyros Pandis Carnegie Mellon University, Pittsburgh, PA 15213 Anna Bernardo-Bricker and Wolfgang Rogge Florida International University, Miami, FL 33199 Andrea Polidori and Barb Turpin Rutgers University, New Brunswick, NJ 08901 Lisa Clarke and Mark Hernandez University of Colorado, Boulder, CO 80309.

5D3 THERMAL DESORPTION-GCMS WITH SILYLATION DERIVATIZATION FOR ANALYSIS OF POLAR ORGANICS FOUND IN AMBIENT PM2.5 SAMPLES, REBECCA SHEESLEY, James Schauer, University of Wisconsin-Madison, Environmental Chemistry and Technology Program, Madison, WI; Mark Meiritz, Jeff DeMinter, University of Wisconsin-Madison, State Lab of Hygiene, Madison, WI.

5D4 SPECIATED ORGANIC COMPOSITION OF ATMOSPHERIC AEROSOLS: A NEW, IN-SITU INSTRUMENT, BRENT J. WILLIAMS, Allen H. Goldstein, University of California, Berkeley, CA; Nathan M. Kreisberg, Susanne V. Hering, Aerosol Dynamics Inc., Berkeley, CA.

5PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 5PD(one minute each).

11:10 AM – 12:40 PM

5E. Chemical Characterization of Atmospheric Aerosols 1

5E1 AIR QUALITY IMPACTS OF THE OCTOBER 2003 SOUTHERN CALIFORNIA WILDFIRES, HARISH C. PHULERIA, Philip M. Fine, Yifang Zhu, and Constantinos Sioutas, University of Southern California, Los Angeles, CA.

5E2 PROGRAM POVA (POLLUTION DES VALLEES ALPINES) : GENERAL PRESENTATION AND SOME HIGHLIGHTS, Jean-Luc JAFFREZO, LGGE, Grenoble, France Didier Chapuis, AIR-APS, Chambéry, France.

5E3 FINE PARTICLE COMPOSITION AND CHEMISTRY DURING WINTERTIME INVERSIONS AND PM2.5 EXCEEDANCES IN LOGAN, UTAH, PHILIP J. SILVA, Mark Eurupe, Eric Vawdrey, Misty Corbett, Department of Chemistry and Biochemistry, Utah State University, Logan, UT.

5E4 GAS-PARTICLE PARTITIONING OF REACTIVE MERCURY, ANDREW RUTTER, James Schauer, University of Wisconsin-Madison, Madison, WI 53706.

5PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 5PE(one minute each).
2:00 PM – 3:30 PM

6A. Deposition in the Lung

6A1 MEASUREMENT OF THE EFFECT OF CARTILAGINOUS RINGS ON PARTICLE DEPOSITION IN A PROXIMAL LUNG BIFURCATION REPLICA, YU ZHANG
Warren H. Finlay Dept. of Mechanical Engineering University of Alberta Edmonton, Alberta Canada.

6A2 DEPOSITION OF CARBON FIBER IN A HUMAN AIRWAY CAST, WEI-CHUNG SU, Yue Zhou, Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM.

6A3 IMPROVING PREDICTIONS OF MOUTH DEPOSITION USING LARGE EDDY SIMULATION, Edgar A. Matida, WARREN H. FINLAY, Carlos. F. Lange, University of Alberta, Edmonton, AB, Canada Michael Breuer, Institute of Fluid Mechanics, University of Erlangen-Nuremberg, Erlangen, Bavaria, Germany.

6A4 DEPOSITION OF ULTRAFINE PARTICLES AT CARINAL RIDGES OF THE UPPER AIRWAYS, DAVID M. BRODAY, Faculty of Civil and Environmental Engineering, Technion I.I.T, Haifa, Israel.

6PA POSTER PREVIEW, This session ends with a brief presentation of posters from Session 6PA(one minute each).

2:00 PM – 3:30 PM

6B. Combustion and Environmental Particle Formation II

6B1 THE INFLUENCE OF A CERIUM ADDITIVE ON ULTRAFINE DIESEL PARTICLES EMISSIONS AND KINETICS OF OXIDATION, 1. Heejung Jung, University of California at Davis, Dept. of MAE (Mechanical & Aeronautical Engineering) & LAWR (Land, Air, Water Resources), One Shields Ave, Davis, CA 95616 2. David B. Kittelson, University of Minnesota, Dept. of Mechanical Engineering, 111 Church St. SE, MN 55455 3. Michael R. Zachariah, University of Maryland, Dept. of Chemistry & Mechanical Engineering, 2181 Glenn L. Martin Hall, College Park, MD 20742.

6B2 ON-BOARD DIESEL AND HYBRID DIESEL-ELECTRIC TRANSIT BUS PM MASS, PARTICLE NUMBER DISTRIBUTIONS, AND SIZE-RESOLVED NUMBER CONCENTRATIONS, BRITT A. HOLMEN, Derek Vikara, Zhong Chen, Ruben Mamani-Paco, University of Connecticut, Storrs, CT; John Warhola, CT TRANSIT, Hartford, CT.

6B3 EFFECTS OF DILUTION RATIO AND RESIDENCE TIME ON THE PARTITIONING OF SEMI-VOLATILE ORGANIC CARBON IN EMISSIONS FROM A WOOD STOVE AND DIESEL ENGINE, ERIC LIPSKY, Allen Robinson, Carnegie Mellon University, Pittsburgh, PA.
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6B4 OAK RIDGE ENGINE AEROSOL CHARACTERIZATION (OREACH) 2004: OVERVIEW, ENGINE CHARACTERISTICS AND SUMMARY OF EFFORTS IN 2003, JOHN STOREY; Mike Kass.

6PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 6PB(one minute each).

2:00 PM – 3:30 PM

6C. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol III

6C1 OPTIMIZATION-BASED SOURCE APPORTIONMENT OF PM2.5 INCORPORATING GAS-TO-PARTICLE RATIOS, AMIT MARMUR, Alper Unal, Armistead G. Russell, James A. Mulholland School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, Georgia 30332-0512.

6C2 A COMPARISON OF MODEL PERFORMANCE OF CMAQ, MADRID-1, MADRID-2 AND REMSAD, ELIZABETH BAILEY, Larry Gautney, Mary Jacobs, Jimmie Kelsoe, Tennessee Valley Authority, Muscle Shoals, AL; Betty Pun, Christian Seigneur, Atmospheric and Environmental Research, Inc., San Ramon, CA; Sharon Douglas, Jay Haney, ICF Consulting/Systems Applications International, San Rafael, CA; Naresh Kumar, EPRI, Palo Alto, CA.

6C3 COMPARING THE RESPONSE OF CMAQ, MADRID-1, MADRID-2 AND REMSAD TO CHANGES IN PRECURSOR EMISSIONS, BETTY PUN, Christian Seigneur, Atmospheric & Environmental Research, Inc., San Ramon, CA; Elizabeth Bailey, Larry Gautney, Mary Jacobs, Jimmie Kelsoe, Tennessee Valley Authority, Muscle Shoals, AL; Sharon Douglas, Jay Haney, ICF Consulting/SAI, San Rafael, CA; Naresh Kumar, EPRI, Palo Alto, CA.

6C4 COMPARISON OF FRM EQUIVALENT AND BEST ESTIMATE METHODS FOR ESTIMATING FUTURE-YEAR PM2.5 DESIGN VALUES, SHARON DOUGLAS, Geoffrey Glass, ICF Consulting/SAI, San Rafael, CA; Eric Edgerton, Atmospheric Research & Analysis, Inc., Cary, NC; Ivar Tombach, Environmental Consulting, Camarillo, CA; John Jansen, Southern Company, Birmingham, AL.

6PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 6PC(one minute each).

2:00 PM – 3:30 PM

6D. Carbonaceous Aerosol Analysis Instrumentation

6D1 ON-LINE MEASUREMENTS OF AMBIENT PARTICLE HUMIC-LIKE SUBSTANCES (HULIS) USING A PARTICLE-INTO-LIQUID-SAMPLER (PILS) COUPLED TO A TOTAL ORGANIC CARBON (TOC) ANALYZER AND XAD-8 COLUMN, AMY SULLIVAN, Rodney Weber, Georgia Institute of Technology, Atlanta, GA; Andrea Clements, Jay Turner, Environmental Engineering Program, Washington University, St. Louis, MO; Min-suk Bae, James Schauer, University of Wisconsin-Madison, Madison, WI.

6D2 FAST PORTABLE BLACK CARBON ANALYSER BASED ON RAMAN-SPECTROSCOPY, ALEXANDER STRATMANN, Gustav Schweiger, Laseranwendungstechnik & Messsysteme, Maschinenbau, Ruhr-Universität Bochum, Germany.

6D2 A SYSTEM FOR AUTOMATIC MEASUREMENTS OF TOTAL AND WATER SOLUBLE CARBONACEOUS AEROSOL, ANDREY KHLYSTOV, Duke University, Durham, NC 27708.
6D4 NITROGEN SPECIATION IN SIZE FRACTIONATED ATMOSPHERIC AEROSOLS COLLECTED IN SHORT TIME INTERVAL, S. TÖRÖK, J. Osán, KFKI Atomic Energy Research Institute, Budapest, Hungary; B. Beckhoff, Physikalisch-Technische Bundesanstalt, Berlin, Germany.

6PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 6PD(one minute each).

2:00 PM – 3:30 PM

6E. Aerosol Physical Properties

6E1 THE IMPACT OF INHOMOGENEITY OF AEROSOL DROPLETS ON THEIR OPTICAL CHARACTERISTICS, Lucas Wind, Linda Hofer, Paul Winkler, Aharon Vrtala and W.W. VLADEK SZYMANJSKI, Institute of Experimental Physics, University of Vienna, Vienna, Austria.

6E2 SURFACE VISCOSITY EFFECTS ON NA SALT PARTICLES FROM BUBBLE BURSTING, Elizabeth G. Singh, Dupont, Wilmington, DE; LYNN M. RUSSELL, Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA.

6E3 CHARGE LIMIT ON EVAPORATING DROPLETS DURING PRECIPITATION OF SOLUTES, Kuo-Yen Li, ASIT K. RAY, Department of Chemical Engineering, University of Kentucky, Lexington, KY 40506-0045.

6E4 ION BEAM CHARGING OF AEROSOL NANOPARTICLES, TAKAFUMI SETO, Takaaki Orii, Hiromu Sakurai, Makoto Hiraseawa, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, JAPAN.

6PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 6PE(one minute each).

WEDNESDAY, OCTOBER 06, 2004

3:00 PM – 5:30 PM Poster #2 Set Up

WEDNESDAY, OCTOBER 06, 2004

3:30 PM – 5:30 PM Working Group Meetings (Staggered)

WEDNESDAY, OCTOBER 06, 2004

6:00 PM – 8:00 PM Exhibitor Reception & Posters # 2 Sneak Peek

6:00 PM – 8:00 PM

4PB. Combustion and Environmental Particle Formation I

4PB1 ON THE SIZE DISTRIBUTIONS OF NEUTRAL AND CHARGED PARTICLES FORMED IN PREMIXED FLAMES, MATTI MARICQ.

4PB2 ON THE USE OF LASER-INDUCED IONIZATION TO DETECT SOOT INCINERATION IN PREMIXED FLAMES, Samuel L. Manzello, George W. Mulholland, National Institute of Standards and Technology, Gaithersburg, MD USA; Eui Ju Lee, Korea Institute of Construction and Technology, Il-San City, South Korea.

4PB3 EFFECT OF FUEL TO OXYGEN RATIO ON PHYSICAL AND CHEMICAL PROPERTIES OF SOOT PARTICLES, JAY G. SLOWIK, Katherine Stainken, Paul
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Davidovits, Boston College, Chestnut Hill, MA; Leah R. Williams, John T. Jayne, Charles E. Kolb, Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA; Ynon Rudich, Weizmann Institute, Rehovot, Israel; Peter DeCarlo, Jose L. Jimenez, University of Colorado at Boulder, Boulder, CO.

4PB4 EMISSIONS OF PARTICULATE MATTER, SELECTED PAHS AND PHENOLS FROM AGRICULTURAL BURNING IN EASTERN WASHINGTON AND NORTH IDAHO, RANIL DHAMMAPALA, Candis Claiborn, Dept of Civil & Environmental Engineering, Washington State University, Pullman, WA; Jeff Corkill, Dept of Chemistry & Biochemistry, Eastern Washington University, Cheney, WA; Brian Gullett, US EPA, National Risk Management Research Laboratory, Research Triangle Park, NC.

4PB5 COMPARISONS OF PM2.5 EMISSION OF EPA METHOD 201A/202 AND CONDITIONAL TEST METHOD 39 AT THE CASTING PROCESS, M.-C. OLIVER CHANG, Judith Chow, John Watson, Desert Research Institute Sue Anne Sheya, Cliff Glowacki, Anil Prabhu, Technikon, LLC.

4PB6 MEASUREMENT OF DILUTION CHARACTERISTICS FOR TAILPIPE EMISSIONS FROM VEHICLES, VICTOR W. CHANG, Lynn M. Hildemann, Stanford University, Stanford, CA; Cheng-Hsin Chang, Kuang-Jung Cheng, Tamkang University, Tamsui, Taiwan.

4PB7 CHEMICAL COMPOSITION AND RADIATION ABSORPTION OF AEROSOL EMISSIONS FROM BIOFUEL COMBUSTION: IMPLICATIONS FOR REGIONAL CLIMATE, GAZALA HABIB, Chandra Venkataraman, Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai Mumbai, MH Arantza Eiguren-Fernandez, Antonio H. Miguel, Southern California Particle Center and Supersite, Chemical Analysis Laboratory, University of California Los Angeles, CA Sheldon K. Friedlander, Department of Chemical Engineering, University of California Los Angeles, CA James J. Schauer, Environmental Chemistry and Technology Program, University of Wisconsin-Madison, Madison, WI T. C. Bond, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Newmark Civil Engineering Laboratory MC-250, 205 N. Mathews Ave, Urbana, IL.

4PB8 HIGH TEMPERATURE SORPTION OF CESIUM AND STRONTIUM ON KAOLINITE POWDERS IN COMBUSTORS, Jong-Ik Yoo, Takuya Shinagawa, Joseph P. Wood, WILLIAM P. LINAK, U.S. Environmental Protection Agency, Research Triangle Park, NC; Dawn A. Santoianni, Charles J. King, ARCADIS Geraghty & Miller, Inc., Durham, NC; Yong-Chil Seo, Yonsei University, Wonju, Korea; Jost O.L. Wendt, University of Arizona, Tucson, AZ.

4PB9 SIZE DISTRIBUTED CHEMICAL COMPOSITION OF FINE PARTICLES EMITTED FROM BURNING ASIAN COALS, ZOHIR CHOWDHURY, Glen R. Cass, Armistead G. Russell, Georgia Institute of Technology, Atlanta, GA 30332; David Wagner, Adel F. Sarofim, JoAnn Lighty, Department of Chemical Engineering, University of Utah, Salt Lake City, UT 84112; James J. Schauer, Environmental Chemistry and Technology Program, University of Wisconsin-Madison, Madison, WI 53706; and Lynn G. Salmon, Environmental Science and Engineering, MC 138-78, California Institute of Technology, Pasadena, CA 91125.

4PB10 INFLUENCE OF TRAFFIC DENSITY ON HEAVY-DUTY DIESEL VEHICLE EMISSIONS, ANIKET SAWANT, David Cocker, University of California, Riverside, CA.

4PB11 CONCENTRATION AND SIZE DISTRIBUTION OF PARTICLES ARISING FROM PLASMA ARC CUTTING, ARI UKKONEN, Dekati ltd., Tampere, Finland; Heikki Kasurinen, Helsinki Univ. of Technology Lab. of Eng. Materials, Helsinki, Finland.

4PB12 OAK RIDGE ENGINE AEROSOL CHARACTERIZATION (OREACH) 2004: REAL-TIME MEASUREMENTS OF DIESEL PARTICULATE MATTER USING LASER-INDUCED INCANDESCENCE AND LASER-INDUCED DESORPTION WITH
6:00 PM – 8:00 PM

4PC. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol I

4PC1 CLOUD ACTIVATING PROPERTIES OF AEROSOL OBSERVED DURING THE CELTIC FIELD STUDY, CRAIG STROUD, Roelof Bruinjte, Sreela Nandi, National Center for Atmospheric Research, Boulder, CO; Eiko Nemitz, Centre for Ecology and Hydrology, Edinburgh, U.K.; Alice Delia, Darin Toohey, Program in Atmospheric and Oceanic Sciences, University of Colorado, Boulder, CO; Jose Jimenez, Peter DeCarlo, Alex Huffman, Department of Chemistry and Biochemistry, University of Colorado, Boulder, CO; Athanasios Nenes, Department of Atmospheric Science, Georgia Institute of Technology, Atlanta, GA.

4PC2 GROWTH OF THE ATMOSPHERIC NANOPARTICLE MODE — COMPARISON OF MEASUREMENTS AND THEORY, MARK R. STOLZENBURG, Peter H. McMurry, Melissa Fink, University of Minnesota, Minneapolis, MN; Charles F. Clement, Envirosc-Quantsci, Wantage, Oxon, UK; Hiromu Sakurai, AIST, Tsukuba, Ibaraki, Japan; Fred L. Eisele, James N. Smith, Roy L. Mauldin, Edward Koschuch, Katharine F. Moore, National Center for Atmospheric Research, Boulder, CO.

4PC3 MACROMOLECULES IN AMBIENT AIR, MURRAY JOHNSTON, Ann Snellinger, Michael Tolocka, Chemistry and Biochemistry Department, University of Delaware, Newark, DE.

4PC4 PARTICLE SIZE DISTRIBUTION AND ATMOSPHERIC METALS MEASUREMENTS IN A RURAL AREA IN THE SE USA, Michael Goforth, CHRISTOS CHRISTOFOROU, School of the Environment, Clemson University, Clemson, SC.

4PC5 SIZE SPECIFIC SPECIATION OF FINE PARTICULATE MATTER IN RURAL CENTRAL GEORGIA: RESULTS FROM THE GRASP PROGRAM, JAMES R PEARSON, Michael O. Rodgers, Avatar Environtech and Air Quality Laborotory, Civil and Environmental Engineering, Georgia Tech.

4PC6 SIZE-RESOLVED MEASUREMENT OF WATER-INSOLUBLE AEROSOL IN NEAR REAL-TIME IN URBAN ATLANTA, ROBY GREENWALD, Michael H. Bergin, Gayle S.W. Hagler, Rodney Weber, Georgia Institute of Technology, Atlanta, Georgia.

4PC7 COMPOSITION OF PM2.5 DURING THE SUMMER OF 2003 IN RESEARCH TRIANGLE PARK, NORTH CAROLINA, USA, MICHAEL LEWANDOWSKI, Tadeusz Kleindienst, Edward Edney, U.S. Environmental Protection Agency, Research Triangle Park, NC; Mohammed Jaoui, ManTech Environmental Technology, Inc., Research Triangle Park, NC.

6:00 PM – 8:00 PM

4PD. Carbonaceous Aerosols I

4PD1 PERIODIC STRUCTURE OF CONCENTRATION FIELDS OF ATMOSPHERIC BIOAEROSOLS IN THE TROPOSPHERE OF THE SOUTH OF WESTERN SIBERIA, ALEXANDER BORODULIN, Alexander Safatov, SRC VB "Vector", Koltsovo, Novosibirsk region, Russia; Olga Khutorova, Kazan State University, Kazan, Russia; Boris Belan, Mikhail Pancenko, IAO SB RAS, Tomsk, Russia.

4PD2 ACCUMULATED IN SNOW COVER BIOGENIC COMPONENT OF ATMOSPHERIC AEROSOL IN RURAL AND URBAN REGIONS, ALEXANDER S. SAFATOV, Galina A. Buryak, Irina S. Andreeva, Alexander I. Borodulin, Yuriy V.
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Marchenko, Sergei E. Ol’kin, Irina K. Reznikova, State Research Center of Virology and Biotechnology “Vector”, Koltsovo, Novosibirsk Region, Russia; Vladimir F. Raputa, Institute of Computation Mathematics and Mathematical Geophysics, SB RAS, Novosibirsk, Russia; Vasilij V. Kokovkin, Institute of Inorganic Chemistry, SB RAS, Novosibirsk, Russia.

4PD3 REAL TIME ASSESSMENT OF WOOD SMOKE PM: A PILOT STUDY, GEORGE Allen, NESCAUM, Boston MA Peter Babich, Richard Poirot, VT APCD, Waterbury VT.

4PD4 ESTIMATION OF ORGANIC CARBON BLANK VALUES AND ERROR STRUCTURES OF THE SPECIATION TRENDS NETWORK DATA, EUGENE KIM, Youjun Qin, Philip K. Hopke, Clarkson University, Potsdam, NY.

4PD5 SEASONAL VARIATIONS OF EC AND OC CONCENTRATIONS IN TWO ALPINE VALLEYS, Gilles Aymoz, Jean-Luc. JAFFREZO, LGGE, Grenoble, France Didier Chapuis, AIR-APS, Chambéry, France.

4PD6 LABORATORY MEASUREMENTS OF PARTICLE NUCLEATION IN MONOTERPENE OZONOLYSIS, JAMES B. BURKHOLDER, Tahllee Baynard, Edward R. Lovejoy, A.R. Ravishankara, Aeronomy Laboraory, National Oceanic and Atmospheric Administration, Boulder, CO.

4PD7 ORGANIC SPECIATION SAMPLING ARTIFACTS, Tanasri Sihabut, Environmental Science Program, Drexel University, Philadelphia, PA; Joshua W. Ray, Bureau of Air Monitoring, New Jersey Department of Environmental Protection, Trenton, NJ; Amanda L. Northcross, Department of Environmental Science and Engineering, University of North Carolina, Chapel Hill, NC; STEPHEN R. MCDOW, EPA, Research Triangle Park, NC.

4PD8 MEASUREMENTS OF PHYSICAL AND CHEMICAL PROPERTIES OF SECONDARY ORGANIC AEROSOLS (SOA) FROM CHAMBER STUDIES USING THE AERODYNE AEROSOL MASS SPECTROMETER (AMS), ROYA BAHERINI, Melita Keywood*, Nga Lee Ng, Varuntida Varutbangkul, Richard C. Flagan, John H. Seinfeld, California Institute of Technology, Pasadena, CA; *Now at CSIRO, Victoria, Australia; Douglas R. Worsnop, Manjula R. Canagaratna, Aerodyne Research Inc., Billerica, MA; Jose. L. Jimenez, University of Colorado, Boulder, CO.

4PD9 CHARACTERISTICS OF POLYCYCLIC AROMATIC HYDROCARBONS IN URBAN AIR IN KOREA, YOUNG SUNG GHIM, Hyoung Seop Kim, Air Resources Research Center, Korea Institute of Science and Technology, Korea; Jong-Guk Kim, Department of Environmental Engineering, Chonbuk National University, Korea.

4PD10 SMOKE PROPERTIES DERIVED FROM THE LABORATORY COMBUSTION OF FOREST FUELS, CHRISTIAN M. CARRICO, Sonia M. Kreidenweis, Jeffrey L. Collett, Jr., Guenter Engling, Gavin R. McMeeking, Department of Atmospheric Science, Colorado State University, Fort Collins, CO; and Derek E. Day and William Malm, CIRA/National Park Service, Fort Collins, CO.

6:00 PM – 8:00 PM

4PE. Cloud Condensation Nuclei/Hygroscopicity

4PE1 RELATING PARTICLE HYGROSCOPICITY TO COMPOSITION USING AMBIENT MEASUREMENTS MADE AT EGBERT, ONTARIO, YAYNE-ABEBA AKLILU, Michael Mozurkewich, Centre for Atmospheric Chemistry, York University, 4700 Keele Street, Toronto,ON, Canada; Mahewar Rupakheti, Department of Physics and Atmospheric Science, Dalhousie University, Halifax, NS, Canada; Katherine Hayden, Richard Leaitch, Air Quality Research Branch, Meteorological Service of Canada, 4905 Dufferin Street, Toronto, ON, Canada.
4PE2  HYGROSкопICITY AND VOLATILITY OF ULTRAFINE PARTICLES FROM FILTERED DIESEL EXHAUST AEROSOLS, MELISSA FINK, David B. Kittelson, Peter H. McMurry, Jake Savstrom, Mark R. Stolzenburg, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN, USA; Hiromu Sakurai, AIST, Tsukuba, Ibaraki, Japan.

4PE3  DIRECT MEASUREMENTS OF THE HYDRATION STATE OF AMBIENT AEROSOL POPULATIONS, JOSHUA L. SANTARPIA; Runjun Li; Don R. Collins, Texas A&M University, College Station, TX.

4PE4  DERIVATION OF CCN SPECTRA AND HUMIDITY-DEPENDENT AEROSOL OPTICAL PROPERTIES USING DMA SIZE DISTRIBUTIONS AND TDMA HYGROSCOPIC GROWTH MEASUREMENTS, ROBERTO GASPARINI, Don R. Collins, Texas A&M University, College Station, TX; James G. Hudson, Desert Research Institute, Reno, NV; John A. Ogren, Patrick Sheridan, National Oceanic and Atmospheric Administration, Boulder, CO; Richard A. Ferrare, National Aeronautics and Space Administration, Hampton, VA.

4PE5  THE ALGORITHM OF ORGANIZING AN OPTIMAL NETWORK FOR MONITORING OF GAS AND AEROSOL ATMOSPHERIC POLLUTANTS OF ANTHROPOGENIC AND NATURAL ORIGINS, Boris Desyatkov, ALEXANDER BORODULIN, Sergey Sarmanaev, Natalya Lapteva, Andrei Yarygin, SRC VB "Vector", Koltsovo, Novostobirsk region, Russia.

4PE6  ASSOCIATIONS BETWEEN PARTICLE NUMBER AND GASEOUS CO-POLLUTANT CONCENTRATIONS IN THE LOS ANGELES BASIN, SATYA B. SARDAR, Philip M. Fine, Heesong Yoon, Constantinos Sioutas, University of Southern California, Los Angeles, CA.

4PE7  OPTICAL REAL-TIME CONTINUOUS PARTICULATE MONITORS AND FEDERAL REFERENCE METHOD (FRM) PM2.5 AND PM10 AIR SAMPLERS: COMPARISON AT AMBIENT CONDITIONS, KRYSTYNA TRZEPLA-NABAGLO, Paul Wakabayashi, Robert Flocchini, Crocker Nuclear Laboratory, University of California, Davis, CA.

4PE8  OPTIMIZATION OF A LOCAL AMBIENT AEROSOL MONITORING NETWORK BASED ON THE SPATIAL AND TEMPORAL VARIABILITY OF PM2.5, SERGEY A. GRINSHPUN, Dainius Martuzevicius, Tiina Reponen, Junxiang Luo, Rakesh Shukla, University of Cincinnati, Cincinnati, OH; Anna L. Kelley, Harry St. Clair, Hamilton County Department of Environmental Services, Cincinnati, OH.


4PE10  MEASUREMENTS PERFORMANCE OF CONTINUOUS PM2.5 MASS CONCENTRATION: EFFECTS OF AEROSOL COMPOSITION AND RELATIVE HUMIDITY, JONG HOON LEE, Philip K. Hopke, Thomas M. Holsen, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY 13699, USA; William E. Wilson, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, USA.

4PE11  THE BASIC PREPARATORY EXPERIMENT FOR THE DISTRIBUTION OF MERCURY IN AMBIENT AIR, RAIN, AND SOILS, HYUN-DEOK CHOI, Thomas M. Holsen, Clarkson University, Potsdam, NY.

6:00 PM – 8:00 PM
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5PB. Filtration

5PB1 INVESTIGATIONS OF NANOPARTICLE GENERATION DURING THE LASER ABLATION DECONTAMINATION, DOH-WON LEE, Oak Ridge Institute for Science and Education, Oak Ridge, TN 37831-6038; Meng-Dawn Cheng, Oak Ridge National Laboratory, Environmental Sciences Division, Oak Ridge, TN 37831-6038.

5PB2 AN INVESTIGATION OF NANOSTRUCTURED TUNGSTEN/VAPOUR/TITANIA CATALYSTS FOR THE OXIDATION OF METHANOL, NATHAN LEE, Vipul Kumar, Catherine Almquist, Paper Science and Engineering Department, Miami University, Oxford, OH.

5PB3 SEPARATION OF SUBMICRON PARTICLES WITH SPRAY NOZZLES, STEFAN LAUB, Helmut Büttner, Fritz Ebert, Particle Technology & Fluid Mechanics, University of Kaiserslautern, Postfach 3049, D-67653 Kaiserslautern, Germany.

5PB4 REMOVAL OF AEROSOL POLLUTANTS VIA AN ELECTROSTATIC COAGULATION TECHNIQUE, Yong-Jin Kim, KOREA INSTITUTE OF MACHINERY AND MATERIALS (KIMM).

5PB5 CHARACTERIZATION OF LASER-GENERATED AEROSOLS IN Nd:YAG ABLATION OF PAINT FROM CONCRETE SURFACES, François Gensdarmes, Institute for Radioprotection and Nuclear Safety (IRSN), MARIE GELEOC, Eric Weisse, Commissariat à l’Energie Atomique (CEA).

5PB6 THE FILTRATION EFFICIENCY OF AN ELECTROSTATIICALLY ENHANCED FIBROUS FILTER, MIHAI CHIRUTA, Pao K. Wang, University of Wisconsin-Madison, WI.


5PB8 SINGLE-PHASE AND MULTI-PHASE FLUID FLOW THROUGH AN ARTIFICIALLY INDUCED, CT-SCANNED FRACTURE, KAMBIZ NAZRIDOUST, Zuleima Karpyn, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY; Abraham S. Grader, Phillip M. Halleck, Energy and Geo-Environmental Engineering, Pennsylvania State University, University Park, PA; Ali R. Mazaheri, Duane H. Smith, National Energy Technology Laboratory, U.S. Department of Energy, Morgantown, WV.

5PB9 COMPUTATIONAL AND EXPERIMENTAL STUDY OF MULTI-PHASE FLUID FLOW THROUGH FLOW CELLS, WITH APPLICATION OF CO2 SEQUESTRATION, KAMBIZ NAZRIDOUST, Joshua Cook, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY; Duane H. Smith, National Energy Technology Laboratory, U.S. Department of Energy, Morgantown, WV.

5PB10 INVESTIGATIONS OF IN-USE HEAVY-DUTY DIESEL VEHICLE EMISSIONS: EFFECT OF FUEL TYPE AND CONTROL TECHNOLOGY, ANIKET SAWANT, Sandip Shah, David Cocker, University of California, Riverside, CA.

5PB11 TREATING WASTE WITH WASTE: A PRELIMINARY EVALUATION OF WELDING FUME AS A SOURCE OF IRON NANOPARTICLES FOR GROUNDWATER REMEDIATION, ANTHONY T. ZIMMER, Kevin E. Ashley, M. Eileen Birch, and Andrew D. Maynard, National Institute for Occupational Safety and Heath, Cincinnati, OH.
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5PB12  CHARGE DENSITY MEASUREMENT OF MELTBLOWN TYPE ELECTRET FILTER BY ALPHA-RAY IRRADIATION, M.-H. Lee*, D.-R. Chen and P. Biswas, Washington University in St. Louis, St. Louis, MO; Y. Otani, Kanazawa University, Kanazawa, Japan.

6:00 PM – 8:00 PM

5PC. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol II

5PC1  CONCENTRATION AND CHEMICAL COMPOSITION OF PM2.5 PARTICLES AT A RURAL SITE IN SOUTH CAROLINA, AND COMPARISON TO OTHER SE USA AEROSOL, CHRISTOS CHRISTOFOROU, Huzefa Husain, David Calhoun, School of the Environment, Clemson University, Anderson, SC; Lynn G. Salmon, EQL, Caltech, Pasadena, CA.

5PC2  INVESTIGATION INTO THE ORGANIC COMPOSITION OF AMBIENT PM2.5 PARTICLES SOLUBLE IN WATER, AMY SULLIVAN, Rodney Weber, Georgia Institute of Technology, Atlanta, GA.

5PC3  DEPENDENCE OF HYGROSCOPICITY ON COMPOSITION FOR ATMOSPHERIC PARTICLES: OBSERVATIONS MADE WITH AN AEROSOL TIME OF FLIGHT MASS SPECTROMETER-TANDEM DIFFERENTIAL MOBILITY ANALYSIS SYSTEM, DABRINA D DUTCHER, Peter H. McMurry, Particle Technology Laboratory, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN 55409; Kihong Park, Department of Mechanical Engineering, University of Maryland, College Park, MD 20742; Alexandra M. Schmitt, Deborah S. Gross, Department of Chemistry, Carleton College, Northfield, MN 55057.

5PC4  EFFECT OF NH3 ON PM2.5 COMPOSITION, KENNETH OLSZYNA, Solomon Bairai, Roger Tanner, Tennessee Valley Authority, Muscle Shoals, AL.

5PC5  UNCERTAINTY ANALYSIS OF THE MEASURED PM 2.5 CONCENTRATIONS, SUN-KYOUNG PARK, Armistead G. Russell, The Georgia Institute of Technology, Atlanta, GA.

5PC6  COMPARISON OF SEARCH AND EPA PM2.5 SPECIATION MONITOR DATA FOR SOURCE PREDICTION CALCULATIONS, DAVYDA HAMMOND, University of Alabama at Birmingham, Birmingham, AL; Ashley Williamson, Southern Research Institute, Birmingham, AL.

5PC7  COMPARISON OF OBSERVED AND CMAQ SIMULATED ATMOSPHERIC CONSTITUENTS BY FACTOR ANALYSIS, Wei Liu , Yuhang Wang, Georgia Institute of Technology, School of Earth and Atmospheric Sciences, Atlanta, GA; Amit Marmur, Armistead Russell, Georgia Institute of Technology, Civil and Environmental Engineering, Atlanta, GA; Eric S. Edgerton, Atmospheric Research and Analysis, Inc., Durham, NC.

6:00 PM – 8:00 PM

5PD. Carbonaceous Aerosols II

5PD1  CORRELATION OF EGA THERMOGRAPHIC PATTERNS AND OC/BC SOURCE REGIONS, DARREL BAUMGARDNER Graciela B. Raga Oscar Peralta.

5PD2  UNDERSTANDING THE ORIGIN OF ORGANIC ACIDS PRESENT IN SECONDARY ORGANIC AEROSOL FROM A REMOTE SAMPLING SITE IN NORTHERN MICHIGAN, REBECCA SHEESLEY, James Schauer, University of Wisconsin-Madison, Environmental Chemistry and Technology Program, Madison, WI; Donna Kenski, Lake Michigan Air Directors Consortium, Des Plaines, IL; Erin Bean, University of Wisconsin-Madison, State Lab of Hygiene, Madison, WI.
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5PD3 EVALUATION OF ORGANIC TRACER ANALYSIS IN AEROSOL, BO WANG, Mei Yu Dong, Georgia Institute of Technology, Atlanta, GA; James Schauer, University of Wisconsin-Madison, Madison, WI; Mei Zheng, Georgia Institute of Technology, Atlanta, GA.

5PD4 SPATIAL CHARACTERIZATION OF PM2.5 ASSOCIATED ORGANIC COMPOUNDS IN THE SAN JOAQUIN VALLEY, LYNN R. RINEHART, Dave Campbell, Eric Fujita, Judith C. Chow, and Barbara Zielinska, Desert Research Institute, Division of Atmospheric Science, Reno, NV 89512.

5PD5 ANNUAL VARIATION OF ENVIRONMENTAL AEROSOL CONCENTRATION: A COMPARATIVE STUDY OF THREE YEARS, T. S. VERMA, T. A. Thomas, Department of Physics, University of Botswana, P/Bag 0022, Gaborone, Botswana.

5PD6 CORRELATIONS BETWEEN BIOGENIC VOLATILE ORGANIC COMPOUNDS, ANTHROPOGENIC POLLUTANTS, AND AEROSOL FORMATION IN A SIERRA NEVADA PINE FOREST, MELISSA LUNDE, Douglas Black, Nancy Brown, Atmospheric Science Department, Lawrence Berkeley National Laboratory, Berkeley, CA; Anita Lee, Gunnar Schade and Allen Goldstein, Department of Environmental Science, Policy, and Management, University of California, Berkeley, CA.

5PD7 URBAN / RURAL CONTRAST FOR AMBIENT FINE PARTICULATE MATTER IN THE ST. LOUIS AREA, Neil D. Deardorff, JAY R. TURNER, Washington University, St. Louis, MO; Min-Suk Bae, James J. Schauer, University of Wisconsin, Madison, WI; Warren W. White, University of California, Davis, CA.

5PD8 WATER- SOLUBLE FRACTION OF ORGANIC CARBON, CRUSTAL ELEMENTS, AND POLYATOMIC IONS IN ASIAN AEROSOLS, RACHELLE DUVALL, Martin Shafer, James Schauer, University of Wisconsin-Madison, Madison, WI; Patrick Chuang, University of California at Santa Cruz, Santa Cruz, CA; Berndt Simoneit, Oregon State University, Corvallis, OR.

5PD9 SHORT-TIME PERIODIC VARIATIONS OF AEROSOL CONCENTRATION AND BASE METEOPARAMETERS IN THE SURFACE LAYER, ANDREI JOURAVEV, Guerman Teptin, Kazan State University, Russia.

6:00 PM – 8:00 PM

5PE. Chemical Characterization of Atmospheric Aerosols 1

5PE1 PM10 AEROSOLS OF URBAN COIMBATORE, INDIA WITH EMPHASIS ON ITS ELEMENTAL, IONIC AND PAH CONSTITUENTS, R. MOHANRAJ, P. A. Azeez. Salim Ali Centre. India.

5PE2 SEASONAL AND SPATIAL VARIABILITY OF THE SIZE-RESOLVED CHEMICAL COMPOSITION OF PARTICULATE MATTER (PM10) IN THE LOS ANGELES BASIN, SATYA B. SARDAR, Philip M. Fine, and Constantinos Sioutas, University of Southern California, Los Angeles, CA.

5PE3 SIZE-SEGREGATED CHEMICAL PARTICLE CHARACTERIZATION IN WINTER 2003 AT THE IFT-RESEARCH STATION MELPITZ (GERMANY), GERALD SPINDLER, Erika Brüggemann, Thomas Gnauck, Achim Grüner, Hartmut Herrmann, Konrad Müller, Leibniz-Institut für Troposphärenforschung e.V., Leipzig, Germany; Horst Werner, Umweltbundesamt, Berlin, Germany.

5PE4 MEASUREMENTS OF AMBIENT AEROSOL COMPOSITION USING AN AERODYNE AEROSOL MASS SPECTROMETER IN NEW YORK CITY: WINTER 2004 INTENSIVE STUDY, SILKE WEIMER, James J. Schwab, Kenneth L. Demerjian, Atmospheric Sciences Research Center, State University of New York, Albany, NY; Frank Drewnick, Department Cloud Physics and Chemistry, Max Planck Institute of Chemistry.
5PE5 ELEMENTAL COMPOSITION OF PM10 AND PM2.5 FROM RESUSPENDED SOIL IN CALIFORNIA'S SAN JOAQUIN VALLEY, OMAR F. CARVACHO, Lowell L. Ashbaugh, Michael S. Brown, and Robert G. Flochini, University of California, Crocker Nuclear Laboratory, Air Quality Group, Davis, California.

5PE6 TRAJECTORY ANALYSIS OF SPECIATED AEROSOL COMPONENTS IN SOUTHERN SCOTLAND, MEASURED USING AN AEROSOL MASS SPECTROMETER, DAVID ANDERSON, Eiko Nemitz, Rick Thomas, John Neil Cape, David Fowler, Centre For Ecology & Hydrology (CEH), Bush Estate, Penicuik, EH26 0QB, UK.

5PE7 CHEMICAL COMPOSITION OF AEROSOLS MEASURED BY AMS AT OKINAWA JAPAN IN WINTER-SPRING PERIOD, AKINORI TAKAMI, Takao Miyoshi, Shiro Hatakeyama, NIES, Tsukuba, Japan; Akio Shimono, Sanyu Plant Service, Sagamihara, Japan.

5PE8 PREDICTING BULK AMBIENT AEROSOL COMPOSITIONS FROM ATOFMS DATA, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering, and Center for Air Resources Engineering and Science, Clarkson University, PO Box 5708, Potsdam, NY 13699-5708; Xueying Qin, Kimberly A. Prather, Department of Chemistry and Biochemistry, University of California, San Diego, La Jolla, CA 92093-0314.

5PE9 EFFECT OF INITIAL AEROSOL CONCENTRATION ON THE PHOTOCHEMICAL REACTION OF AMBIENT AIR, YOUNG-MEE LEE, Seung-Bok Lee, Ji-Eun Choi, Gwi-Nam Bae, Kil-Choo Moon, KIST.

5PE10 EFFECT OF LIGHT INTENSITY ON THE PHOTOCHEMICAL REACTIONS OF AMBIENT AIR, SEUNG-BOK LEE, Young-Mee Lee, Ji-Eun Choi, Gwi-Nam Bae, Kil-Choo Moon, Korea Institute of Science and Technology, Seoul, Korea.


6:00 PM – 8:00 PM

6PA. Deposition in the Lung

6PA1 MODELING OF POLLUTION OF THE GROUND SURFACE WITH DROPS OF ROCKET FUEL, Yuriy Morokov, Gdaly Rivin, Ekaterina Klimova, ICT SB RAS, Novosibirsk, Russia; ALEXANDER BORODULIN, Boris Desyatkov, Sergei Zykov, SRC TB "Vector", Koltsovo, Novosibirsk, Russia.

6PA2 AIRBORNE NUMBER AND MASS CONCENTRATION AND COMPOSITION OF FINE AND ULTRAFINE PARTICLES AT THE WTC SITE ONE YEAR LATER, MAIRE S.A. HEIKKINEN, NYU School of Medicine, New York, NY; Shao-I Hsu, Ramona Lall, Paul Peters, Beverly S. Cohen, Lung Chi Chen, George Thurston, NYU School of Medicine, Tuxedo, NY.

6PA3 INVESTIGATION OF ORGANIC DPM SAMPLING ARTIFACTS OF A HIGH-VOLUME SAMPLING SYSTEM, ZIFEI LIU, Minming LU, Tim C. Keener, Fuyan Liang, Dept. of Civil and Environmental Engineering, University of Cincinnati, Cincinnati, OH.
6PA4 CHARACTERIZATION OF AEROSOL AND FRAGRANCE EXPOSURES TO TWO CONSUMER FRAGRANCE PRODUCTS, CHWEN-JYH JENG, Toxcon HSRC Inc., Edmonton, AB, Canada; D. A. Isola, Ladd Smith, Research Institute for Fragrance Materials, Inc., Woodcliff Lake, NJ; R. E. Rogers, and A. Myshaniuk, Toxcon HSRC Inc., Edmonton, AB, Canada.

6PA5 COMPARISON OF ANALYSIS OF METALS AND ORGANIC COMPOUNDS IN PM2.5 PERSONAL EXPOSURE SAMPLES WITH STANDARD AMBIENT SAMPLES, GLYNIS C LOUGH, Rebecca J. Sheesley, James J. Schauer, Martin M. Shafer, University of Wisconsin-Madison, Madison, WI; Manisha Singh, Philip M. Fine, Constantinos Sioutas, University of Southern California, Los Angeles, CA.

6PA6 THE EFFECT OF AEROSOLIZED CLASS C FLY ASH IN WEANLING GOATS, CHARLES PURDY, USDA-ARS, Bushland, TX; David Straus, Texas Tech University Health Sciences Center, Lubbock, TX; J.R. Ayers, Veterinary Diagnostic Center, University of Nebraska, Lincoln, NE.

6PA7 SOME PROBLEMS OF AIR POLLUTION IN ARMENIA, LUIZA GHARIBYAN, Yerevan State Medical University; Department Hygiene and Ecology, Yerevan, Armenia.

6PA8 AERODYNE AEROSOL MASS SPECTROMETER MEASUREMENTS OF PARTICLE SIZE DISTRIBUTIONS AND CHEMICAL COMPOSITION FROM PRESSURIZED METERED DOSE INHALERS, LEAH WILLIAMS, Hacene Boudries, John Jayne, Charles Kolb, and Douglas Worsnop, Aerodyne Research Inc., Billerica, MA; Margaret Farrar, Cambridge Rindge and Latin High School, Cambridge, MA; William Barney, TIAX LLC, Cambridge, MA.

6PA9 INVESTIGATION OF ELEMENTAL SPECIES IN A REFERENCE MATERIAL FOR PM2.5 URBAN PARTICULATE MATTER, ROLF ZEISLER, Rabia D. Spatz, Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD; Robert Mitkus, Katherine Squibb, Department of Epidemiology and Preventive Medicine, University of Maryland School of Medicine, Baltimore, MD.

6PA10 AMBIENT BIOLOGICAL PARTICULATE MATTER CHARACTERIZATION AT THE ST. LOUIS Û MIDWEST SUPERSITE, DANIEL G. RAUER, Jay R. Turner, Largus T. Angenent, Washington University in St. Louis, St. Louis, MO.

6PB1 DETAILED GAS- AND PARTICLE-PHASE MEASUREMENTS OF EMISSIONS FROM IN-USE DIESEL-ELECTRIC LOCOMOTIVES, ANIKET SAWANT, Abhilash Nigam, David Cocker, University of California, Riverside, CA.

6PB2 EMISSION RATES OF PARTICULATE MATTER, ELEMENTAL AND ORGANIC CARBON FROM IN-USE DIESEL ENGINES, SANDIP SHAH, David Cocker, University of California, Riverside, CA.

6PB3 EMISSION CHARACTERISTICS OF INCENSE COMBUSTION TRANSITION FROM FLAMELESS TO FLAME, TZU-TING YANG, Jia-Ming Lin, Yee-Chung Ma, Ming-Heng Huang, Chih-Chieh Chen, National Taiwan University, Taipei, Taiwan.

6PB4 VOLATILITY OF ULTRAFINE PARTICLES IN DIESEL EXHAUST UNDER IDLING CONDITION, HIROMU SAKURAI, Osamu Shinozaki, Keizo Saito, Takafumi Seto, AIST, Tsukuba, Japan.

6PB5 EMISSION CHARACTERISTICS OF INCENSE COMBUSTION TRANSITION FROM FLAMELESS TO FLAME, TZU-TING YANG, Jia-Ming Lin, Yee-Chung Ma, Ming-Heng Huang, Institute of Environmental Health, College of Public Health, National Taiwan University, Chih-Chieh Chen, Institute of Occupational Medicine Industrial Hygiene, College of Public Health, National Taiwan University.
6PB6 LABORATORY EXPERIMENTS EXAMINING ULTRAFINE PARTICLE PRODUCTION BY RE-BREATHING OF ROAD DUST THROUGH A DIESEL ENGINE, KEITH J. BEIN, Yongjing Zhao, Anthony S. Wexler, University of California, Davis, CA; Eric Lipsky, Allen L. Robinson, Carnegie Mellon University, Pittsburgh, PA.

6PB7 REAL-TIME SIMULTANEOUS MEASUREMENTS OF SIZE, DENSITY, AND COMPOSITION OF SINGLE ULTRAFINE DIESEL TAILPIPE PARTICLES, ALLA ZELENYUK/IMRE, Yong Cai, Michael Alexander, Pacific Northwest National Laboratory, Richland, WA; Dan Imre, Imre Consulting, Richland, WA; Jian Wang, Gunnar Sernum, Brookhaven National Laboratory, Upton, NY; John Storey, Oak Ridge National Laboratory at NTRC, Knoxville, TN.

6PB8 OAK RIDGE ENGINE AEROSOL CHARACTERIZATION (OREACH) 2004: STUDIES OF DIESEL ENGINE PARTICLE EMISSIONS USING SMPS AND EEPS, JIAN WANG, Brookhaven National Laboratory, Upton, NY; Kass, Shean Huff, Brian West, Norberto Domingo, John Storey, Oak Ridge National Laboratory, Knoxville, TN.

6PB9 COMPOSITION AND SIZE DISTRIBUTION OF PARTICULATE MATTER EMISSIONS FROM HOBBY ROCKETS, ANDREW RUTTER, Charles Christensen, James Schauer, University of Wisconsin-Madison, Madison, WI.

6PB10 THE ELEMENTAL CARBON CONTENT IN DPM OF VEHICLES IN AN UNDERGROUND METAL MINE WITH AND WITHOUT DIESEL PARTICULATE FILTERS, Alex Bugarski, Steve Mischler, JIM NOLL, Larry Patts, George Schnakenberg, National Institute for Occupational Safety and Health, Pittsburgh, PA.

6PB11 EFFECTS OF LOW SULFUR FUEL AND A CATALYZED PARTICLE TRAP ON THE COMPOSITION AND TOXICITY OF DIESEL EMISSIONS, JACOB D. MCDONALD, Kevin S. Harrod, JeanClare Seagrave, Steven K. Seilkop and Joe L. Mauderly, Lovelace Respiratory Research Institute, Albuquerque, NM.

6PC. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol III

6PC1 UNCERTAINTY ANALYSIS OF CHEMICAL MASS BALANCE MODELING USING ORGANIC TRACERS FOR PM2.5 SOURCE APPORTIONMENT, BO YAN, Mei Zheng, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA; Armistead Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA.

6PC2 BIRMINGHAM PM SOURCE ATTRIBUTION USING CONTINUOUS GAS AND PARTICLE SIZE MEASUREMENTS, ASHLEY WILLIAMSON, Southern Research Institute, Birmingham, AL; Davyda Hammond, University of Alabama at Birmingham, Birmingham, AL.

6PC3 SOURCE APPORTIONMENT OF FINE PARTICULATE MATTER IN THE TENNESSEE VALLEY REGION, LIN KE, Georgia Institute of Technology, Atlanta, GA; Roger L. Tammer, Tennessee Valley Authority Environmental Research Center, CEB 2A, P.O.B. 1010, Muscle Shoals, AL; James J. Schauer, Environmental Chemistry and Technology Program, University of Wisconsin-Madison, Madison, WI; Mei Zheng, Georgia Institute of Technology, Atlanta, GA.

6PC4 SOURCE ALLOCATION OF ORGANIC CARBON IN PM2.5 USING 14C AND TRACER INFORMATION, Eric Edgerton, ARA, Inc.

6PC5 ATMOSPHERIC AEROSOL OVER TWO URBAN-RURAL PAIRS IN SOUTHEAST UNITED STATES: CHEMICAL COMPOSITION AND SOURCES, Wei Liu, Wei Liu, Yuhang Wang, Georgia Institute of Technology, School of Earth and Atmospheric Sciences, Atlanta, GA; Armistead Russell, Georgia Institute of Technology, Civil and
Environmental Engineering, Atlanta, GA; Eric S. Edgerton, Atmospheric Research and Analysis, Inc., Durham, NC.

6PC6 EMISSIONS PROFILE AND AIR QUALITY IMPACTS FROM PRESCRIBED BURNING IN GEORGIA, SANGIL LEE, Karsten Baumann, Michael Chang, Zohir Chowdhury, Ted Russell, Mei Zheng, EAS/CEE, Georgia Tech, Atlanta, GA; Luke Naheer, EHS, University of Georgia, Athens, GA; James Schauer, CEE, University of Wisconsin, Madison, WI.

6:00 PM – 8:00 PM
6PD. Carbonaceous Aerosol Analysis Instrumentation

6PD1 QUANTIFYING UNCERTAINTIES IN THERMAL/OPTICAL ANALYSIS FOR ORGANIC AND ELEMENTAL CARBON FRACTIONS, L.-W. Antony Chen, Guadalupe Paredes-Miranda, M.-C. Oliver Chang, Judith Chow, John Watson, Desert Research Institute, Reno, NV; Kochy Fung, Atmoslytic Inc., Calabasas, CA.

6PD2 CHARACTERIZATION AND PERFORMANCE EVALUATION OF THE MAGEE SCIENTIFIC AETHALOMETER (TM) FOR AMBIENT BLACK CARBON CONCENTRATION MEASUREMENTS, BRADLEY P. GOODWIN, Jay R. Turner, Washington University, St. Louis, MO; George A. Allen, NESCAUM, Boston, MA.

6PD3 EXTRACTING REFRACTIVE INDEX INFORMATION FROM TEH LIGHT SCATTERING SIGNALS MEASURED WITH THE TSI AEROSOL TIME OF FLIGHT MASS SPECTROMETER, DABRINA D DUTCHER, Peter H. McMurry, Particle Technology Laboratory, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN; Deborah S. Gross, Department of Chemistry, Carleton College, Northfield, MN.


6PD5 ELEMENTAL COMPOSITIONS OF INDIVIDUAL PARTICLES WITH A LASER-INDUCED PLASMA SOURCE FOR MASS SPECTROMETRY, Shenyi Wang, Hong Chen, MURRAY JOHNSTON, Chemistry and Biochemistry Department, University of Delaware, Newark, DE.

6PD6 PARTICLE SIZE AND EXTINCTION COEFFICIENT OF OIL AEROSOLS PRODUCED VIA THE VAPORIZATION AND CONDENSATION, PAUL NAM, Ramesh Chand, Robert Schaub, Shubhen Kapila, Virgil Flanigan, Center for Environmental Science & Technology, University of Missouri-Rolla, MO; William Rouse, Edgewood Chemical & Biological Center, SBCCOM, Aberdeen Proving Ground, MD.

6PD7 MATERIAL EFFECTS ON THRESHOLD COUNTING EFFICIENCY OF TSI MODEL 3785 WATER-BASED CONDENSATION PARTICLE COUNTER, Wei Liu, STANLEY L. KAUFMAN, Gilmore J. Sem, Paul J. Haas, TSI Incorporated, Shoreview, MN; Frederick R. Quant, Quant Technologies LLC, Blaine, MN.

6PD8 DEVELOPMENT OF A LASER-BASED INSTRUMENT FOR MEASURING SCATTERING, 180 DEGREE BACKSCATTERING, AND ABSORPTION BY AEROSOLS, RUNJUN LI, Yong Seob Lee, Don R. Collins, Texas A&M University, College Station, TX.
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6PD9 DEVELOPMENT OF A MULTI-ANGLE LIGHT-SCATTERING SPECTROMETER FOR AIRCRAFT USE, WILLIAM DICK, Francisco Romay, Daryl Roberts, Benjamin Liu, MSP Corporation, Shoreview, MN.

6PD10 SEMI-EMPIRICAL MODELS FOR THE ASPIRATION EFFICIENCIES OF AEROSOL SAMPLERS IN PERFECTLY CALM AIR, WEI-CHUNG SU, Lovelace Respiratory Research Institute, Albuquerque, NM; James H. Vincent, University of Michigan, Ann Arbor, MI.

6:00 PM – 8:00 PM

6PE. Aerosol Physical Properties

6PE1 THE MODEL OF RADIO WAVES SCATTERING BY AEROSOL IN TURBULENT ATMOSPHERE CONSIDERING REAL HUMIDITY, A.V. ALEXANDROV, G.M. Teptin, O.G. Khoutorova Department of Physics, Kazan State University.

6PE2 PARAMETRIC OPTICAL PROCESSES WITH THRESHOLD BEHAVIOR IN TRANSPARENT DROPLETS, M.V. JOURAVLEV, Aerosol Department of SCC of Russian Federation, Karpov Institute of Physical Chemistry, Moscow, Russia; G. Kurizki, Department of Chemical Physics, Weizmann Institute of Science, Rehovot, Israel.

6PE3 CHARACTERISTICS OF URBAN AEROSOLS AT PUNE, N. SHANTIKUMAR SINGH, Indian Astronomical Observatory, Indian Institute of Astrophysics, Leh-Ladakh (J & K) 194101, India G. R. Aher, Physics Department, Nowrosjee Wadia College, Pune 411 001, India V. V. Agashe, Department of Environmental Sciences, University of Pune, Pune 411 007, India.

6PE4 EFFECTIVE REFRACTIVE INDEX OF SUBMICRON AEROSOLS AT AN ANTARCTIC SITE, AKI VIRKKULA, Risto Hillamo, Kimmo Teinilä, Finnish Meteorological Institute, Air Quality Research, FIN-00880 Helsinki, Finland Ismo K. Koponen, Markku Kulmala, Aerosol and Environmental Physics Laboratory, University of Helsinki, FIN-00014 Helsinki, Finland.

6PE5 EFFECT OF PRIMARY PARTICLE SIZE ON THE COAGULATION RATE OF FRACTAL-LIKE AGGLOMERATES, KI-JOON, JEON and Chang-Yu, Wu, University of Florida, Gainesville, FL.

6PE6 TAXONOMY OF TRANSIENT NUCLEATION AND GROWTH, Ranjit Bahadur, RICHARD B. MCCLURG, University of Minnesota, Minneapolis, MN.

6PE7 NODAL ALGORITHM AND SOFTWARE FOR THE SOLUTION OF GENERAL DYNAMIC EQUATION, ANAND PRAKASH, Michael R. Zachariah, University of Maryland, College Park, MD Ameya Bapat, University of Minnesota, Minneapolis, MN.

6PE8 CHARACTERIZATION OF AEROSOLS PRODUCED IN AN AMPLIFIER OF POWERFUL LASER, François Gensdarmes, Guillaume Basso, Institute for Radioprotection and Nuclear Safety (IRSN), Isabelle Toven, STEPHANIE PALMIER, CEA-CESTA.

6PE9 AEROSOL GROUPING AND EVAPORATION IN OSCILLATING FLOW- THEORY, David Katsovevski Dept. of Environmental Engineering The Institute for Applied Biosciences Ben-Gurion University of the Negev Beer-Sheva 84105, Israel Gennady Ziskind Dept. of Mechanical Engineering Ben-Gurion University of the Negev Beer-Sheva 84105, Israel.

6PE10 HOLLOW METAL PARTICLES FORMED THROUGH NITROGEN DISSOLUTION, NEIL JENKINS.

6PE11 AN APPROACH TO THE STANDARDIZATION OF PARTICLE FRAC TAL DIMENSION IN MORPHOLOGICAL CHARACTERIZATION, ESTHER COZ, Begona Artinano, Francisco J. Gomez-Moreno, CIEMAT, Madrid, Spain; Daniel
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Rodriguez-Perez, Hugo Franco-Triana, Jose L. Castillo, J. Carlos Antoranz, UNED, Madrid, Spain.

6:00 PM – 8:00 PM
7PA. Atmospheric Aerosol Modeling I

7PA1 COMPUTATIONAL MODELING OF NEAR-SOURCE DEPOSITION OF FUGITIVE DUST ON VEGETATIVE SURFACES, JOHN VERANTH, Eric Pardyjak, Fang Yin, Kevin Perry, University of Utah, Salt Lake City, UT, Judith Chow, John Watson, Vic Etyemezian, Desert Research Institute, Reno NV.


7PA3 COAGULATION ALGORITHMS FOR SOURCE-ORIENTED AIR QUALITY MODELS, QI YING, Michael J. Kleeman, University of California, Davis, CA.

7PA4 IMPROVING THE PERFORMANCE OF THE ISORROPIA AEROSOL THERMODYNAMIC MODEL, DOUGLAS WALDRON, University of Louisville, Louisville, KY; Athanasios Nenes, Georgia Institute of Technology, Atlanta, GA.

7PA5 METEOROLOGICAL UNCERTAINTIES AND THEIR INFLUENCES ON AEROSOL MODEL PREDICTIONS, SHAO-HANG CHU U. S. Environmental Protection Agency Research Triangle Park, NC.

7PA6 IMPROVEMENTS TO AIR QUALITY MODELING USING A SPATIALLY AND TEMPORALLY RESOLVED AMMONIA EMISSION INVENTORY, ROBERT PINER, Timothy Gaydos, Peter Adams, Carnegie Mellon University, Pittsburgh, PA.

7PA7 NUMERICAL SIMULATION OF SULFATE AND NITRATE WET DEPOSITION IN THE LAKE BAIKAL REGION, VLADIMIR MAKUKHIN, Vladimir Obolkin, Limnological Institute SB RAS, Irkutsk, Russia.

7PA8 ATMOSPHERIC CONDUCTIVITY REDUCTION UNDER ENHANCED AEROSOL CONDITIONS, K Nagaraja, B S N PRASAD, University of Mysore, Mysore, India Nels Laulainen. Pacific Northwest National Laooratory, Richland, WA.

7PA9 AN EXPERIMENTAL STUDY AND NUMERICAL SIMULATION OF OIL GENERATED AEROSOLS IN BATTLEFIELD, QIANG CHEN, Shubhen Kapila, Virgil Flanigan, Paul Nam, Kanisa Kitiriratanapiboon, Center for Environmental Science and Technology, University of Missouri – Rolla, MO William Rouse, Edgewood Chemical and Biological Center, Aberdeen Providing Ground, MD.

7PA10 PARTICLE FORMATION AND GROWTH DURING THE QUEST CAMPAIGN IN HYTTYLÖ, FINLAND, KARI E. J. LEHTINEN, Lauri Laakso, Hanna Vehkamaki, Ismo Napari, Miikka Dal Maso, Markku Kulmala, University of Helsinki, Dept. Physical Sci., Finland.

7PA11 COMPUTER SIMULATION OF POLLUTANT TRANSPORT AND DEPOSITION NEAR PEACE BRIDGE, CHAOSHENG LIU, Goodarz Ahmadi, Clarkson University, Potsdam, NY.

7PA12 PARTICLE TRANSPORT AND DEPOSITION IN CHANNEL FLOWS - AN UNSTRUCTURED GRID ANALYSIS, CHAOSHENG LIU, Goodarz Ahmadi, Clarkson University, Potsdam, NY.

6:00 PM – 8:00 PM
7PB. Special Symposium: Heterogeneous & Multiphase Chemistry I
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7PB2 SURFACE OXIDATION OF DIESEL PARTICULATE MATTER IN THE PRESENCE OF O3 +NOX: DIRECT TD/GC/MS ANALYSIS, ZHONG CHEN and Britt A. Holmen, Environmental Engineering Program, University of Connecticut, Storrs, CT.

7PB3 GAS-PARTICLE PARTITIONING OF ORGANICS DURING PHOTO-OXIDATION OF TOLUENE/NOX MIXTURES, JANYA HUMBLE, Diane Michelangeli, Don Hastie, Mike Mozurkewich, York University, Toronto, ON, Canada; Paul Makar, MSC, Downsview, ON, Canada; Craig Stroud, NCAR, Boulder CO.

7PB4 THE ROLE OF PARTICLE SUBSTRATE EFFECTS IN DETERMINING THE REACTIVITY OF ORGANIC AEROSOLS, GEOFFREY D. SMITH, John D. Hearn, University of Georgia, Athens, GA.


7PB6 SECONDARY ORGANIC AEROSOL YEILD OF DIVERSE MONOTERPENES BY HETEROGENOUS ACID CATALYZED REACTIONS, AMANDA NORTHCROSS, Myoseon Jang, University of North Carolina, Chapel Hill, NC.

7PB7 DEPENDENCE OF SECONDARY ORGANIC AEROSOL YIELD ON AEROSOL ACIDITY IN HETEROGENEOUS ACID CATALYZED REACTIONS, NADINE CZOSCHKE, Richard Kamens, Myoseon Jang, University of North Carolina, Chapel Hill, NC.

7PB8 EFFECT OF SURFACTANTS ON GAS/PM2.5 PARTITIONING OF HERBICIDES, WENLI YANG and Britt A. Holmen, Environmental Engineering Program, University of Connecticut, Storrs, CT.

7PB9 ORGANIC AEROSOL PARTICLES AS CLOUD CONDENSATION NUCLEI: THE EFFECT OF SURFACE TENSION AND OXIDATIVE PROCESSING, KEITH BROEKHUIZEN, Jonathan P.D. Abbatt, University of Toronto, Toronto, Canada.

7PB10 IS SECONDARY ORGANIC PARTICULATE MATTER FORMED BY REACTIONS OF GAS PHASE ALDEHYDES SULFATE AEROSOL PARTICLES?, MICHAEL MOZURKEWICH, Jin Zhang, York University, Toronto, Ontario, Canada.

7PB11 ORGANIC ACID FORMATION PATHWAYS, Grazyna Orzechowska, Ha Nguyen, De-Ling Liu, Zsuzsa Marka, SUZANNE E. PAULSON Department of Atmospheric Sciences, University of California at Los Angeles, Los Angeles, CA 90095.

7PB12 MODELLING THE SECONDARY ORGANIC AEROSOL WITHIN A 3-DIMENSIONAL AIR QUALITY MODEL, ADAM G. XIA, Diane V. Michelangeli, Centre for Atmospheric Chemistry & Department of Earth and Space Science and Engineering, York University, Toronto, ON, Canada; Paul Makar, Air Quality Modelling and Integration Division, Meteorological Service of Canada, Toronto, ON, Canada.

7PB13 A COMPUTATIONALLY EFFICIENT ALGORITHM FOR AEROSOL PHASE EQUILIBRIUM, RAHUL A. ZAVERI, Richard C. Easter, Leonard K. Peters, Pacific Northwest National Laboratory, Richland, WA; Anthony S. Wexler, University of California, Davis, CA.

6:00 PM – 8:00 PM
7PC.  Health Related Aerosol Characterization I

7PC1  DIFFUSION CHARGER-BASED AEROSOL SURFACE AREA MONITOR RESPONSE TO SILVER AGGLOMERATES WITH 2-D FRACTAL DIMENSIONS RANGING FROM 1.58 TO 1.94, BON KI KU, Andrew Maynard, National Institute for Occupational Safety and Health (NIOSH), 4676 Columbia Parkway, MS R-3, Cincinnati, OH 45226.

7PC2  CHARACTERIZATION OF AEROSOL PARTICLES RELEASED DURING AGITATION OF UNPROCESSED SINGLE WALLED CARBON NANOTUBES, USING AEROSOL PARTICLE MASS ANALYSIS AND TRANSMISSION ELECTRON MICROSCOPY, ANDREW D. MAYNARD, Bon-Ki Ku, NIOSH, Cincinnati, OH; Mark R. Stolzenburg, Peter McMurry, University of Minnesota, Minneapolis, MN.

7PC3  DEVELOPMENT OF AN AEROSOL SYSTEM FOR CREATING UNIFORM SAMPLES OF DEPOSITED BACTERIA, PAUL BARON, Cherie Estill, Terri Schnorr, National Institute for Occupational Safety and Health, Cincinnati, OH; John Wright, Greg Dahlstrom, Jeremy Beard, Daryl Ward, Dugway Proving Ground, Dugway, UT; Wayne Sanderson, University of Iowa, Iowa City, IA.

7PC4  THE EFFECT OF FILTER MATERIAL ON THE BIOAEROSOL COLLECTION EFFICIENCY: EXPERIMENTAL STUDY UTILIZING BG SPORES AS BACILLUS ANTHRACIS SIMULANT, NANCY CLARK BURTON, Atin Adhikari, Sergey Grinshpun, and Tiina Reponen, Center for Health-Related Aerosol Studies, Department of Environmental Health, University of Cincinnati, Cincinnati, OH, USA.

7PC5  QUANTITATIVE TECHNIQUE FOR TESTING BIO-AEROSOL SAMPLERS, VLADIMIR B. MIKHEEV, Maria L. Luna, and Patricia M. Irving, InnovaTek, 350 Hills Street, Richland, WA 99352, USA.

7PC6  INACTIVATION RATES OF AIRBORNE BACILLUS SUBTILIS CELLS AND SPORES BY A SOFT X-RAY ENHANCED CORONA SYSTEM, ERIC KETTLESON, Myonghwa Lee, Largus Angenent, Pratim Biswas, Washington University in St. Louis, St. Louis, MO.

7PC7  QUANTIFICATION OF AIRBORNE MYCOBACTERIUM TUBERCULOSIS IN HEALTH CARE SETTING BY REAL-TIME QPCR, Pei-Shih Chen and CHIH-SHAN LI, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University.

7PC8  SAMPLING PERFORMANCE OF IMPINGEMENT AND FILTRATION FOR BIOAEROSOLS BY VIABILITY USING FLUOROCHROME AND FLOW CYTOMETRY, Pei-Shih Chen and CHIH-SHAN LI, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University.

7PC9  REAL-TIME QUANTITATIVE PCR WITH GENE PROBE, FLUOROCHROME, AND FLOW CYTOMETRY FOR MICROORGANISM ANALYSIS, Pei-Shih Chen and CHIH-SHAN LI, Graduate Institute of Environmental Health College of Public Health, National Taiwan University.

7PC10  ULTRAVIOLET GERMICIDAL IRRADIATION AND TITANIUM DIOXIDE PHOTOCATALYST FOR CONTROLLING LEGIONELLA PNEUMOPHILA, Chun-Chieh Tseng and CHIH-SHAN LI, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University, Taipei, Taiwan, R.O.C.

7PC11  STERILIZATION OF BIOLOGICALLY CONTAMINATED AIR AND SURFACES USING ELECTROSTATIC FIELDS, Maosheng Yao, GEDIMINAS MAINEILIS, Rutgers University, New Brunswick, NJ.

6:00 PM – 8:00 PM

7PD.  Aerosol Synthesis of Nanomaterials I
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7PD1 FORMATION OF ZN, CU AND CARBON PARTICLES BY CO2 LASER ABLATION., Anatoli Baklanov Tatjana Fedirko.

7PD2 SINGLE WALLED CARBON NANOTUBE SYNTHESIS BY A NOVEL AEROSOL METHOD, ALBERT G. NASIBULIN, Centre for New Materials, Helsinki University of Technology ANNA MOISALA, Centre for New Materials, Helsinki University of Technology HUA JIANG, VTT Processes, Aerosol Technology Group DAVID P. BROWN, Centre for New Materials, Helsinki University of Technology ESKO I. KAUPPINEN, Centre for New Materials, Helsinki University of Technology and VTT Processes, Aerosol Technology Group.

7PD3 MONTE CARLO SIMULATION OF AEROSOLS UNDERGOING SIMULTANEOUSLY COAGULATION, CONDENSATION AND SINTERING, ZHEN SUN, Richard L. Axelbaum, Washington University in St. Louis, MO.

7PD4 THE EVOLUTION OF METAL OXIDE AEROSOLS IN FLAMES: AN ELECTRON MICROSCOPY STUDY WITH THERMOPHORETIC SAMPLING, BING GUO, Ian M. Kennedy, University of California, Davis, CA.

7PD5 SYNTHESIS OF TIN OXIDE NANOPARTICLES USING A COMMERCIAL ARC WELDER, JUNHONG CHEN Esam Abu-Zahra Ganhua Lu University of Wisconsin-Milwaukee Milwaukee, WI 53211.

7PD6 SYSTEMATIC STUDY OF EFFECT OF CORONA-SOFT X-RAY ON NANOPARTICLE SYNTHESIS IN A FURNACE REACTOR, Kuk Cho, Joonghyuk Kim, Myonghwa Lee, PRATIM BISWAS, Environmental Engineering Science, Washington University in St. Louis; Sangsoo Kim, Korean Advanced Institute of Science and Technology, Korea.

7PD7 MORPHOLOGICAL STUDY ON THE TIO2 PARTICULATE DEPOSITED ON THE TEMPERATURE CONTROLLED SUBSTRATE, Hyuksang Chang, Yeungnam University.

7PD8 HIGH TEMPERATURE HEAT AND MASS TRANSFER OF OXIDIZING TUNGSTEN PARTICLE WITH ACCOUNT OF STEFAN FLUX, SVETLANA ORLOVSAYA, Valerii Kalinchak, Tatyana Gryzunova, Odessa National Mechnikov's University, Odessa, Ukraine.

7PD9 SPRAY PYROLYSIS SYNTHESIS AND PROPERTIES OF LANTHANIDE Ú DOPED YTTRIUM OXIDE NANOPARTICLES WITH DIFFERENT FLUORESCENT SPECTRA, DOSI DOSEV, Bing Guo, Ian Kennedy, University of California Davis, Davis CA.

7PD10 A BROWNIAN DYNAMICS SIMULATION TO PREDICT THE FRACTAL DIMENSION OF AGGLOMERATES WITH COLLISION AND SINTERING, KUK CHO and Pratim Biswas; Aerosol and Air Quality Research Laboratory; Chemical Engineering, Washington University in St. Louis, St. Louis, MO.

6:00 PM – 8:00 PM

7PE. Indoor Aerosols I

7PE1 THE EFFECT OF RESUSPENSION ON HUMAN EXPOSURE AND RESIDENCE TIME OF INDOOR PM10, Andrea Ferro, JING QIAN, Clarkson University, Potsdam NY.

7PE2 PARTICLE TRANSPORT BY FOOT TRAFFIC: TRACKING AND RESUSPENSION, MARK R. SIPPOLA and Tracy L. Thatcher, Indoor Environment Department, Environmental Energy Technologies Division, Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, CA 94720 USA.

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7PE3 DESIGN AND CHARACTERIZATION OF A RESUSPENSION CHAMBER FOR RESUSPENSION STUDIES, JONATHAN THORNBURG, Charles Rodes, Doug VanOsdell RTI International, Research Triangle Park, NC; Jacky Rosati, US EPA, Research Triangle Park, NC.


7PE5 MATHEMATICAL MODELING OF MICROCLIMATE AND SPREAD OF AEROSOL POLLUTANTS WITHIN LARGE BUILDINGS, Sergei Sarmanaev, ALEXANDER BORODULIN, Boris Desyatkov, SRC VB “Vector”, Koltsovo, Novosibirsk region, Russia.

7PE6 POLLUTANT TRANSPORT IN INDOOR AIR Ü A THREE DIMENSIONAL MODEL, KAMBIZ NAZRIDOUST, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY.

7PE7 CFD MODELING OF SIZE-RESOLVED PARTICLE DISTRIBUTION AND DEPOSITION IN A VENTILATED CHAMBER, Alvin Lai, FANGZHI CHEN, School of Mechanical and Production Engineering, Nanyang Technological University, Singapore 639798.

7PE8 SUPERMICRON PARTICLE DEPOSITION FROM TURBULENT FLOW ONTO SMOOTH AND ROUGH VERTICAL SURFACES: PART 1 Ü EXPERIMENTAL STUDY, ALVIN LAI, School of Mechanical and Production Engineering, Nanyang Technological University, Singapore; William Nazaroff, Department of Civil and Environmental Engineering, University of California, Berkeley, CA.

6:00 PM – 8:00 PM

8PA. Urban/Regional PM I

8PA1 THE RESEARCH OF THE QUANTITATIVE RELATIONSHIP BETWEEN METEOROLOGICAL CONDITION AND FINE PARTICLES IN BEIJING, JINGLI WANG, Conglan Cheng, Xiaofeng Xu, Institute of Urban Meteorology, CMA, Beijing Yuanhang Zhang, Min Shao, Limin Zeng, State Joint Key Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences, Peking University Xulin Liu, Beijing Meteorological Information and Network Center.

8PA2 ANALYSIS OF SMOG EPISODE IN KOREA IN MAY 2003, YOUNG SUNG GHIM, Air Resources Research Center, Korea Institute of Science and Technology, Korea; Jae-Gwang Won, School of Earth and Environmental Sciences, Seoul National University, Korea; Shang Gyoo Shim, Kil-Choo Moon, Air Resources Research Center, Korea Institute of Science and Technology, Korea; Il Soo Park, Atmospheric Physics Division, National Institute of Environmental Research, Korea.

8PA3 A MORPHOLOGICAL STUDY OF AMBIENT PARTICLES IN A SUBURBAN AREA (MADRID, SPAIN) RELATED TO THEIR AERODYNAMIC SIZE, ESTHER COZ, Francisco J. Gomez-Moreno, Manuel Pujadas, Begona Artinano, CIEMAT, Dept. Combustibles Fosiles, Madrid, Spain.

8PA4 FUEL-BASED PARTICULATE MATTER AND GASEOUS EMISSION FACTORS DETERMINED FROM VEHICLES IN PITTSBURGH, PA’S SQUIRREL HILL TUNNEL, ANDREW P. GRIESHOP, Eric M. Lipsky, Allen L. Robinson, Carnegie Mellon University, Pittsburgh, PA.

8PA5 MEASUREMENTS OF NITRATE PARTICLES IN PITTSBURGH USING RAPID SINGLE PARTICLE MASS SPECTROMETER, YONGJING ZHAO, Keith J. Bein, and...
Anthony S. Wexler, Mechanical and Aeronautical Engineering, Civil and Environmental Engineering, and Land, Air and Water Resources, University of California, Davis, CA; Michael P. Tolocka and Murray V. Johnston, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE.

**8PA6** IN-SITU CONCENTRATION OF SEMI-VOLATILE AEROSOL USING WATER-CONDENSATION TECHNOLOGY, ANDREY KHLYSTOV, Duke University, Durham, NC; Qi Zhang, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Charlie Stanier, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA; Manjula R. Canagaratna, Aerodyne Research Inc., Billerica, MA; Philip Fine, Chandan Misra, Constantinos Sioutas, University of Southern California, Los Angeles, CA.

**8PA7** SPATIAL AND TEMPORAL VARIABILITY OF AMBIENT AEROSOL IN THE MEXICO CITY METROPOLITAN AREA, DOUGLAS R. WORSNOP, Manjula Canagaratna, Timothy B. Onasch, John T. Jayne, Scott Herndon, Phil Mortimer, Charles E. Kolb, Aerodyne Research, Inc., 45 Manning Road, Billerica, MA 01821; Berk Knighton, Montana State University; Bozeman, MT 59717; Ed Dunlea, Linsey Marr, Mario Molina, Luisa Molina, MIT, Cambridge, MA 02139; Dara Salcedo, Universidad Iberoamericana Mexico; Katja Depina, Jose L Jimenez, Dept. of Chemistry and Biochemistry, University of California, Boulder, CO 80309.

**8PA8** CHEMICAL COMPOSITION OF PARTICLES AND THE LIGHT EXTINCTION ANALYSIS IN GUANGZHOU CITY, CHINA, MIN SHAO, limin Zeng, Yuanhang Zhang, College of Environmental Sciences, Peking Univeristy, Beijing, 100871, P.R.CHINA.

**8PA9** GROUND-BASED MEASUREMENTS OF SUBMICRON AEROSOLS IN TOKYO USING THE AERODYNE AEROSOL MASS SPECTROMETER, NOBUYUKI TAKEGAWA, Yutaka Kondo, Takuma Miyakawa, Yuzo Miyazaki, Yuichi Konazaki, University of Tokyo, Tokyo, Japan; Jose-Luis Jimenez, University of Colorado, Boulder, CO; John T. Jayne, Douglas R. Worsnop, Aerodyne Research, Inc., Billerica, MA.


**8PA11** EFFECTS OF AIRBORNE PARTICLES AND RAINFALL ON BUILDING DETERIORATION: NUMERICAL MODELING AND FIELD MEASUREMENTS, Wei Tang, CLIFF I. DAVIDSON, Carnegie Mellon University, Pittsburgh, PA.

6:00 PM – 8:00 PM

**8PB. Special Symposium: Heterogeneous & Multiphase Chemistry II**

**8PB1** MEASUREMENTS OF SIZE-DEPENDENT REACTIVITY OF ALUMINUM NANOPIERCLES USING SINGLE PARTICLE MASS SPECTROMETRY, KIHONG PARK, Ashish Rai, and Michael R. Zachariah; Co-laboratory on NanoParticle Based Manufacturing and Metrology, University of Maryland and National Institute of Standards and Technology, MD, USA; Donggeun Lee, School of Mechanical Engineering, Pusan National University, Busan, Korea.

**8PB2** CRYSTALS FORMED AT 293 K BY AQUEOUS SULFATE-NITRATE-AMMONIUM-PROTON AEROSOL PARTICLES, Julie C. Schlenker, Adam Malinowski, SCOT T. MARTIN, Hui-Ming Hung, and Yinon Rudich, Harvard University, Cambridge, MA.

**8PB3** EFFECTS OF AQUEOUS PHASE REACTIONS ON METHANESULFONATE-TO-NON-SEASALT-SULFATE RATIOS IN PARTICLES, LEI ZHU, School of Earth and Atmospheric Sciences, Athanasios Nenes, School of Earth and Atmospheric Sciences & Chemical and Biomolecular Engineering, Paul Wine, School of Earth and Atmospheric Sciences, Athanasios Nenes, School of Earth and Atmospheric Sciences & Chemical and Biomolecular Engineering.
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Sciences & Chemistry and Biochemistry, J. Michael Nicovich, School of Chemistry and Biochemistry, GA Institute of Technology, Atlanta, GA.

8PB4 SURFACE SPECTROSCOPY STUDIES OF THE REACTION OF OZONE WITH ALKALI HALIDE SALTS, JOHN T. NEWBERG, John C. Hemminger, University of California, Irvine, CA.

8PB5 RELEASE OF REACTIVE BROMINE FROM THE PHOTOLYSIS OF NITRATE AND HYDROGEN PEROXIDE IN SEA-SALT SOLUTIONS, CORT ANASTASIO, Ingrid George, Atmospheric Science Program, Department of Land, Air & Water Resources, University of California - Davis, CA.

8PB6 SURFACE ION MOBILITY MEASUREMENTS ON NACL CRYSTALS, STEPHANIE M. KING, Treavor A. Kendall, and Scot T. Martin, Harvard University, Cambridge, MA.

8PB7 WATER ACTIVITY OF SODIUM CHLORIDE NANODROPLETS AND ITS CORRELATION WITH NITRIC ACID UPTAKE, THOMAS DAVID SAUL, Michael P. Tolocka & Murray V. Johnston, University of Delaware, Department of Chemistry and Biochemistry, Newark, DE.

8PB8 SURFACTANT CONTROL OF HCL AND HBR UPTAKE INTO SUPERCOOLED SULFURIC ACID, SAMUEL GLASS, Jennifer Lawrence, Seong-Chan Park, Gilbert Nathanson, University of Wisconsin-Madison, Madison, WI.

8PB9 DIRECT MEASUREMENTS OF THE HYGROSCOPIC GROWTH CYCLES IN AMBIENT AEROSOL POPULATIONS, JOSHUA L. SANTARPIA, Roberto Gasparini, Don R. Collins, Texas A&M University, College Station, TX.

8PB10 METHANOL REACTION WITH SULFURIC ACID: APPLICATION TO ORGANOSULFATE AEROSOL CHEMISTRY IN THE UPPER TROPOSPHERE, LISA L VAN LOON and Heather C Allen Department of Chemistry The Ohio State University Columbus, OH USA.

8PB11 APPLICATIONS OF FT-IR SPECTROSCOPY TO THE STUDY OF AEROSOL HETEROGENEOUS CHEMISTRY, CINDY DEFOREST HAUSER, Kate Williams, Francois Trappey, Department of Chemistry, Davidson College, Davidson, NC.

8PB12 COMPOSITION AND STRUCTURE OF BINARY AEROSOL NANODROPLETS FROM DENSITY FUNCTIONAL THEORY, Jin-Song Li, GERALD WILEMSKI, University of Missouri-Rolla, Rolla, MO.

8PB13 COMPARISONS BETWEEN ABSORPTIVE PARTITIONING THEORY AND LABORATORY AND AMBIENT MEASUREMENTS FOR ORGANIC COMPOUNDS, P.A. Makar (1), M. Diamond (2), D.J. Donaldson (3), J. Truong (2), A. Asad(3), N. H. Martinez (2), E. Demou(3), H. Visram(3). (1) Environment Canada, 4905 Dufferin Street, Toronto, Ontario, Canada, M3H 5T4, paul.makar@ec.gc.ca (2) Departments of Chemical Engineering and Geography, University of Toronto, 45 St. George Street, Toronto, Ontario, Canada. (3) Department of Chemistry, University of Toronto, 80 St. George Street, Toronto, Ontario, Canada.

6:00 PM – 8:00 PM

8PC. Indoor Aerosols II

8PC1 CHARACTERIZATION AND INHALATION DOSE ESTIMATION OF PARTICLES PRODUCED DURING SHOWERING, YUE ZHOU, Janet M. Benson, Clinton M. Irvin, Hammad Irshad, Yung-Sung Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM.

8PC2 AEROSOL EMISSIONS FROM LASER PRINTERS, AYANO NIWA, Lawrence Norcio, Pratim Biswas; Aerosol and Air Quality Research Laboratory; Environmental Engineering Science, Box 1180; Washington University in St. Louis, MO 63017.
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8PC3  COLLECTION OF MICROBES IN HOSPITAL AIR ENVIRONMENTS USING THREE DIFFERENT SAMPLING METHODS., Krisaneya Sungkajuntranon, PARADEE CHUAYBAMROONG, Faculty of Public Health; Pipat Sriwebnialux, Faculty of Associated Medical Sciences, Khon Kaen University, Khon Kaen, 40002, Thailand.

8PC4  INDOOR AIR QUALITY IN A SOUTH CAROLINA RESIDENCE, Hamp Crow, CHRISTOS CHRISTOFOROU, School of the Environment, Clemson University.

8PC5  LABORATORY PERFORMANCE COMPARISON OF INDOOR AIR CLEANERS, TSUNG-SHI LIN, Chih-Chieh Chen, National Taiwan University; Yu-Mei Kuo, Chung Hwa College of Medical Technology.

8PC6  MICROANALYSIS OF INDOOR AEROSOLS FOR PREVENTIVE CONSERVATION OF CULTURAL HERITAGE, RENE VAN GRIEKEN, Ricardo Godoi, Velichka Kontozova, Zoya Spolnik, University of Antwerp, Belgium; Chul-Un Ro, Hallym University, ChunCheon, Korea.

6:00 PM – 8:00 PM

8PD. Aerosol Synthesis of Nanomaterials II

8PD1  MODELING AND SIMULATION OF TITANIA FORMATION AND GROWTH IN METHANE/AIR FLAMES, GUANGHAI WANG, Sean C. Garrick, University of Minnesota, Minneapolis, MN.

8PD2  COMBUSTION SYNTHESIS OF ULTRAFINE ANATASE TI02 NANO PARTICLES IN A PREMIXED STAGNATION FLAME, Bin Zhao, Kei Uchikawa, Hai Wang, Department of Mechanical Engineering, University of Delaware; John, R. McCormick, Chao Ying Ni, Department of Materials Science and Engineering, University of Delaware; Jingguang G. Chen, Department of Chemical Engineering, University of Delaware.

8PD3  GENERATION AND GROWTH OF LICOO2 NANO PARTICLES IN A DIFFUSION FLAME REACTOR, Yong-Jae Suh, Chun Mo Seong, Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea, CO; Churl Kyoung Lee, Kumoh Institute of Technology, Kumi, Korea.

8PD4  HEAT AND MASS TRANSFER AND THERMAL DISTRACTION OF HARD FUEL WHEN LASER RADIATION ACTION, LARISA RYABCHUK, Mikle Chesnokov, Odessa National I.I.Mechnikov&##8217;s university.

8PD5  EXPERIMENTAL EVIDENCE FOR NON-UNIFORM FLOW IN A HORIZONTAL EVAPORATION/CONDENSATION AEROSOL GENERATOR, Teddy Damour, SHERYL EHRLMAN, Department of Chemical Engineering, University of Maryland, College Park, MD; Lisa Karlsson, Department of Materials Chemistry, Lund University, Lund, Sweden; Martin Karlsson, Kнут Depprt, Department of Solid State Physics, Lund University, Lund, Sweden.

8PD6  STRUCTURAL AND MAGNETIC PROPERTIES OF FLAME AEROSOL SYNTHESIZED NANO PARTICLES AS A FUNCTION OF SIZE, PRAKASH KUMAR, Pratim Biswas, Da-Ren Chen, Richard Axelbaum and Ronald Indeck; Aerosol and Air Quality Research Laboratory, Washington University in St. Louis.

8PD7  IN-SITU CONTROL OF AEROSOL SIZE DISTRIBUTIONS DURING LASER ABLATION OF ZINC OXIDE, MEVLUT BULUT, Renato P. Camata, University of Alabama at Birmingham, Department of Physics, Birmingham, AL.

8PD8  AN AEROSOL METHOD FOR INCORPORATING METAL NANO PARTICLES IN AMORPHOUS CARBON FILMS FOR PROPERTY MODULATION, MEVLUT BULUT, Renato P. Camata, University of Alabama at Birmingham, Department of Physics, Birmingham, AL.
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8PD9 TWO-COMPONENT NANOPARTICLE GENERATION BY LIQUID FLAME SPRAY, JYRKI M. MÄKELÄ, Helmi Keskinen, Jorma Keskinen, Aerosol Physics Laboratory, Tampere University of Technology, Finland.

8PD10 TURBULENT THREE-PHASE FLOWS IN A BUBBLE COLUMN, XINYU ZHANG, Goodarz Ahmadi, Clarkson University, Potsdam, NY.

6:00 PM – 8:00 PM

8PE. Chemical Characterization of Atmospheric Aerosols 2

8PE1 CHEMICAL COMPOSITION AND SIZE DISTRIBUTIONS OF NON-REFRACTORY SUB-MICRON AEROSOL MEASURED DURING THE NEW ENGLAND AIR QUALITY STUDY 2004, MANJULA CANAGARATNA, Tim Onasch, Douglas Worsnop, Aerodyne Research, Inc., 43 Manning Road, Billerica, MA 01821; Patricia Quinn, Tim Bates, Pacific Marine Environmental Laboratory, NOAA, Seattle, WA 98115.

8PE2 CHARACTERIZATION OF LABORATORY AND AMBIENT PARTICLES USING THE COMBINATION OF AEROSOL MASS SPECTROMETRY AND LIGHT SCATTERING TECHNIQUES, EBEN CROSS, Timothy B. Onasch, David K. Lewis, John T. Jayne, Manjula Canagaratna, Douglas Worsnop, Aerodyne Research, Inc., 43 Manning Road, Billerica, MA 01821; Edward Dunlea, Jose L. Jimenez, Dept. of Chemistry and Biochemistry, University of Colorado, Boulder, CO 80309.

8PE3 RECENT AIRBORNE MEASUREMENTS USING AN AERODYNE AEROSOL MASS SPECTROMETER ON THE UK FACILITY FOR AIRBORNE ATMOSPHERIC MEASUREMENTS (FAAM), JONATHAN CROSIER, Hugh Coe, Mohammedrami Alfarra, James D. Allan, Keith N. Bower, Paul I. Williams, School of Earth, Atmospheric and Environmental Sciences, The University of Manchester, UK, Doug R. Worsnop, John T. Jayne, Aerodyne Research Inc., Billerica, MA, USA, Jose L. Jimenez, University of Colorado, Boulder, CO.

8PE4 EVALUATION OF SINGLE-DIAMETER SMPS SAMPLING FOR CAPTURING ROADSIDE PARTICLE DYNAMICS, DEB NIEMEIER, University of California Davis, CA; Britt A. Holmén, University of Connecticut, Storrs, CT.

8PE5 PHYSICOCHEMICAL PROPERTIES OF PM2.5 EMISSIONS IN AN INDIVIDUAL MOLDING PROCESS AT THE FOUNDRY, M.-C. OLIVER CHANG, Judith Chow, John Watson, Desert Research Institute Cliff Glowacki, Anil Prabhu, Sue Anne Sheya, Technikon, LLC.

8PE6 RADIOLOGICAL STUDY OF THE LOAD OF SEDIMENTS OR SILTS THE CHIHUAHUA VALLEY, Jorge Ivan Carrillo Flores Luisa Idelia Manzanares Papayanopoulos Leonor Cortés Palacios Arturo Keer Rendón Eduardo Florencio Herrera Peraza.

8PE7 MODEL-BASED PREDICTION OF NEW PARTICLE FORMATION FROM H2SO4-NH3-H2O NUCLEATION, Timothy Gaydos, CHARLES STANIER, Carnegie Mellon University, Pittsburgh, PA; Spyros Pandis, University of Patras, Patra, Greece and Carnegie Mellon University, Pittsburgh, PA.

8PE8 IMPROVED CHARACTERIZATION OF PERSONAL EXPOSURE SAMPLES USING ICP-MS TECHNIQUES, MARTIN SHAFER, Glynis Lough, Joel Overdier, James Schauer, University of Wisconsin-Madison-Environmental Chemistry & Technology, WI; Mike Arndt, Chris Worley, University of Wisconsin-Madison-State Laboratory of Hygiene, WI.

THURSDAY, OCTOBER 07, 2004

7:00 AM – 6:00 PM Registration
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THURSDAY, OCTOBER 07, 2004

8:00 AM – 9:00 AM Plenary Session #3

8:00 AM – 9:00 AM

STUDYING THE REACTIVITY OF NANOAEROSOLS, Michael R. Zachariah, University of Maryland, Mechanical Engineering and Chemistry.

THURSDAY, OCTOBER 07, 2004

9:00 AM – 3:00 PM Exhibits Open

THURSDAY, OCTOBER 07, 2004

9:00 AM – 3:00 PM Posters Open

THURSDAY, OCTOBER 07, 2004

9:20 AM – 10:50 AM Platform Session 7

9:20 AM – 10:50 AM

7A. Atmospheric Aerosol Modeling I

7A1 THERMODYNAMIC MODELING OF SINGLE- AND MULTI-PHASE AEROSOL PARTICLES CONTAINING NEUTRAL COMPOUNDS AND ELECTROLYTES, ELSA I. CHANG, James F. Pankow, Oregon Health & Science University, Department of Environmental & Biomolecular Systems, Beaverton, OR, USA.

7A2 IMPACT OF RENOXIFICATION REACTIONS ON AEROSOL CONCENTRATIONS, ANGEL JIMENEZ-ARANDA, Donald Dabdub, University of California Irvine, Irvine, CA.

7A3 DETAILED MICROPHYSICAL MODELING STUDY OF PARTICLE SIZE DISTRIBUTIONS IN INDUSTRIAL PLUMES, SUNHEE CHO, Diane V. Michelangeli, York University, Toronto, ON; Cathy Banic, Meteorological Service of Canada, Toronto, ON.

7A4 APPLICATION OF A THREE-DIMENSIONAL CHEMICAL TRANSPORT MODEL (PMCAMX+) TO MODEL SUMMER AND WINTER PM IN THE EASTERN UNITED STATES, TIMOTHY M GAYDOS, Rob Pinder, Bonyoung Koo, Kathleen M Fahey, Spyros N Pandis, Carnegie Mellon University, Pittsburgh PA.

7PA POSTER PREVIEW, This session ends with a brief presentation of posters from Session 7PA(one minute each).

9:20 AM – 10:50 AM

7B. Special Symposium: Heterogeneous & Multiphase Chemistry I

7B1 ORGANIC AEROSOL AND THEIR EFFECT ON CLOUD DROPLET FORMATION, MARIA CRISTINA FACCHINI, Sandro Fuzzi, Institute of Atmospheric Science and Climate - CNR, Bologna, Italy.

7B2 WATER ACTIVITY AND CRITICAL SUPERSATURATIONS ESTIMATED FROM HYGROSCOPICITY MEASUREMENTS, KIRSTEN KOEHLER, Sonia Kreidenweis.
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Anthony Prenni, Paul DeMott, Christian Carrico, Colorado State University, Fort Collins, CO.

7B3 ISOPRENE AND IN-CLOUD FORMATION OF SECONDARY ORGANIC AEROSOL, Ho-Jin Lim, BARBARA TURPIN, Ammarie Carlton, Rutgers University, Environmental Sciences, New Brunswick, NJ, USA.

7B4 STRUCTURE OF ORGANIC PARTICLES, LYNN M. RUSSELL, Scripps Institution of Oceanography, UCSD, La Jolla, CA; Mary K. Gilles, Lawrence Berkeley National Laboratories, Berkeley, CA; Steven F. Maria, Satish Myneni, Princeton University, Princeton, NJ.

7PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 7PB(one minute each).

9:20 AM – 10:50 AM

7C. Health Related Aerosol Characterization I

7C1 INVESTIGATION OF SOURCE-RELATED CHEMICAL SPECIATION OF SIZE-RESOLVED FINE AND ULTRAFINE PARTICLES IN THE SOUTH BRONX AREA OF NEW YORK CITY, DRITAN XHILLARI, Polina Maciejczyk, George Thurston, Lung Chi Chen, New York University School of Medicine, Tuxedo, NY; Yongjing Zhao, University of California, Davis, Davis, CA.

7C2 INDOOR AND OUTDOOR MEASUREMENTS OF PM2.5 AND DIESEL EXHAUST PARTICLES IN NEW YORK CITY, YAIR HAZI, Patrick Kinney, Juan Correa, Darrell Holmes, Frederica Perera, Columbia University, Mailman School of Public Health, Center for Children’s Environmental Health, New York, NY.

7C3 EVALUATION OF AN AEROSOL TIME-OF-FLIGHT MASS SPECTROMETER FOR INDUSTRIAL MONITORING, STEPHEN CRISTY, BWXT Y-12, Oak Ridge, TN.

7C4 ON-ROAD EXPOSURE AND EMISSION MEASUREMENTS, David Kittelson, Winthrop Watts, Jason Johnson, University of Minnesota, Minneapolis, MN; Gunter Oberdorster, University of Rochester, Rochester, NY.

7PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 7PC(one minute each).

9:20 AM – 10:50 AM

7D. Aerosol Synthesis of Nanomaterials I

7D1 FLAME SYNTHESIS OF COMPOSITE NANO PARTICLES, Sowon Sheen, Sowon Yang and MANSOO CHOI, National CRI Center for Nano Particle Control, School of Mechanical and Aerospace Engineering, Seoul National University, Seoul, 151-742, South Korea Email: mchoi@plaza.snu.ac.kr.

7D2 FLAME SYNTHESIS OF CERIA CONTAINING WATER-GAS SHIFT CATALYSTS FOR FUEL CELL APPLICATIONS, RANJAN KUMAR PATI, Sheryl H. Ehrman, University of Maryland, College Park, MD; Ivan C. Lee, Deryn Chu, US Army Research Laboratory, Adelphi, MD.

7D3 HIGH DENSITY PLASMA SYNTHESIS OF HIGHLY ORIENTED SINGLE CRYSTAL SILICON NANOPARTICLES FOR DEVICE APPLICATIONS, Ameya Bapat, UWE KORTSHAGEN, Mechanical Engineering, University of Minnesota, Minneapolis, MN; Ying Dong, Stephen A. Campbell, Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN; Christopher Perrey, C. Barry Carter, Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN.
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7D4 A PHENOMENOLOGICAL MODEL TO DESCRIBE OXIDATION OF ALUMINUM NANOPARTICLES, ASHISH RAI, Shekhar Sonwane, Kihong Park, Michael R. Zachariah, University of Maryland, College Park, Md.

7PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 7PD(one minute each).

9:20 AM – 10:50 AM

7E. Indoor Aerosols I

7E1 PM RESUSPENSION AND SUBSEQUENT TRANSLOCATION IN A RESIDENTIAL SETTING, JACKY ROSATI, U.S. Environmental Protection Agency, Indoor Environment Management Branch, Research Triangle Park, NC; Jonathan Thornburg, Charles Rodes, RTI International, Research Triangle Park, NC.

7E2 HUMAN EXPOSURE TO PARTICULATE POLLUTANTS FOLLOWING A PULSE RELEASE AND REGULAR HUMAN ACTIVITY, Jing Qian, ANDREA FERRO, Clarkson University, Potsdam, NY.

7E3 A COMPUTATIONAL / EXPERIMENTAL STUDY OF PARTICULATE DISPERSION AND RESUSPENSION IN CONFINED CHAMBERS UNDER INFLUENCES OF HUMAN MOTION, Jack Edwards, ROSHAN OBEROI, North Carolina State University, Raleigh, NC; Jacky Rosati, U.S. Environmental Protection Agency, Research Triangle Park, NC; Jonathan Thornburg, Charles Rodes; RTI International, Research Triangle Park, NC.

7E4 SUPERMICRON PARTICLE DEPOSITION FROM TURBULENT FLOW ONTO SMOOTH AND ROUGH VERTICAL SURFACES: PART 2 Ù SIMULATION STUDY, ALVIN LAI, School of Mechanical and Production Engineering, Nanyang Technological University, Singapore; William Nazaroff, Department of Civil and Environmental Engineering, University of California, Berkeley, CA.

7PE POSTER PREVIEW, This session ends with a brief presentation of posters from Session 7PE(one minute each).

THURSDAY, OCTOBER 07, 2004

11:10 AM – 12:40 PM Platform Session 8

11:10 AM – 12:40 PM

8A. Urban/Regional PM I

8A1 APPORTIONMENT OF AMBIENT PRIMARY AND SECONDARY PM2.5 DURING A 2001 SUMMER STUDY IN THE NETL PITTSBURGH SITE USING PMF2 AND EPA UNMIX, Delbert J. Eatough, Brigham Young University.

8A2 AIR QUALITY IMPACTS OF DISTRIBUTED GENERATION: MODEL UNCERTAINTY AND SENSITIVITY ANALYSIS OF PM2.5 AEROSOL, MARCO RODRIGUEZ, Donald Dabdub, University of California, Irvine, Irvine, CA.

8A3 INTEGRATED MODELLING OF PARTICULATE MATTER IN REGIONAL AIR QUALITY WITH SMASS, DIANE V. MICHELANGEI, Ray J. Yang, Adam G. Xia, Centre for Atmospheric Chemistry & Department of Earth and Space Science and engineering, York University, Toronto, ON, Canada.

8A4 3-D MODEL EVALUATION: AEROSOL MASS AND NUMBER SIZE DISTRIBUTIONS, YANG ZHANG, Jonathan Bulau, North Carolina State University, Raleigh, NC; Betty Pun, Christian Seigneur, Atmospheric & Environmental Research, Inc., San Ramon, CA; Mark Z. Jacobson, Stanford University, Stanford, CA.
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8PA POSTER PREVIEW, This session ends with a brief presentation of posters from Session 8PA (one minute each).

11:10 AM – 12:40 PM

8B. Special Symposium: Heterogeneous & Multiphase Chemistry II

8B1 SEA SALT AEROSOL CHEMISTRY: BRIEF OVERVIEW AND RECENT MODELING RESULTS, von Glasow, Roland (1) Institut fuer Umweltphysik, University of Heidelberg, Germany (2) Scripps Institution of Oceanography, UCSD, La Jolla, USA.

8B2 REAL-TIME MONITORING OF HETEROGENEOUS REACTIONS ON INDIVIDUAL ATMOSPHERIC DUST PARTICLES, KIMBERLY A. PRATHER, Sergio Guazzotti, John Holecek, David Sodeman, University of California, San Diego, CA.

8B3 HYDRATION REACTIVITY OF CALCIUM CONTAINING MINERAL DUST PARTICLES AGED WITH NITRIC ACID., B.J. Krueger and V.H. Grassian Department of Chemistry and the Center for Global and Regional Environmental Research, University of Iowa, Iowa City, Iowa 52242 J.P. Cowin and A. LASKIN William R. Wiley Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, P.O. Box 999, MSIN K8-88, Richland, WA 99352.

8B4 COMPARISONS OF MODEL AEROSOL MASS AND CHEMICAL COMPOSITION WITH OBSERVATIONS FROM NEAQS 2002, G. J. FROST, S. A. McKeen, A. Middlebrook, J. deGouw, E. Williams, NOAA Aeronomy Laboratory, Boulder, CO, and CIRES, University of Colorado, Boulder, CO; S. E. Peckham, G. Grell, NOAA Forecast Systems Laboratory, Boulder, CO, and CIRES, University of Colorado, Boulder, CO; R. Schmitz, Department of Geophysics, University of Chile, Santiago, Chile, and IMK-IFU, Forschungszentrum Karlsruhe, Garmisch-Partenkirchen, Germany; R. Talbot, EOS, University of New Hampshire, Durham, NH.

8PB POSTER PREVIEW, This session ends with a brief presentation of posters from Session 8PB (one minute each).

11:10 AM – 12:40 PM

8C. Indoor Aerosols II

8C1 PENETRATION OF FREEWAY ULTRAFINE PARTICLES INTO INDOOR ENVIRONMENTS, YIFANG ZHU, William C. Hinds, Thomas Kuhn, Margaret Krudysz, John Froines, University of California, Los Angeles, CA; Constantinios Sioutas, University of Southern California, Los Angeles, CA.

8C2 THE TRANSPORT AND FATE OF OUTDOOR CARBONACEOUS AEROSOLS IN THE INDOOR ENVIRONMENT, MELISSA LUNDEN, Thomas W. Kirchstetter, Tracy L. Thatcher, Nancy Brown, Lawrence Berkeley National Laboratory, Berkeley, CA; Susanne Herring, Aerosol Dynamics Inc. Berkeley, CA.

8C3 INSIGHT INTO THE SIZE-RESOLVED SOURCE AND PROPERTIES OF INDOOR AEROSOLS THROUGH COUPLED MEASUREMENTS OF SIZE DISTRIBUTIONS AND HYGROSCOPIC GROWTH, DON R. COLLINS, Chance Spencer, Texas A&M University, College Station, TX; Maria T. Morandi, Tom H. Stock, University of Texas School of Public Health, Houston, TX.

8C4 INDOOR-OUTDOOR RELATIONSHIPS OF ACCUMULATION MODE PARTICLES AT FIVE RESIDENCES IN SEATTLE, WA, RYAN ALLEN, Dave Covert, Tim Larson, and Sally Liu, University of Washington, Seattle, WA.

8PC POSTER PREVIEW, This session ends with a brief presentation of posters from Session 8PC (one minute each).

11:10 AM – 12:40 PM
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8D. Aerosol Synthesis of Nanomaterials II

8D1 PHOTOCATALYSIS EVALUATION OF NANOSTRUCTURED TiO2 POWDERS AND THIN FILMS PREPARED BY FLAME AEROSOL METHOD FOR PARTIAL OXIDATION OF HYDROCARBONS, Zhong-Min Wang, Department of Environmental Engineering, University of Cincinnati Pratim Biswas, Departments of Chemical and Civil Engineering, Washington University in St. Louis, MO 63130 Endalkachew Sahla-Demessie, USEPA National Risk Management Research Laboratory, Cincinnati, OH 45221.

8D2 HYPERSOニック PLASMA PARTICLE DEPOSITION OF SILICON-TITANIUM-NITROGEN NANOPARTICLE FILMS, J. Hafiz, X. Wang, R. Mukherjee, P.H. McMurry, J.V.R. Heberlein, S.L. GIRSHICK, Dept. of Mechanical Engineering, University of Minnesota, Minneapolis, MN.

8D3 SYNTHESIS OF VERY LOW DENSITY, CARBONACEOUS AEROGEL MATERIALS, R. Dhaubhadel, C. Gerving, A. Chakrabarti and C.M. SorenSen, Department of Physics, Kansas State University, Manhattan, KS 66506-2601.

8D4 NANOSTRUCTURED ZINC OXIDE THIN FILMS BY A HYBRID LASER-AEROSOL METHOD, MASASHI MATSUMURA, Renato P. Camata, University of Alabama at Birmingham, Department of Physics, Birmingham, AL.

8PD POSTER PREVIEW, This session ends with a brief presentation of posters from Session 8PD(one minute each).

11:10 AM – 12:40 PM

8E. Chemical Characterization of Atmospheric Aerosols 2

8E1 PM2.5 TECHNOLOGY ASSESSMENT AND CHARACTERIZATION STUDY IN NEW YORK Æ PMTACS-NY: AN OVERVIEW OF THE 2004 WINTER INTENSIVE IN QUEENS, NY, Kenneth L. Demerjian, J. Schwab, G. Lala, O. Hogrefe, Y. Li, S. Weimer, D. Orsini, F. Drewnick, K. Rhoads, Atmospheric Sciences Research Center, University at Albany SUNY; D. Felton, G. Boynton, T. Lanni, B. Frank, New York State Department of Environmental Conservation; L. Husain, X. Zhou Department of Environmental Health and Toxicology, University at Albany, SUNY; W. Brune, X. Ren, Pennsylvania State University; D. Worsnop, Aerodyne Research, Inc.; P. Hopke, P. Venkataram, Clarkson University; H. Patashnick, J. Ambs, Rupprecht & Patashnick Co., Inc.; J. Jimenez, Dept. of Chemistry & Biochemistry; and CIRES, University of Colorado.


8E4 THERMAL METHODS FOR CHEMICAL CHARACTERIZATION OF MERCURY-CONTAINING AEROSOLS, MARY LYNAM, Matthew Landis, National Exposure Research Laboratory, United States Environmental Protection Agency, Research

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THURSDAY, OCTOBER 07, 2004
12:40 PM – 2:40 PM Poster Session 2, with Box Lunch

THURSDAY, OCTOBER 07, 2004
2:50 PM – 4:10 PM Platform Session 9

2:50 PM – 4:10 PM
9A. Combustion Aerosol Control
9A2 TECHNOLOGIES FOR MERCURY REMOVAL USING FABRIC FILTER COLLECTORS FOR COAL-FIRED POWER PLANTS, Kenneth Noll, OBATOSIN ALUKO, Illinois Institute of Technology, Chicago, IL.
9A3 STUDY OF FINE AEROSOL SIZE DISTRIBUTION CHANGE DUE TO INTERCOAGULATION BY COARSE AEROSOL, SANG-RIN LEE, Chang-Yu Wu, University of Florida, Gainesville, FL.
9A4 A NOVEL APPROACH FOR THE CONTINUOUS DEPOSITION AND OXIDATION OF DIESEL PARTICULATE MATTER, REINHARD NIESSNER Armin Messerer Astrid Thalhammer Elisabeth Dronia Ulrich Poeschl.

2:50 PM – 4:10 PM
9B. Special Symposium: Heterogeneous & Multiphase Chemistry III
9B1 INTERACTIONS BETWEEN SOOT AND NITROGEN OXIDE SPECIES, RAVISHANKARA, A. R..
9B2 PRODUCTS AND MECHANISM OF THE HETEROGENEOUS REACTION OF NITRATE RADICALS WITH OLEIC ACID PARTICLES, Kenneth Docherty, Huiming Gong, PAUL ZIEMANN, Air Pollution Research Center, University of California, Riverside, CA.
9B3 UPTAKE AND REACTIONS OF ATMOSPHERIC TRACE GASES BY SURFACE FILMS, D. JAMES DONALDSON, Department of Chemistry, University of Toronto, Toronto, Ont. Canada.
9B4 THEORETICAL, IN SITU, AND LABORATORY CONSTRAINTS ON ORGANIC AEROSOL OXIDATION, NEIL DONAHUE, Allen Robinson, Carnegie Mellon University, Pittsburgh, PA.

2:50 PM – 4:10 PM
9C. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol IV
9C1 LUNG TOXICITY OF AMBIENT PARTICULATE MATTER FROM SOUTHEASTERN US SITES WITH DIFFERENT CONTRIBUTING SOURCES,
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JEANCLARE SEAGRAVE, Jacob D. McDonald, Joe L. Mauderly, Lovelace Respiratory Research Institute, Albuquerque, NM; Eric S. Edgerton, ARA Inc, Cary, NC; J.J. Jansen, Southern Co, Birmingham, AL.

9C2 RESULTS OF ARIES EMERGENCY DEPARTMENT AND IMPLANTABLE DEFIBRILLATOR STUDIES, 1998-2002, PAIGE TOLBERT, Mitchel Klein, Jennifer Peel, Kristina Metzger, Dana Flanders, Rollins School of Public Health of Emory University, Atlanta, GA.


9C4 LINKING ATMOSPHERIC AEROSOL EXPOSURE TO HEALTH IMPACTS: MODEL DEVELOPMENT AND APPLICATIONS TO THE SOUTHEAST UNITED STATES, Quansong Tong and Denise Mauzerall, Science, Technology and Environmental Policy program, Woodrow Wilson School, Princeton University, Princeton, NJ; Robert Mendelsohn, School of Forestry & Environmental Studies, Yale University, New Haven, CT.

2:50 PM – 4:10 PM

9D. Aerosol Aggregates


9D2 AGGLOMERATION AND FRAGMENTATION OF AIRBORNE BIOLOGICAL NANOPARTICLES, CHRISTOPHER HOGAN, Myong-Hwa Lee, Da-Ren Chen and Pratim Biswas; Environmental Engineering Science, Box 1180; Washington University in St. Louis, MO.

9D3 THE EFFECTS OF FLUID TURBULENCE ON NANOPARTICLE COAGUATION, SEAN C. GARRICK, University of Minnesota, Minneapolis, MN.

9D4 DETACHMENT OF MICROPARTICLE AGGLOMERATES, A. H. Ibrahim, S. EscobarVargas, P. F. Dunn and R. M. Brach Particle Dynamics Laboratory University of Notre Dame, Notre Dame, IN 46556.

2:50 PM – 4:10 PM

9E. Nucleation/Ultrafine Aerosols

9E1 SIZE-FRACTIONATED MEASUREMENTS OF AMBIENT ULTRAFINE PARTICLE CHEMICAL COMPOSITION IN LOS ANGELES USING THE NANOMOUDI, SATYA B. SARDAR, Philip M. Fine, Paul R. Mayo and Constantinos Sioutas, University of Southern California, Los Angeles, CA.

9E2 VOLATILITY PROPERTIES OF OUTDOOR AND INDOOR ULTRAFINE PARTICLES CLOSE TO A FREEWAY, THOMAS KUHN, Yifang Zhu, Margaret Krudysz, William C. Hinds, John Froines, Southern California Particle Center & Supersite, University of California, Los Angeles, CA; Philip M. Fine, Constantinos Sioutas, Southern California Particle Center & Supersite, University of Southern California, Los Angeles, CA.

9E3 ATMOSPHERIC ION-INDUCED NUCLEATION OF SULFURIC ACID AND WATER, EDWARD LOVEJOY, Karl Froyd, NOAA Aeronomy Laboratory, Boulder, CO; Joachim Curtius, Institut fur Physik der Atmosphere, Universitat Mainz, Mainz, Germany.
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9E4 SIZE-DEPENDENT CHEMICAL COMPOSITION OF SUB-20 NANOMETER ATMOSPHERIC AEROSOL, KATHARINE F. MOORE, James N. Smith, Matt Dunn, Fred L. Eisele, National Center for Atmospheric Research, Boulder, CO; Peter H. McMurry, Melissa Fink, Mark R. Stolzenburg, University of Minnesota, Minneapolis, MN.

THURSDAY, OCTOBER 07, 2004

3:00 PM – 6:00 PM Exhibitor Move-Out

THURSDAY, OCTOBER 07, 2004

4:30 PM – 5:50 PM Platform Session 10

4:30 PM – 5:50 PM

10A. Bioaerosol Analysis Instrumentation

10A1 AN EFFICIENT & SELECTIVE BIOLOGICAL AEROSOL MONITORING SYSTEM, KEITH COFFEE, Vincent Riot, Bruce Woods, David Fergenson, Eric Gard, Lawrence Livermore National Laboratory, Livermore, CA; Greg Czerwieniec, Scott Russell, Carlito Lebrilla, University of California Davis, Davis, CA.

10A2 THE DETECTION AND CHARACTERIZATION OF BIO-AEROSOLS IN AN ION TRAP MASS SPECTROMETER BY MATRIX-ASSISTED LASER DESORPTION/IONIZATION, WILLIAM A. HARRIS, Peter T.A. Reilly, William B. Whitten, J. Michael Ramsey, Oak Ridge National Laboratory, Oak Ridge TN.


10A4 ENRICHMENT OF BIOAEROSOLS CUED FROM THEIR FLUORESCENCE SPECTRUM, Yong-Le Pan 1, Veronique Boutou2, Jean-Pierre Wolf2, and Richard K. Chang 1 1 Department of Applied Physics and Center for Laser Diagnostics, Yale University, New Haven, CT 06520 2LASIM (UMR5579), Universite Claude Bernard Lyon 1, 43 bd du 11 Novembre, 69622 Villeurbanne Cedex, France.

4:30 PM – 5:50 PM

10B. Toxicology

10B1 GENERATION OF HYDROXYL RADICAL IN SIMULATED LUNG FLUID BY IRON-SOOT AEROSOL, HEEJUNG JUNG(1,2), Bing Guo(1), Cort Anastasio(2), Ian Kennedy(1) (1) Dept. of Mechanical & Aeronautical Engineering (2) Dept. of Land, Air, Water & Resources University of California, Davis; One Shields Ave; Davis, CA.

10B2 RELATIONSHIP BETWEEN TOXICITY AND COMPOSITION OF INHALED DIESEL EXHAUST, JACOB D. MCDONALD, Kevin S. Harrod, JeanClare S. Seagrave, and Joe L. Mauderly, Lovelace Respiratory Research Institute, Albuquerque, NM.

10B3 PARTICULATE EXPOSURE ADVERSELY LOWERS CARDIAC OUTPUT IN SENESCENT MICE, CLARKE G. TANKERSLEY, Djahida Bedja, Eiki Takimoto, Wayne Mitzen, Richard Rabold, Kathleen Gabrielson, Johns Hopkins Medical Institutes, Baltimore, MD.
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10B4 USE OF A COMPACT CASCADE IMPACTOR TO COMPARE THE BIOLOGICAL ACTIVITY OF SIZE-SEGREGATED SAMPLES OF THREE OCCUPATIONAL AEROSOLS., LUPITA D. MONTOYA, Rensselaer Polytechnic Institute, Troy, NY; Ramon M. Molina, Joseph D. Brain, Harvard School of Public Health, Boston, MA.

4:30 PM – 5:50 PM

10C. Special Symposium: Characterization and Health Effects of Ambient Southeastern U.S. Aerosol V

10C1 INFLUENCE OF ATMOSPHERIC FINE PARTICULATE MATTER ON RESPIRATORY HEALTH IN RURAL CENTRAL GEORGIA: RESULTS FROM THE GRASP HEALTH STUDY, MICHAEL O. RODGERS, James R. Pearson, Air Quality Laboratory, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA.

10C2 AIR POLLUTION AND ACUTE AMBULATORY CARE VISITS: PRELIMINARY 4-YEAR RESULTS FROM THE AEROSOL INHALATION AND EPIDEMIOLOGY STUDY (ARIES), AMBER H. SINCLAIR, Dennis Tolsma, Kaiser Permanente-Georgia, Atlanta, GA.

10C3 RELATIVE TOXICITIES OF INDOOR AND OUTDOOR FINE PARTICLES USING AN IN VITRO ASSAY, Ted Myatt, Daid MacIntosh, Environmental Health & Engineering, Inc., Newton, MA Luke Nacher, Department of Environmental Health Sciences, University of Georgia, Athens, GA HELEN SUH, Department of Environmental Health, Harvard School of Public Health, Boston, MA.

10C4 CAN WE DETERMINE PENETRATION COEFFICIENTS AND DEPOSITION RATES FROM FIELD STUDIES? RESULTS OF A 37-PERSON PANEL STUDY IN NORTH CAROLINA, LANCE WALLACE, Ronald Williams, National Exposure Research Laboratory, REsearch Triangle Park, NC.

4:30 PM – 5:50 PM

10D. Particle Formation Processes

10D1 NANOPARTICLE DYNAMICS IN LASER ABLATION PROCESS, DA-REN CHEN, Washington University in St. Louis, St. Louis, MO; Doh-Won Lee and Meng-Dawn Cheng, Oak Ridge National Laboratory, Oak Ridge, TN.

10D2 NUCLEATION RATES FOR THE CONDENSATION OF MONOVALENT METALS, Ranjit Bahadur, RICHARD B. MCCLURG, University of Minnesota, Minneapolis, MN.

10D3 NUCLEATION OF ALCOHOLS IN SUPERSONIC NOZZLES, Murad Gharibeh, BARBARA WYSLOUZIL, The Ohio State University, Columbus, OH; Yoojeong Kim, Worcester Polytechnic Institute, Worcester, MA; David Ghosh, Reinhard Strey, Universitaet zu Koeln, Germany.

10D4 ION-INDUCED NUCLEATION IN DIPOLAR VAPOURS, ALEXEY NADYKTO, Fangqun Yu, Atmospheric Sciences Research Centers; SUNY at Albany; Albany; NY; USA.

4:30 PM – 5:50 PM

10E. Carbonaceous Aerosols III

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10E2 SEASONAL AND SPATIAL VARIATION OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) IN VAPOR-PHASE AND PM2.5 IN THE CALIFORNIA CHILDREN’S HEALTH STUDY., ARANTZA EIGUREN-FERNANDEZ, Suresh Thurairatnam, Antonio H. Miguel*, SCPCS, University of California, Los Angeles, CA, USA and Ed L. Avol, Department of Preventive Medicine, University of Southern California, Los Angeles, CA, USA.

10E3 THE INFLUENCE OF FOREST FIRES IN THE WESTERN UNITED STATES ON POLLUTANT CONCENTRATIONS IN CALIFORNIA DURING THE SUMMER OF 2002, MELISSA LUNDEN, Douglas Black, Nancy Brown, Lawrence Berkeley National Laboratory, Berkeley, CA; Gavin McMeeking, Sonia Kreidenweis, Christian Carrico, Taehyoung Lee, Jacqueline Carrillo, Jeffrey Collett, Jr., Department of Atmospheric Science, Colorado State University, Fort Collins, CO; Derek Day, Jennifer Hand and William Malm, CIRA, Colorado State University, Fort Collins, CO.

10E4 AEROSOL BLACK CARBON CLIMATOLOGY AT THE ST. LOUIS - MIDWEST SUPERSITE, JAY R. TURNER, Neil D. Deardorff, Bradley P. Goodwin, Jason S. Hill, Washington University, St. Louis, MO; Min-Suk Bae, James J. Schauer, University of Wisconsin, Madison, WI.

FRIDAY, OCTOBER 08, 2004
7:00 AM – 2:00PM Registration

FRIDAY, OCTOBER 08, 2004
8:00 AM – 9:00 AM Plenary Session #4

8:00 AM – 9:00 AM
CHARACTERIZATION OF ATMOSPHERIC AEROSOLS: YESTERDAY AND TODAY, Susanne Hering, Aerosol Dynamics Inc., Berkeley, CA.

FRIDAY, OCTOBER 08, 2004
8:00 AM – 2:00 PM Poster #2 Move Out

FRIDAY, OCTOBER 08, 2004
9:30 AM – 10:50 AM Platform Session 11

9:30 AM – 10:50 AM
11A. Personal Aerosol Samplers

11A1 MINIATURIZED TAPERED ELEMENT OSCILLATING MICROBALANCE PERFORMANCE IN A PERSON-WEARABLE DUST MONITOR., JON C. VOLKWEIN, Robert P. Vinson, and Donald P. Tuchman; CDC/NIOSH PO Box 18070, Pittsburgh, PA 15236.

11A2 EVALUATION OF THE COLLECTION EFFICIENCY OF A PERSONAL MICROTRAP AEROALLERGEN SAMPLER, LUPITA D. MONTOYA, Rensselaer
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Polytechnic Institute, Troy, NY; Nathan M. Kreisberg, Aerosol Dynamics Inc., Berkeley, CA.

11A3 FIELD VALIDATION OF A PERSONAL CASCADE IMPACTOR SAMPLER (SIOUTAS IMPACTOR) FOR TRACE-LEVEL COMPOSITION MEASUREMENTS, MANISHA SINGH, Philip M. Fine, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA; Glynis C. Lough, James J. Schauer, Martin M. Shafer, University of Wisconsin-Madison Environmental Chemistry and Technology Program, Madison, WI.

11A4 A PASSIVE AEROSOL SAMPLER TO MEASURE ULTRAFINE PARTICLE EXPOSURE, THOMAS PETERS, University of Iowa, Iowa City, IA; David Leith, Stephen Rappaport, University of North Carolina, Chapel Hill, NC.

9:30 AM – 10:50 AM

11B. Special Symposium: Heterogeneous & Multiphase Chemistry IV

11B1 OZONOLYSIS OF ORGANIC AEROSOLS: KINETICS AND FORMATION OF HIGH MOLECULAR WEIGHT PRODUCTS, MICHAEL TOLOCKA, Matthew Dreyfus, Julie Lloyd and Murray Johnston, University of Delaware, Newark, DE.

11B2 IDENTIFICATION OF POLYMERS AS MAJOR COMPONENTS OF ATMOSPHERIC ORGANIC AEROSOLS, Urs Baltensperger, Dwane Paulsen, Martin Steinbacher, Josef Dommen, Rebekka Fisseha, ANDRE S.H. PREVOT, Laboratory of Atmospheric Chemistry, Paul Scherrer Institut, Switzerland Markus Kalberer, Myriam Sax, Vladimir Frankevich, Renato Zenobi, Chemistry and Applied Biosciences, ETH Zürich, Switzerland.

11B3 A DETAILED MODELLING STUDY OF THE EVOLUTION OF ORGANIC AEROSOLS, GORDON MCFIGGANS, Dave Topping, Mike Cubison, Hugh Coe, Atmospheric Physics Group, UMIST, Manchester, UK; Mike Jenkin, Imperial College, London, UK.

11B4 FAST SIZE-RESOLVED AEROSOL COMPOSITION MEASUREMENTS IN MEXICO CITY WITH AN AMS, JOSE L. JIMENEZ, Katja Dzepina, Matthew Dunn, Peter DeCarlo, Qi Zhang, and Alex Huffman, University of Colorado-Boulder; Dara Salcedo, Universidad Iberoamericana, Mexico City; Timothy Onasch, Douglas R. Worsnop, Phillip Mortimer, John T. Jayne, and Manjula R. Canagaratna, Aerodyne Research; Beatriz Cardenas, CENICA; Rainer Volkamer, Benjamin de Foy, Kirsten Johnson, Bilal Zuberi, Mario Molina, and Luisa Molina, MIT; James Smith, NCAR; Peter McMurry, University of Minnesota, and Jeffrey Gaffney and Nancy Marley, Argonne National Laboratory.

9:30 AM – 10:50 AM

11C. Bioaerosols

11C1 AEROSOLIZATION OF MICROORGANISMS AND MICROBIAL FRAGMENTS FROM METALWORKING FLUIDS, HONGXIA WANG, Atin Adhikari, Weixin Li, Dainius Martuzevicius, Klaus Willeke, Sergey Grinshpun, Tiina Reponen, Center for Health-related Aerosol Studies, Department of Environmental Health, University of Cincinnati, OH.

11C2 PERFORMANCE AND DESIGN OF A SINGLE-PASS ÔBUBBLINGÖ BIOAEROSOL GENERATOR, GEDIMINAS MAINELIS, Rutgers University, New Brunswick, NJ; Rudolph Jaeger, CH Technologies, Westwood, NJ; David Berry, Hey Reoun An, Maosheng Yao, Rutgers University, New Brunswick, NJ; Kevin DeVoe, BGI Inc., Waltham, MA.
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11C3  SAMPLING EFFICIENCY AND STORAGE EFFECTS FOR VIRUS AEROSOL, Chun-Chieh Tseng and CHIH-SHAN LI, Graduate Institute of Environmental Health, College of Public Health, National Taiwan University, Taipei, Taiwan, R.O.C..

11C4  IDENTIFICATION AND CHARACTERIZATION OF AUREOBASIDIUM IN THE OUTDOOR AIR IN PASADENA, RICHARD C. FLAGAN, Philip E. Taylor, California Institute of Technology, Pasadena, CA; M. Michael Glovsky, Huntington Memorial Research Institute, Pasadena, CA; Robert Esch, Greer Laboratories, Lenoir, NC.

9:30 AM – 10:50 AM

11D.  Soot Formation and Characterization

11D1  A STUDY OF THE CRITERIA FOR SOOT INCEPTION IN OXYGEN ENHANCED COFLOW FLAMES, BENJAMIN KUMFER, Richard Axelbaum, Washington University, St. Louis, MO.

11D2  REACTION PROPERTIES OF TEM-OBSERVABLE PRIMARY SOOT PARTICLES IN FLAME ENVIRONMENTS, C.H. Kim, A.M. El-Leathy, G.M. FAETH, University of Michigan, Ann Arbor, MI; F. Xu, University of Central Florida, Orlando, FL.

11D3  ON THE FRACTAL DIMENSION AND EFFECTIVE DENSITY OF SOOT PARTICLES, MATTI MARICQ, Ning Xu.

11D4  CHARACTERIZATION OF DIESEL SOOT WITH SYNCHROTRON TECHNIQUES, ARTUR BRAUN, Naresh Shah, Frank E. Huggins, Yuanzhi Chen, Gerald P. Huffman, Consortium for Fossil Fuel Science, Lexington, KY; Kerry E. Kelly, Adel Sarofim, University of Utah, Salt Like City, UT; Sue Wirick, Christoper Jacobsen, SUNY Stony Brook, NY; Simon Bongjin Mun, Zahid Hussain, Berkeley National Laboratory, Berkeley, CA; Matti Maricq, Ford Motor Company, Deerborn, MI; Jan Ilvsky, Purdue University, IN; Pete R. Jemian, University of Chicago, Chicago, IL; Steven N. Ehrlich, Brookhaven National Laboratory, Upton, NY; Alena Kubatova, University of North Dakota, Grand Forks, ND.

9:30 AM – 10:50 AM

11E.  Atmospheric Aerosol Modeling II

11E1  FORMATION AND REMOVAL OF AMMONIUM NITRATE AND ITS PRECURSORS: IMPLICATIONS FOR PM2.5 CONTROL STRATEGIES, Dimitris Vayenas, University of Ioannina, Agrinio, Greece; SATOSHI TAKAHAMA, Cliff Davidson, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA.

11E2  A COMPUTATIONALLY EFFICIENT MODEL FOR MULTICOMPONENT ACTIVITY COEFFICIENTS IN AQUEOUS SOLUTIONS, RAHUL A. ZAVERI, Richard C. Easter, Pacific Northwest National Laboratory, Richland, WA; Anthony S. Wexler, University of California, Davis, CA.

11E3  THE PREDICTED EFFECTS OF DISSOLVED INORGANIC SALTS ON THE FORMATION OF AEROSOL PARTICULATE MATTER CONTAINING ORGANIC COMPOUNDS AND WATER, GARNET B. ERDAKOS, James F. Pankow, OGI School of Science & Engineering at OHSU, Department of Environmental and Biomolecular Systems, Beaverton, OR.

11E4  AN UPDATED AMMONIA EMISSION INVENTORY FOR THE CONTINENTAL UNITED STATES, CLIFF DAVIDSON, Ross Strader, Carnegie Mellon University, Pittsburgh, PA.

FRIDAY, OCTOBER 08, 2004

11:10 AM – 12:30 AM  Platform Session 12
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11:10 AM – 12:30 AM

12A. New Concepts in Instrumentation

12A1 AN INNOVATIVE APPROACH FOR SIMULTANEOUS DETERMINATION OF PARTICLE SIZE AND ITS COMPLEX REFRACTIVE INDEX, Artur Golczewski, Peter Gal, Attila Nagy, Aladar Czitrovszky and W.W. VLADEK SZYMANSKI, University of Vienna, Vienna Austria.


12A3 DEVELOPMENT OF AEROSOL MOBILITY SIZE SPECTROMETER, PRAMOD KULKARNI, Jian Wang, Brookhaven National Laboratory, Upton, NY.

12A4 A NEW GAS AND PARTICLE ANALYZER: CONTINUOUS ION MOBILITY SPECTROMETER (C-IMS), MANG ZHANG, Beelee Chua, Anthony S. Wexler University of California, Davis, CA.

11:10 AM – 12:30 AM

12B. Special Symposium: Heterogeneous & Multiphase Chemistry V

12B1 RECENT RESULTS IN SECONDARY ORGANIC AEROSOL FORMATION, JOHN SEINFELD, Song Gao, Sally Ng, Melita Keywood, Varuntida Varutbangkul, Roya Bahreini, Jason Surratt, Jesse Kroll, Fred Brechtel, and Richard Flagan. California Institute of Technology, Pasadena, CA.

12B2 A THERMODYNAMIC APPROACH TO EVALUATING THE EXTENT TO WHICH ALPHA-PINENE AND ISOPRENE MAY CONTRIBUTE TO ORGANIC PARTICULATE MATTER VIA THE FORMATION OF Oligomers, KELLEY BARSANTI, James Pankow, OGI School of Science and Engineering at OHSU, Portland, OR.

12B3 A PREDICTIVE MODEL FOR ORGANIC AEROSOL GROWTH BY HETEROGENEOUS ACID-CATALYZED REACTIONS OF ORGANIC CARBONYLS, MYOSEON JANG, Nadine Czoschke, Amenda Northcross, The University of North Carolina at Chapel Hill, NC.

12B4 PANEL DISCUSSION ON ORGANIC AEROSOL FORMATION AND REACTIONS IN ATMOSPHERE,

11:10 AM – 12:30 AM

12C. Health Related Aerosol Characterization II

12C1 A NEW METHOD TO EVALUATE RESPIRATORY PROTECTION PROVIDED BY N95 RESPIRATORS AGAINST AIRBORNE DUST AND MICROORGANISMS IN AGRICULTURAL FARMS, SHU-AN LEE, Atin Adhikari, Sergey A. Grinshpun, Tiina Reponen, Center for Health-Related Aerosol Studies, Department of Environmental Health, University of Cincinnati, P.O. Box 670056, Cincinnati, OH.

12C2 AEROSOL-BORNE HYDROPEROXIDES IN URBAN AIR, Chuautemoc Arellanes and SUZANNE E. PAULSON Atmospheric Sciences Department, University of California at Los Angeles, CA 90095 Alam S. Hasson Department of Chemistry, California State University Fresno, CA 93740.

12C3 FOREIGN PARTICLE CHARACTERIZATION IN INHALATION DRUG PRODUCTS: BENEFITS OF AUTOMATED MICRO Raman, OLIVER VALET. rap.ID Particle Systems, Berlin; Markus Lankers, rap.ID Particle Systems, Berlin; Michael Niemann, Boehringer Ingelheim, Ingelheim.
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12C4
VARIABILITY IN BLACK CARBON CONCENTRATIONS FOR DIFFERENT TEMPORAL AND SPATIAL SCALES IN THE NEW YORK METROPOLITAN AREA, Yair Hazi, Dept of Env Health Sciences of Columbia University STEVEN CHILLRUD, Farnosh Family, James Ross, David Friedman, Lamont-Doherty Earth Observatory of Columbia University Deepti K.C., Juan Correa, Molini Patel, Patrick Kinney, Mailman School of Public Health of Columbia University Swati Prakash, West Harlem Environmental Action Marian Feinberg, South Bronx Clean Air Coalition.

11:10 AM – 12:30 AM

12D. Biological and Coarse PM

12D1

12D2
MULTIPLE UV WAVELENGTH EXCITATION AND FLUORESCENCE OF BIOAEROSOLS, VASANTHI SIVAPRAKASAM, Alan Huston, Cathy Scotto, Jay Eversole, Naval Research Laboratory, Washington DC.

12D3

12D4

11:10 AM – 12:30 AM

12E. Urban/Regional PM II

12E1
GASEOUS AND PARTICULATE POLLUTANT TRANSPORT IN STREET CANYONS, KAMBIZ NAZRIDOUST, Goodarz Ahmadi, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY.

12E2
ATMOSPHERIC AEROSOLS IN BEIJING, CHINA, DURING DUST STORM EVENTS AND NON-DUST STORM EVENTS, MARCH 22- APRIL 1, 2001, ANN M. DILLNER, Xia Su, Arizona State University, Tempe, AZ; James J. Schauer, University of Wisconsin, Madison, WI; Glen R. Cass, deceased.

12E3
PM2.5 MASS AND CHEMICAL COMPOSITION ACROSS THE PEARL RIVER DELTA REGION OF CHINA, G.W. HAGLER, M.H. Bergin, M. Zheng, Georgia Tech, Atlanta, GA; L.G. Salmon, Caltech, Pasadena, CA; J.Z. Yu, E. Wan, HKUST, Hong.
LONG TERM AEROSOL NUMBER CONCENTRATION MEASUREMENTS IN FIVE EUROPEAN CITIES, K. HÄMERI, P. Aaalto, P. Paatero, M. Kulmala, University of Helsinki, Finland; T. Bellander, N. Berlind, Department of Occupational and Environmental Health, Stockholm, Sweden; L. Bouso, G. Castaño-Vinyals, A. Marconi, J. Sunyer, IMIM - Institut Municipal d'Investigació Mèdica, Barcelona, Spain; G. Cattani, Instituto Superiore di Sanità, Rome, Italy; J. Cyrys, S. Von Klot, A. Peters, K. Zetzshe, GSF-Forschungszentrum Institut f. Epidemiologie, Neuherberg, Germany; T. Lanki, J. Pekkanen, National Public Health Institute, Kuopio, Finland; F. Nyberg, Institute of Environmental Medicine, Karolinska Institute, Stockholm, Sweden; B. Sjövall, Stockholm Air Quality and Noise Analysis, Stockholm, Sweden; F. Forastiere, Department of Epidemiology, Rome, Italy.