

PROGRAM
25th Informal Symposium on Kinetics and Photochemical Processes in the Atmosphere

February 20, 2008
University of California Los Angeles, Covell Commons, Grand Horizon Room
330 De Neve Drive, L-16, Los Angeles, CA 90095-1492

Sponsored by:
UCLA, Office of the Vice-Chancellor of Research
UCLA, College of Letters and Science
UCLA, Department of Atmospheric and Oceanic Sciences
California Air Resources Board

REGISTRATION & BREAKFAST

8:00 – 9:00 Arrival, Registration, Breakfast, Poster Set-Up, and Organization of 1-minute Poster Summaries.
9:00 – 9:15 Welcome and Opening Remarks

SESSION I

9:15 – 9:45 Invited Talk: **Photochemistry Past and Future**, *Sydney Benson*, University of Southern California
9:45-10:15 Poster Summaries for Sessions I and II
10:15 – 11:00 Poster Viewing

SESSION II

11:00-11:30 Invited Talk: **Six Decades of Atmospheric Chemistry in 30 ± 1 Minutes**, *Jim Pitts*, University of California Irvine
11:30-12:30 Poster Viewing

LUNCH

12:30-1:30 Lunch

SESSION III

1:30-2:00 Invited Talk: **Mixtures of Organic Functional Groups in Individual Atmospheric Particles**, *Lynn Russell*, Scripps Institute for Oceanography/University of California San Diego
2:00-2:30 Poster Summaries for Sessions III and IV
2:30-3:15 Poster Viewing

SESSION IV

3:15-3:45 Invited Talk: **Upper Tropospheric Ozone Maxima over Summer Monsoon Regions: Deep Convection, Lightning, and Chemistry**, *Qinbin Li*, NASA-JPL
3:45-4:45 Poster Viewing:
4:45-5:00 Concluding Remarks

Reception

5:00 – 7:00

POSTER PRESENTATIONS

Instructions: Please mount your poster on the board with the number corresponding to your assigned poster. A's indicate posters in the morning sessions and P's indicate posters in the afternoon sessions. Posters presented during the Sessions I and II should be mounted by 9:00 a.m. and removed during lunch by 12:30 p.m. This will allow the afternoon posters to be mounted prior to Sessions III and IV. Posters presented during the afternoon sessions should be mounted during lunch before 1:00 p.m. and removed at the conclusion of the symposium.

POSTER SESSIONS I and II (MORNING SESSIONS)

9:00 a.m. – 12:30 p.m.

- A1. **Molecular dynamics simulations of alkylamines at the air-water interface**, Karen Michelle Callahan, University of California Irvine, (callahak@uci.edu)
- A2. **Secondary organic aerosol formation from reaction of isoprene with nitrate (NO₃) radicals**, Arthur Chan, California Institute of Technology, (achan@caltech.edu)
- A3. **How does an organic coating affect the reactivity of an electrolyte solution: implications for atmospheric aerosols**, Raffaella D'Auria, University of California Irvine, (rdauria@uci.edu)
- A4. **Measurement of NO₂ and PAN by Gas Chromatography with Luminol Detection**, Dennis Fitz, University of California Riverside, (dfitz@cert.ucr.edu)
- A5. **NO_x Analyzer and Nitrate Particle Analyzer**, James Hargrove, Activated Light Technology Industries (ALTI), (james@activatedlight.com)
- A6. **Organic functional groups and trace metals in submicron aerosol by FTIR and XRF in the Gulf of Mexico during TEXAQS/GoMACCS 2006**, Lelia Hawkins, Scripps Institute for Oceanography - University of California San Diego, (lnahid@ucsd.edu)
- A7. **Complexes of HNO₃ and NO₃⁻ with NO₂ and its Dimer, and Their Role in Atmospheric HONO Formation**, Michael Anthony Kamboures, University of California Irvine, (mkambour@uci.edu)
- A8. **Secondary organic aerosol formation from reaction of isoprene with NO₃ radicals**, Alan Kwan, California Institute of Technology, (kwan@its.caltech.edu)
- A9. **Measurements of Peroxy Radicals Using Chemical Amplification/Cavity Ring-down Spectroscopy**, Yingdi Liu, University of California Riverside, (yliu018@student.ucr.edu)
- A10. **Sulfur isotope mass-independent fractionation during SO₂ photolysis**, James R Lyons, University of California Los Angeles, IGPP, (jimlyons@ucla.edu)
- A11. **Development of a Quantitative Mechanism of Aerosol Formation from Alkene Reactions with OH Radicals**, Aiko Matsunaga, University California Riverside, (amats001@student.ucr.edu)
- A12. **Effect of Marine Microorganisms and Surface Active Organic Matter on Sea Salt Aerosol Production by Bubble Bursting and its Cloud Condensation Nuclei (CCN) Activity**, Megan Moore, University of California San Diego, (moore@ucsd.edu)

- A13. **Kinetics Study of OH Radical Reaction with meta-xylene at 1-10 Torr Using the Relative Rate/Discharge Flow/Mass Spectrometer Technique**, Andrew Nguyen, California State University Fullerton, (andrew_p_nguyen@yahoo.com)
- A14. **Vertical gradients of HONO, NO₂, and other trace gases in during TEXAQS II**, Hoon-Ju Oh, University of California Los Angeles, (hoonju@atmos.ucla.edu)
- A15. **Development of an explicit mechanistic model for isoprene oxidation, assessed by atmospheric chamber experiments**, Fabien Paulot, California Institute of Technology, (fabienpaulot@gmail.com)
- A16. **Modeling mass transfer and interfacial reactions of chemical species at aerosol surfaces**, Prasad Pokkunuri, University of California Irvine, (prasad@uci.edu)
- A17. **Real-time, single-particle flight-based measurements of cloud condensation nuclei**, Kerri Pratt, University of California San Diego, (kdenkenb@ucsd.edu)
- A18. **UV/vis Photolysis Cross Section Measurements of Several Branched-Chain Aldehydes**, Coleen Roehl, California Institute of Technology, (coleen@gps.caltech.edu)
- A19. **Iodine chemistry in the Antarctic boundary layer**, Alfonso Saiz-Lopez, NASA/JPL, (alfonso.saiz-lopez@jpl.nasa.gov)
- A20. **Comprehensive Airborne Characterization of Aerosol From a Major Bovine Source**, Armin Sorooshian, California Institute of Technology, (armin@caltech.edu)
- A21. **Nitrous and Pernitric Acid in and around Mexico City**, Kathleen Spencer, California Institute of Technology, (kspencer@caltech.edu)
- A22. **Characterization of iron in ambient aerosols with spectromicroscopy**, Satoshi Takahama, Scripps Institute for Oceanography - University of California San Diego, (stakahama@ucsd.edu)
- A23. **Investigation of quinones as biomarkers for exposure to air pollution**, Kennedy Vu, California State University Fresno, (kennedykv@hotmail.com)
- A24. **Estimation of the OH column abundance in the lower atmosphere from space- and ground-based measurements**, Shuhui Wang, NASA/JPL, (Shuhui.Wang@jpl.nasa.gov)
- A25. **Aerosol flow tube studies of secondary organic Aerosol Formation through Gaseous NO_x and Aqueous Nitrate Ion Photochemistry**, Yong Yu, University of California Irvine, (yongy@uci.edu)
- A26. **Simulation of Laboratory Experiments and Modeling the Composition of Planetary Atmospheres**, Yuk L. Yung, California Institute of Technology, (yly@gps.caltech)
- A27. **The vibrational spectra of matrix-isolated cis, cis-HOONO**, Xu Zhang, NASA/JPL, (xu.zhang@jpl.nasa.gov)

POSTER SESSIONS III and IV (AFTERNOON SESSIONS)

12:30 p.m. – 4:30 p.m.

- P1. **Quantification of Volatile Fatty Acid Emissions from California Dairy Facilities**, Phillip Alanis, California State University Fresno, (philly86@csufresno.edu)
- P2. **Observation and Characterization of Individual Ship Plumes by Aerosol Time-of-Flight Mass Spectrometry**, Andrew Ault, University of California San Diego, (aault@ucsd.edu)
- P3. **Ultrafine Aerosol Particle and Ozone Generation by Ionization and Ozonation Air-Purifiers**, Ahmad Alshawa, (S. Nizkorodov), University of California Irvine, (nizkorod@uci.edu)
- P4. **Hygroscopicity of Amphiphilic Nanoparticles: The Role of Size and Composition**, Chris M Harmon, University of California Irvine, (cwharmon@uci.edu)
- P5. **A thermodenuder-mass spectrometer technique for characterization of the volatility and composition of organic aerosol**, Annelise Faulhaber, University California Riverside, (annelise.fa@gmail.com)
- P6. **Trace Gas Measurements at Summit, Greenland: Long Term Trends and Evidence of Summertime Cl atom Chemistry**, Katrine Gorham, University of California Irvine, (kgorham@uci.edu)
- P7. **North American Carbon Weather: Observations and Models**, Gretchen Keppel-Aleks, California Institute of Technology, (gka@gps.caltech.edu)
- P8. **Kinetics of CH₂ Br and CH₂ BrO₂ radicals in reactions with NO and O₂**, Anatoly Komissarov, NASA/JPL, (akomiss@jpl.nasa.gov)
- P9. **Pollution-Driven Enhancement of Cl₂ in the Marine Boundary Layer**, Mike Lawler, University of California Irvine, (mlawler@uci.edu)
- P10. **Heterogeneous Conversion of 1,4-Hydroxycarbonyls to Cyclic Hemiacetals and Dihydrofurans on Aerosol Particles**, Yong Bin Lim, University California Riverside, (yonglim@hotmail.com)
- P11. **Kinetics Study of OH Radical Reaction with o-xylene at 240-298 K and 1-10 Torr using Relative Rate/Discharge Fast-Flow/ Mass Spectrometry Technique**, Joshua Lo , California State University Fullerton, (ohmyjosh@gmail.com)
- P12. **An On-line and Off-line Product Study of Aerosol Generated from Oxidation of m-Xylene Under High, Low, and No NO_x Conditions**, Quentin J.G. Malloy , University of California Riverside / CE-CERT, (qmalloy@cert.ucr.edu)
- P13. **Photochemical Aging of Organic Aerosol from the Oxidation of d-Limonene**, Stephen Mang, University of California, Irvine, (smang@uci.edu)
- P14. **Ozone Oxidation Reactions of Self-Assembled Monolayers on Silicon Oxide Thin Layers on Si and ZnSe Surfaces**, Theresa M. McIntire, University of California Irvine, (mcintire@uci.edu)

- P15. **Kinetics Study of Reaction of para-xylene with $\cdot\text{OH}$ at 1-9 Torr and 240-340K Using the Relative Rate/Discharge Flow/Mass Spectrometry (RR/DF/MS) Technique**, Deepali Mehta, California State University Fullerton, (dnmehta@gmail.com)
- P16. **Yields of Glyoxal and Ring Cleavage Co-products from the OH Radical-Initiated Reactions of Selected 2-Ring PAHs**, Noriko Nishino, University of California Riverside, (nnish002@student.ucr.edu)
- P17. **Branching ratio measurements of alkylperoxy self reactions**, Aaron Noell, California Institute of Technology, (aaron@caltech.edu)
- P18. **Carbonyl Products of OH Radical-Initiated Reactions of Aromatic Hydrocarbons and Observations in Ambient Air**, Genevieve Obermeyer, University of California Riverside, (gober001@ucr.edu)
- P19. **Observations of reactive iodine species at Pacific and Atlantic coastal locations in the United States**, Olga Pikelnaya, University of California Los Angeles, (olga@atmos.ucla.edu)
- P20. **Retrieval of NO_2 absolute columns in the stratosphere and troposphere from ground-based UV-visible measurements with the Fourier transform ultraviolet spectrometer (FTUVS) at Table Mountain CA: Method and comparison to OMI**, Thomas Pongetti, NASA/JPL, (pongetti.jpl.nasa.gov)
- P21. **Branching ratios for the reaction of hydroperoxy radicals with propionyl peroxy and butionyl peroxy radicals**, Sukhdip Singh, California State University Fresno, (sukhdeep@csufresno.edu)
- P22. **Spectroscopic and Kinetic Studies on $\text{HO}_2 + \text{HCHO}$ using Pulsed Laser Photolysis Cavity Ringdown Spectroscopy**, Matthew K. Sprague, California Institute of Technology, (sprague@caltech.edu)
- P23. **CCN activation of calcium salts as proxies for fresh and aged mineral dust particles**, Ryan Sullivan, University of California San Diego, (rcsulliv@ucsd.edu)
- P24. **Further Exploration of the Nitrate Radical**, Kana Takematsu, California Institute of Technology, (kana@caltech.edu)
- P25. **Real-Time Characterization of Pollutant Concentrations and Their Gradients Near Heavily Travelled Roadways in Port-Adjacent Communities: Application of an EV Mobile Monitoring Platform**, Arthur Winer, University of California Los Angeles, (amwiner@ucla.edu)
- P26. **Enhanced surface photochemistry in chloride-nitrate ion mixtures**, Lisa Wingen, University of California Irvine, (wingenit@uci.edu)
- P27. **Influence of Nocturnal Vertical Stability on Daytime Chemistry: A One-dimensional Model Study**, Clare Wong, University of California Los Angeles, (clare@atmos.ucla.edu)
- P28. **Multi-Axis DOAS measurements during the 2006 Milagro/Mirage experiment in Mexico City**, Catalina Yi, University of California Los Angeles, (catayale@ucla.edu)
- P29. **Theoretical Study of Small Water Clusters of SO_2** , Yaying Zhao, California State University Fullerton, (zhaoyy@126.com)