

# 28<sup>th</sup> Informal Symposium on Kinetics and Photochemical Processes in the Atmosphere (2011)

March 3, 2011, 7:30AM – 6:30PM  
Student Center at the University of California at Irvine

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## PROGRAM

All events take place in *Pacific Ballroom D* except for the poster sessions, which will be in *Pacific Ballroom ABC*

- 7:30-8:00 Arrival, registration, coffee, pastries
- 8:00-8:15 Welcome and opening remarks by Sergey Nizkorodov and Eric Saltzman
- 8:15-9:00 Invited talk by Prof. Jingsong Zhang (UC Riverside, Department of Chemistry) *Reactive intermediates in tropospheric oxidation reactions*
- 9:00-9:45 Invited talk by Prof. Ronald Cohen (UC Berkeley, Department of Chemistry) *Space based measurements of NO<sub>2</sub> constrain OH in urban and power plant plumes*
- 9:45-10:30 One-minute poster madness: posters 1-35
- 10:30-11:15 Coffee break, which overlaps with the poster set-up
- 10:30-10:45 During the coffee break, every poster presenter (ALL posters!) grabs a poster board and a poster board holder and sets-up his/her poster in Pacific Ballroom ABC. Refer to the map of poster locations.
- 10:45-12:00 **Poster Session I** (viewing posters 1-35)
- 12:00-1:00 Lunch
- 1:00-1:45 Invited talk by Prof. Donald Dabdub (UC Irvine, Department of Mechanical and Aerospace Engineering) *Applications of chemical kinetics to current issues - a study in air quality and transportation*
- 1:45-2:30 One-minute poster madness: posters 35-71
- 2:30-3:45 Coffee break and **Poster Session II** (viewing posters 36-71)
- 3:45-4:00 All poster presenters remove their posters and move the poster board and poster holder to Pacific Ballroom D. NOTE: we must be out of the Pacific Ballroom ABC by 4 pm.
- 4:00-4:45 Invited talk by Prof. Michael Prather (UC Irvine, Department of Earth System Science) *Atmospheric Chemistry, Climate Change, and the IPCC: Uncertainties in the "Data"*
- 4:45-5:00 Concluding remarks, announcement of the host for the 2012 meeting.
- 5:00-6:30 Dinner

#	Title	Authors
1	Release of gas phase species from the photolysis of thin water films containing nitrate and synthetic sea salt.	Richards, N.K., Callahan, K.M., Wingen, L.M., Tobias, D.J. and Finlayson-Pitts, B.J.
2	Condensational growth of ultrafine particles in Bakersfield	Ahlm L., Russell L.M., Liu S., Day D.A., Goldstein A., Weber R.
3	Development and application of functional group analysis for secondary organic aerosol studies.	Aimanant S., Ziemann P.J.
4	Laboratory measurements of poly aromatic hydrocarbons in biomass burning particles	Altepetter, L.M., Curtis D.B.
5	Characterization of volatile organic compounds measured in the lower troposphere around the Deepwater Horizon oil spill site (Gulf of Mexico)	Barletta, B., Meinardi, S., Blake, N.J., Leifer, I., Rowland, F.S., Blake, D.R.
6	Efficient cloud processing of biogenic secondary organic aerosol by aqueous photochemistry	Bateman A.P., Laskin A., Laskin J., Nizkorodov, S.A.
7	A study of the $\text{ClO} + \text{ClO} \leftrightarrow \text{ClOCl}$ equilibrium at low temperatures	Bayes K., Hume K., Sander S.
8	Observational constraints on the photooxidation reaction mechanism of isoprene: BEARPEX 2009	Beaver M.R., St. Clair J.M., Paulot F., Spencer K.M., Crouse J.D., Min K.E., Pusede S.E., LaFranchi B.W., Browne E.C., Park C.H., Schade G., Park J.H., Weber R., Goldstein A.H., Van Duin D., Brune W.H., Cohen R.C., and Wennberg P.O.
9	A field-deployable, chemical ionization time-of-flight mass spectrometer: application to the measurement of gas-phase organic and inorganic acids under both laboratory and field conditions.	Bertram T.H., Crisp T.A, Ryder O.S., Kimmel J.R., Cubison M.J., Gonin M., Worsnop D.R.
10	Measuring vapor pressures and heats of sublimation using atmospheric solids analysis probe mass spectrometry (ASAP-MS)	Bruns E.A., Greaves J., Finlayson-Pitts B.J.
11	WRF/CHEM simulation of ozone and precursors in the LA basin during the 2010 CalNex campaign	Chen D., Li Q., Stutz J., Pikelnaya O., Tsai J.Y., Murakami J. Haman C., Lefer B., Flynn J., Roberts J., Gouw J., Holloway J., Veres P., Gilman J., Kuster B.
12	Prevalence of wide area impacts from freeways during pre-sunrise periods	Choi W., He M., Kozawa K.H., Mara S., Winer A.M., Paulson S.E.
13	Oxygen isotopic anomaly in secondary carbonates: evidence of anthropogenic pollution	Chong K., Manu M., Shaheen R., and Thiemens M.
14	Oxidized organic functional groups of submicron aerosols from a boreal forest in Hyytiälä, Finland during HUMPPA-COPEC 2010	Corrigan, A.L., Russell, L.M., Aijala, M., Petaja, T., Williams, J.
15	Aircraft aerosol mass spectrometer measurements over the los angeles basin during calNex	Craven J.S., Metcalf A.R., Flagan R.C., Seinfeld J.H.
16	New particle formation and growth in the atmosphere from methanesulfonic acid and organic amines	Dawson M.L., Varner M.E., Perraud V., Ezell M.J., Wingen L.M., Bruns E.A., Gerber R.B., Kleinman M.T., Finlayson-Pitts B.J.

17	Hydroxyl radical oxidation of phospholipids on sodium chloride as a model for coated sea salt particles in air	Dilbeck C.W., Finlayson-Pitts, B.J.
18	Observations of ultrafine particles at Owens (dry) lake	Fitzgerald E.M.M., Moore M.J.K., Zauscher M.D., Roberts G.C., Prather K.A.
19	Organic functional group composition of ambient and generated particles off the coast of California during CalNex 2010	Frossard A.A., Russell L.M., Keene W.C., Maben J.R., Kieber D.J., Bates T.S., Quinn P.K.
20	The impact of port and marine biogenic emissions on the single-particle chemistry of marine aerosols during CalNex	Gaston C.J., Quinn P.K., Bates T.S., Prather K.A.
21	Are aromatic hydrocarbons generated from the atmospheric oxidation of biogenic hydrocarbons?	Gratien A., Johnson S.N., Ezell M.J., Wingen L., Perraud V., Dawson M., Bennett R., Finlayson-Pitts B.J.
22	CARDS analyzers for air pollution monitoring.	Hargrove, J.M., Gundersen, J, Hargrove, J.M.
23	Measurements and model studies of aerosol volatility in Riverside, CA	Hatch L.E., Pratt K.A., Barsanti K.C., Prather K.A.
24	Hygroscopicity of dicarbonyl-amine secondary organic aerosol products investigated with HTDMA	Hawkins, L.N., Baril, M., and De Haan, D.O.
25	UCR's experimental database to develop and evaluate atmospheric mechanisms of O <sub>3</sub> and SOA formation	Heo G., Nakao S., Cocker D.R., Carter W.P.L.
26	Effect of NO <sub>x</sub> level on the real refractive indices of secondary organic aerosol generated from photooxidation of limonene.	Hwajin Kim, Brian Barkey, Suzanne E. Paulson
27	Emissions Measurements of Selected VOCs from a Central California Dairy	Jeff Cole, Srikar Middala, Kennedy Vu, Lucien Nana, Austen Scruggs, Catalina Olea and Alam Hasson
28	Reaction of OH radicals with methane at low temperature	Karpichev B., Sander S.P.
29	Formation of light-absorbing compounds during evaporation of aqueous solutions of biogenic secondary organic aerosols	Lee P., Nguyen T.B., Nizkorodov S.A.
30	Source Signatures of Organic Compounds in the Particle Phase in Bakersfield, CA.	Liu S., Russell L.M., Day D.A., Goldstein A., Weber R.
31	An improved dual channel PERCA instrument for atmospheric peroxy radical measurements using diode laser based cavity ring down spectroscopy	Liu Y., Zhang J.
32	FTIR measurements of atmospherically relevant mixtures: Implications for climate modeling	Lopez T., Martinez R., Robitu C., Hudson P.K.
33	Aging of secondary organic aerosol in laboratory chambers: m-xylene	Loza, C.L., Chhabra, P.S., Yee, L.D., Flagan, R.C., Seinfeld, J.H.
34	Wildfire contribution to black carbon in the western U.S. mountain ranges	Mao Y., Li Q., Zhang L., Jin Y., Chen Y., Randerson J.T.
35	A miniaturized polar nephelometer for the measurement of aerosol scattering properties	McCrowey C. J., Calderon G., Curtis D. B.

36	Investigation of the film drop mechanism of sea spray aerosol production: preliminary results	Modini R.L., Russell L.M., Prather K.A., Stokes D., Deane G.B.
37	Atmospheric lidar program at the Aerospace Corporation	Mollner A.K., Ionov P., Cardoza D., Farley R.W., Lotshaw W.T.
38	Kinetics study of reaction of pinenes with hydroxyl radical at 1–8 Torr and 240-340 K using the relative rate/discharge flow/mass spectrometry method	Montenegro A., Ishibashi J.S.A., Lam P., Li Z.
39	The influence of large-scale dynamical forcing and meteorological regime on Arctic cloud microphysical properties	Muelmenstaedt J., Russell L.M., Lubin D.
40	Thermal and Photochemical Reactions of NO <sub>2</sub> on a Chromium (III) Oxide Surface	Nishino N., Ezell M. J., Johnson S. N., Perraud V., Finlayson-Pitts B. J.
41	First measurement of cosmogenic radionuclide <sup>35</sup> S in sulfate aerosol in Antarctica	Pandey A., Dominguez G., Savarino J. and Thiemens M. H.
42	Regional Modeling of CO <sub>2</sub> over the L.A. Basin with WRF/Chem-VPRM	Park, C., Li, Q., Chen, D., Fu, D., Sander, S., Jamroensan, A., Carmichael, G. R., Ahmadov, R., Beck, V., Pillai, D., Kretschmer, R., Gerbig, C.
43	Photodegradation of Benzo[a]pyrene-3,6-dione in water-rich solutions	Pech H, Montes R, Foster K.
44	Contribution from O <sub>3</sub> chemistry to secondary organic aerosol formation during the NO <sub>3</sub> radical-initiated oxidation of $\alpha$ -pinene.	Perraud V., Bruns E.A., Ezell M.J., Johnson S.N., Yu Y., Alexander M.L., Zelenyuk A., Imre D., Finlayson-Pitts B.J.
45	Visualizing trace gas emissions from individual sources with Imaging DOAS	Pikelnaya O., Tsai C., Stutz J.
46	Atmospheric remote sensing from three different ground based spectrometers; overview of the instruments, methods, and results	Pongetti T., Fu D., Wang S., Sander S.
47	Investigating the pH-dependent formation of light-absorbing products from mixtures of amine and dicarbonyl compounds.	Powelson, M., Hawkins, L.N., and De Haan, D.O.
48	Portable long path FTIR for industrial applications	Ramazan K.
49	Vibrational predissociation dynamics of the water-water hydrogen-bonded dimer	Rocher B.E., Mollner A.K., Ch'ng L.C., Reisler H
50	Effects of sulfite-glyoxal adduct formation on glyoxal partitioning and brown carbon production.	Rynaski A.D., De Haan D.O.
51	Heterogeneous chemical transformation on mineral aerosol surfaces during long range transport and its implications in understanding aeolian dust deposits in antarctic dry valley	Shaheen R., Chong K., Manu M., Bao H., and Thiemens M.
52	Organic reactions with nitrogen dioxide.	Shenghur A.
53	Cavity ringdown spectroscopy and chemical kinetics of HO <sub>2</sub> + formaldehyde	Sprague M.K., Sander S.P., Okumura M.
54	Kinetics and Mechanism of the reaction of Propylene Oxide (PPO) in the troposphere.	Srikar M., Campbell S., Scruggs A., Oleia C., Hasson A.
55	Formation of secondary organic aerosol from the reaction of OH radicals with aromatics and their primary oxidation products	Strollo C.M., Ziemann P.J.

56	Inhalation anaesthetics and climate change	Sulbaek Andersen M.P., Karpichev B., Sander S.P., Nielsen O.J., Wagner D.S., Sanford T.J.
57	Organic aerosol functional group composition measured in Tijuana, Mexico, during the Cal-Mex campain	Takahama S., Johnson S., Guzman Morales J., Russell L. M., Duran R., Cortez A., Puckita B., Toom-Sauntry D., Leitch R., Jayne J.
58	Spectroscopy and kinetics of substituted peroxy radicals	Takematsu, K., Eddingsaas, N.C., Dodson, L.G., and Okumura, M.
59	Theoretical investigation of the homogeneous gas-phase reaction: $2\text{NO}_2(\text{g}) + \text{H}_2\text{O}(\text{g}) + \text{NH}_3(\text{g}) \rightarrow \text{HONO}(\text{g}) + \text{NH}_4\text{NO}_3(\text{s})$	Tao F.M., Zhang B.Q.
60	Nocturnal vertical gradients of O <sub>3</sub> , NO <sub>2</sub> , NO <sub>3</sub> , HONO, HCHO, and SO <sub>2</sub> during CalNex 2010.	Tsai Catalina., Wong Kam Weng., Pikelnaya Olga., Hurlock Steven C., Cheung Ross., Haman Christine., Barry Lefer., and Stutz Jochen.
61	Molecular dynamics simulations of the fate of NO <sub>3</sub> photolysis in seasalt aerosols	Tsai, C., Richards, N., Callahan, K., Wingen, L., Finlayson-Pitts, B., Tobias, D.
62	Chemical aging of atmospheric secondary organic aerosols by N-containing compounds	Updyke K.M., Nguyen T.B., Nizkorodov S.
63	20th century ethane variability from polar firm air and implications for the methane budget	Verhulst, K. R., Saltzman. E.S, Aydin, M., Battle, M. O., Montzka, S. A., Tang, Q., Prather, M. J.
64	Characterization of a particle concentrator used in health effects studies by aerosol mass spectrometry	Wingen, L.M., Kleinman, M.T., Finlayson-Pitts, B.J.
65	Nitrous Acid Vertical Gradients during SHARP 2009 in Houston, TX	Wong K.W., Tsai C., Pikenaya O., Stutz J., Lefer B., Haman C., Flynn J.
66	Yields of gas and aerosol products formed from the reactions of alkenes with nitrate radicals	Yeh, G.K., Ziemann, P.J.
67	Hydrogen Cyanide Exhaust Emission from Gasoline vehicles	Yong Yu, Richard Ling, Paul Rieger
68	Sensitivity of meteorological feedbacks in convection-permitting WRF/Chem simulations to the height and composition of idealized external pollution plumes	Zhan Zhao, Lynn M. Russell, Michael S. Pritchard
69	Lightning and Dynamics Impacts on Tropospheric Ozone over the Southern Tropical Indian Ocean	Zhang L., Li Q.B.,Murray T.L., Jiang H.J., Jin J.J., Liversey N.
70	Infrared absorption spectra of CO <sub>2</sub> /H <sub>2</sub> O complex in a cryogenic nitrogen matrix	Zhang, X. and Sander, S.P.
71	Effect of NO <sub>2</sub> concentration on nitro-PAH yields from the gas-phase OH radical-initiated reactions of 1,7- and 2,7-dimethylnaphthalene	Zimmermann K., Arey J., Atkinson R.
73	Formation of HONO(g) and NH <sub>4</sub> NO <sub>3</sub> (s) from Homogeneous Gas-Phase Reaction $2\text{NO}_2(\text{g}) + \text{H}_2\text{O}(\text{g}) + \text{NH}_3(\text{g}) \rightarrow \text{HONO}(\text{g}) + \text{NH}_4\text{NO}_3(\text{s})$ - A new Source of HONO(g) and NH <sub>4</sub> NO <sub>3</sub> (s) Aerosol	Zhang B.Q., Li Z.J., and Tao F. M.