Thursday Morning (STOCKTON ROOM)
Radiation Chemistry of Europa's Surface
Lucy M. Ziurys, *Presiding*

8:00 (566). Coupled surface-atmosphere chemical production of oxidants in the solar system. **S.K. Atreya**

8:45 (567). Carbon dioxide chemistry at low temperatures. **R. Hodyss**, S. Piao, M.L. Cable, M.J. Malaska

9:30 568. Primary phosphorus sources within extraterrestrial ices. **M.A. Pasek**

10:15 (569). Investigating the formation of alkylphosphonic acids in phosphine ices. **A.M. Turner**, R. Kaiser

10:45 (570). Synthesis of di-depsipeptides under possible solar system environments. **E.T. Parker**, J.G. Forsythe, F.M. Fernandez

11:15 (571). Infrared matrix isolation spectroscopy of photochemical products of acetylene and nitrogen in argon matrices. **B.T. Genest**, P.D. Cooper

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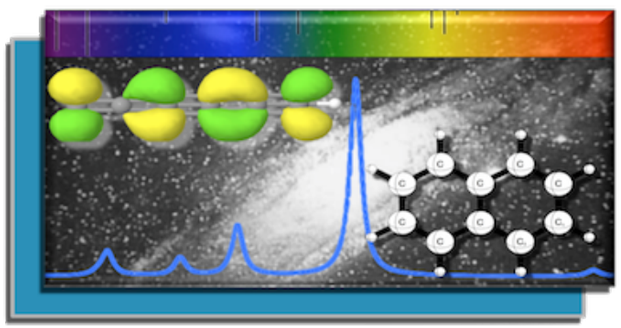

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Expanding the Frontiers in Condensed Phase Astrochemistry:

Electron Transfer Processes in Ices and Catalysis on Interstellar Grains

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April 3-6, 2017

Monday Morning
Astrophysics of Ice and Dust
Reggie L. Hudson, *Presiding*

8:00 (108). Production mechanisms for complex interstellar molecules. **E. Herbst**, C.N. Shingledecker

8:45 (109). Thermally induced low temperature fragmentation reaction in solid phase: Possible answers to the non-detection of some interstellar chemical species. **I. Krim**

9:30 (110). Ortho-to-para ratios of hydrogen molecules desorbed from ice at around 10 K: What happens on cosmic ice dust?. **N. Watanabe**, H. Ueta, T. Hama, A. Kouchi

10:15 (111). Gas-phase chemistry above interstellar and cometary ice analogs. **S.L. Widicus Weaver**, A.J. Mesko, H. Smith, S.N. Milam

10:45 (112). Extreme Isotope Ratios in Meteoritic Material: A Gas-Phase Interstellar Origin?. **L.M. Ziurys**, D.T. Halfen, T. Zega

11:15. A highly sensitive organic detection instrument for an extraterrestrial kinetic penetrator. **A. Stockton**, Z. Duda, G. Tan, T. Cantrell, M. Van Enige, M. Dorn, M. Cato, P. Putman, S. Foreman, J. Kim.).

Monday Afternoon
Kiuper Belt Objects and Comets
Naoki Watanabe, *Presiding*

1:30 (148). Chemistry in protoplanetary disks. **T.K. Henning**

2:15 (149). Chemical evolution of organic materials from protoplanetary disk to small bodies recorded in Antarctic micrometeorites. **H. Yabuta**

3:00 (150). Energetic gas-surface encounters at ice interfaces. G. Langlois, R.S. Thompson, W. Li, K. Gibson, D.R. Killelea, H. Yuan, **S.J. Sibener**

3:45 (151). Adsorption, diffusion, aggregation, and desorption of simple molecules (CO_2, CO, O_2, etc.) on interstellar ice analogs. **G. Vidali**, J. He, S. Emtiaz

4:30 (152). Synthesizing the basic PAH unit. **B. Sivaraman**

Tuesday Morning
Condensed Materials in the Outer Solar System
Bryana L. Henderson, *Presiding*

8:00 (191). Chemistry and processes in the Pluto system. **W. Grundy**, D. Cruikshank, C. Olkin, S. Stern, K. Ennico-Smith, L. Young, H.A. Weaver

8:45 (192). Links between the ices of comet 67P/Churyumov-Gerasimenko and the interstellar medium from Rosetta/ROSINA observations. **M. Rubin**, K. Altwegg, H. Balsiger, J. Berthelier, M. Combi, J. De Keyser, B. Fiethe, S. Fuselier, S. Gasc, T. Gombosi, K. Hansen, U. Mall, H. Rème, M. Schuhmann, I. Schroeder, T. Sémon, C. Tzou, J.H. Waite, S. Wampfler, P. Wurz

9:30 (193). Aerosol impact spectrometer – A variable velocity nanoparticle accelerator. **R.E. Continetti**

10:15 (194). Self-Assembly of prebiotic organic materials from impact events of amino acid solutions. **N. Goldman**

10:45 (195). Comparison of gas phase and condensed phase species: Sgr B2(N) vs. Comet 67P. **D.T. Halfen**, J. Bernal, L.M. Ziurys

11:15 (196). Results from recent experiments on electron-stimulated desorption from icy & rocky surfaces. **C. Bennett**, M.J. Poston, T.M. Orlando

Tuesday Afternoon
Chemistry of Condensates on the Terrestrial Planets
Nir Goldman, *Presiding*

1:30 (234). Quantum chemistry and ab initio molecular dynamics simulations of reactive chemistry in ionized clusters: From acetylene clusters to aromatics. T. Stein, M. Ahmed, **M.P. Head-Gordon**

2:15 (235). Nucleobase synthesis via UV-induced oxidation of their precursors in astrophysical ices: A quantum chemical perspective. **P. Bera**, T. Stein, M.P. Head-Gordon, T.J. Lee

3:00 (236). Theoretical cluster studies of charge shift reactions in astrophysical ices. **D.E. Woon**

3:45 (237). Formation of formamide NH_2CHO catalyzed by icy grain particles: Atomistic insights from quantum chemical simulations. **A. Rimola**, V. Taquet, C. Ceccarelli, N. Balucani, P. Ugliengo

4:15 (238). Adsorption and catalysis of noble gas atoms and electrons on PAH surfaces. **R.C. Fortenberry**, G.T. Filipek, II, C.M. Novak, M.M. Moore, M.L. Theis, T.J. Lee

Wednesday Morning
Physical Properties of Condensed Super Volatiles on Pluto: From the New Horizon Mission
Gianfranco Vidali, *Presiding*

8:00 (284). Probing molecular growth and charge transfer processes with vacuum ultraviolet mass spectrometry. **M. Ahmed**

8:45 (285). Chemical processing in interstellar grains via electron and UV radiation. **B.L. Henderson**, M.S. Gudipati

9:30 (286). Photon-stimulated processes on planetary surfaces and in astrophysical environments. **T.M. Orlando**, C. Bennett, J. McLain, M. Sarantos

10:15 (287). Chemical functionalization and catalytic activity of polycyclic aromatic hydrocarbons on dust grain surfaces. **L. Hornekaer**, J.H. Jørgensen, A.W. Skov

11:00 (288). PAHs, Dust and ice in the solar system. **A. MATTIODA**, G. Cruz-Diaz, A. Ricca Bauschlicher, A. de Barros, S. Erickson, P. van Vliet, E. da Silveira, A. Cook

Wednesday Afternoon
Chemical Composition & Evolution of Comets 67P/CG: As Observed by the Rosetta Mission
Liv Hornekaer, *Presiding*

1:30 (324). Sugar derivatives in residues produced from the UV irradiation of astrophysical ice analogs. **M. Nuevo**, S.A. Sandford, J. Saunders, G. Cooper

2:15 (325). Protonation and ionization of organic reactive molecules in low-density amorphous water ice. **W.W. Sander**, P. Costa, M.S. Gudipati

3:00 (326). Radiation chemistry and redox reactions in icy molecular solids. **R.L. Hudson**, M. Loeffler

3:45 (327). Electron induced chemistry in interstellar and cometary ices. **N.J. Mason**

4:30 (328). Non-Ionizing UV (< 7 eV) photochemistry of cosmic ice analogs of ammonia. **H. Cumberbatch**, **A. Bao**, C. Arumainayagam