33rd POMS Scientific Program

Saturday Morning

8:00  Registration – MDCL-1110

8:30  Opening Remarks

Session 1  Chair: Jeff Keillor

8:40  Derek A. Pratt  
*Souping-up Vitamin E: Toward diffusion-controlled radical-trapping antioxidants and effective anti-atherosclerotic compounds*

9:00  Michelle Chrétien, Jean-François Roy, Ann M. English  
*Spectroscopic investigation of the role of copper in S-nitrosation of low mass thiols*

*Reactivity/selectivity of 4’-substituted-4-biphenylyloxenium ions*

9:40  Kamilah Smith and D.S. Bohle  
*Kinetics and stereochemistry of nitric oxide’s reaction with various nucleophiles*

10:00  Mathieu Frenette, Patricia McClain, L.R.C. Barclay and J.C. Scaiano  
*Radically different antioxidants. Highly stabilized carbon-centered radicals as peroxyl radical trapping antioxidants*

10:20  Coffee Break – MDCL Southeast Foyer

Session 2  Chair: Vladimir Popik

10:40  Andrea Wallette and Mark S. Workentin  
*Electron transfer reduction of biologically relevant cyclic disulfide systems*

11:00  Lawrence A. Huck and William J. Leigh  
*Mechanistic studies of the reactions of diarylgermylenes and tetraaryldigermenes in solution*

11:20  Robert C. Mawhinney, Heidi Muchall and Gilles H. Peslierbe  
*Assessing substituent effects in carbenes through computational chemistry*

11:40  Paul S. Billone, Cameron R. Harrington, Katie Beleznay, and William J. Leigh  
*The photochemistry of a potential precursor to GeH2 and Ge2H4 in solution*

12:00  Lunch – MDCL Southeast Foyer
Saturday afternoon

Session 3  
Chair: Anne Petitjean

1:00  
**Elena V. Ivanova** and Heidi M. Muchall  
*A comparison of N-sulfinylamine and isocyanate hydrolysis: a theoretical study*

1:20  
**J. Peter Guthrie**  
*A new approach to mechanistic analysis. Estimation of Hammett $\rho$ or Taft $\rho^*$ values by a simple procedure*

1:40  
**Qadir K. Timerghazin**, Etienne Paradis, Gilles Peslherbe, and Ann M. English  
*Computational studies of biologically relevant reactions of S-nitrosothiols*

2:00  
**John Andraos**  
*Recent advances in the determination of kinetic parameters in heterogeneous media: what we have been doing wrong*

2:20  
**Coffee Break – MDCL Southeast Foyer**

Session 4  
Chair: Heidi Muchall

2:40  
**Derek Tsang** and W.G. Skene  
*Synthesis and photophysical characterization of conjugated imines and imine precursors*

3:00  
Andrei Polukhtine, Gregory Karpov, Nurtai Urdabayev and **Vladimir Popik**  
*Design, synthesis and reactivity of photoswitchable enediynes: a journey from physical organic to medicinal chemistry*

3:20  
**John E. Baldwin** and Jean-Marie Fedé  
*Reaction stereochemistry for the isomerization of 1-(E)-propenylcyclobutane to 3-methylcyclohexene*

3:40  
**Ossie Tee**  
*A brief history of POMS: 1973-2005*

4:00-6:00  
**Poster session – MDCL Southeast Foyer**

7:00  
**Banquet – Celebration Room, Kenneth Taylor Hall**
Sunday morning

Session 5

Chair: Derek Pratt

9:00 Christian Lherbet, Christian Gravel, Dany Halim and Jeffrey W. Keillor
Transpeptidase mechanism and inhibition

9:20 Paul G. Loncke and Paul J. Berti
Implications of protonation and substituent effects for C-O and O-P bond cleavage in alkyl and aryl phosphate monoesters

9:40 Tina L. Amyes, John P. Richard, and James J. Tait
Activation of orotidine 5'-monophosphate decarboxylase by phosphate dianion: the whole substrate is the sum of two parts

10:00 Meghann E. Clark and Paul J. Berti
Stabilization of a cationic intermediate by AroA (Enolpyruvyl shikimate 3-phosphate synthase)

10:20 Coffee Break – MDCL Southeast Foyer

Session 6

Chair: Gonzalo Cosa

10:40 Jun Zhu, Arnold J. Kell and Mark S. Workentin
Preparation of the maleimide-modified surfaces on monolayer-protected nanoparticles and its reactivity

11:00 Anne Petitjean and Jean-Marie Lehn
Ion-triggered molecular switching devices: dynamic molecular tweezers and multi-state molecular logic gates

11:20 Kenneth E. Maly, Eric Gagnon, Thierry Maris, and James D. Wuest
Hydrogen-bonded networks derived from substituted hexaphenylbenzenes and other branched oligophenyles

11:40 Jeremy G. Finden and Robert P. Lemieux
Detection of chiral perturbations in ferroelectric liquid crystals by $^2$H NMR spectroscopy

12:00 Marius G. Ivan and J.C. Scaiano
Laser induced formation of pyrene supramolecular assemblies in polymer films

12:20 Scott Dufour, Hui-Sheng Li and S. Holger Eichhorn
Octaacids of tetraazaporphyrins and phthalocyanines – mesomorphism and surface properties

12:40 Closing Remarks