

Chairman-Elect  
**Changkun Liu**  
Past Chairman  
**Wolfgang Ruettinger**  
Catalysis Society Representative  
**Israel Wachs**  
Webmaster  
**Jennifer Wade**  
Directors  
**David Harris**  
**Jeff Yang**  
**John Byrne**

The CATALYSIS SOCIETY of Metropolitan New York  
www.nycsweb.org

Chairman  
MARCO J. CASTALDI  
(212) 854-6390  
(212) 854-7081 (fax)  
Mc2352@columbia.edu

Secretary  
AMANDA JOSEY  
973-245-6173  
973-245-6766 (fax)  
Amanda.Josey@BASF.com

Treasurer  
JOHN BRODY  
(908) 730-2932  
(262) 313-4051 (FAX)  
John.f.brody@exxonmobil.com

**Wednesday, January 19, 2010**  
**Crowne Plaza Hotel, Somerset, New Jersey**

**Dr. Xianqin Wang**  
**Assistant Professor**  
**Otto H. York Department of Chemical Engineering**  
**New Jersey Institute of Technology**

**"Synchrotron-based in situ Structural Studies of Catalytic Nanomaterials for Energy Production"**

Nowadays, we face new challenges in creating alternate fuels, cleaning the environment, dealing with the causes of global warming, and keeping us safe from toxic substances and infectious agents. The synthesis of functional nanomaterials offers a unique opportunity to meet these challenges. A fundamental understanding of structure-function relationships of catalysts is vital for the design of new catalytic materials that match the structural conformation of the reactants, and lead to optimal reaction pathways towards the desired products. It is tremendously valuable to fundamentally understand the nanomaterials in reactive environments. To accomplish this, new and efficient methods of *in situ* time-resolved characterization and rapid throughput testing of catalytic properties are crucial. In this talk, synchrotron-based in situ studies of several nanocatalytic systems will be discussed, including water-gas shift reaction on Cu-CeO<sub>2</sub>, K effect on Pt based ethanol reforming, and bio-oil upgrading catalytic systems. In these work, we are able to identify the active sites with *in situ* time-resolved X-ray diffraction (TR-XRD) and X-ray absorption spectroscopy (TR-XAS) and illustrate the importance of *in situ* structural studies for the reaction systems.

Dinner is a buffet, and includes  
a choice of beef, chicken or fish

Social Hour (Cash Bar) 6:00 PM  
Dinner 7:00 PM  
Presentation 7:45 PM

Members	\$37
Non-members	\$45
Students	\$17 ( <i>Student Members = \$5</i> )
Retired/Post-Doc/ Unemp.	\$37 ( <i>Members = \$27</i> )
Annual Dues	\$15

**Deadline for dinner reservations is 2:00 p.m. Monday, January 17, 2010**

Call or email Amanda Josey (973) 245-6173 ([amanda.josey@basf.com](mailto:amanda.josey@basf.com)) for reservations. With the exception of extreme circumstances, anyone not canceling reservations by the above deadline will be billed for dinner regardless of attendance.

---

**2010-2011 Officers:** Marco Castaldi (Chair), Changkun Liu (Chair-Elect), Wolfgang Ruettinger (Past Chair), Israel Wachs (Catalysis Society Rep), Amanda Josey (Secretary), John Brody (Treasurer), Jennifer Wade (Webmaster), David Harris, Jeff Yang, John Byrne (Directors)