Catalysis Club of Philadelphia

Thursday January 17th, 2013
DoubleTree Hotel
4727 Concord Pike Wilmington, DE 19803

Supported Metal Catalysts – Issues and Opportunities

Stuart Soled
ExxonMobil Research and Engineering Co,
Annandale, NJ

Social Hour: **5:30 PM**
Dinner: **6:30 PM**
Meeting: **7:30 PM**

Members: $35.00
Walk Ins & Non-members: $40.00
Student & Retired Members: $20.00

Menu

Chicken Dijonaisse with Sun Dried Tomatoes & Tarragon topped with a Creamy Dijon Sauce
Center Cut Filet Mignon Char-grilled, atop Potato Latkas with Baby Carrots & a Green Peppercorn Sauce
Vegetable Phyllo, Triangle, stuffed with roasted red pepper, humus, sun dried tomato, black eyed peas, broccoli, okra, flavored with lime and garlic garnished with roasted tomato wedges

Meal reservations - Please notify your company representative or Jacob Weiner (jlweiner@udel.edu, phone: 302.831.2213) by ***Thursday January 10th***.

Company Representatives – We would like to encourage you to make meal/meeting reservations to your company representative.

Membership - Dues for the 2012-13 season will be $25.00 ($5.00 for the local chapter and $20.00 for the national club). Dues for students, post-docs and retirees will be $10.00 ($5.00 for local club and $5.00 for national club).

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Stuart Soled

ExxonMobil Research and Engineering Co, Rt. 22 East, Annandale, NJ

Abstract:

Supported metal oxides, metals and sulfides form a large fraction of industrially important catalysts. Preparation of supported catalysts can involve a rich chemistry. We will detail different preparation approaches all aimed at controlling active site number and site location. Issues involving activity, transport, and deactivation come into play. Site locations are optimized on both mm and nm scale. Approaches involving electrostatic interactions and surface complex formation will be illustrated. We will describe approaches to making supported noble metal catalysts on silica as well as catalysts used in Fischer-Tropsch chemistry. The importance of nanoscale homogeneity on catalyst stability will be illustrated in several examples.

Biography:

Stuart Soled received his Ph.D in chemistry from Brown University in 1973. He then did 4 year of post-doctoral work in solid state chemistry both at Brown University and in France, focusing on the synthesis and characterization of novel oxide and sulfide materials. He has been at Exxon's Corporate Research Labs for more than 31 years. His research interests lie in the synthesis, characterization and evaluation of novel catalytic materials. He has worked extensively on Fischer-Tropsch chemistry, solid acid and metal catalysis, and hydrotreating. He is the coauthor of more than 70 publications and over 100 U.S. patents. He worked on the team discovering the Nebula catalyst and has worked on a joint ExxonMobil-Albemarle team to bring it to commercial reality. Nebula has been producing low sulfur diesel fuels in over 15 refinery units worldwide.

He is the recipient of the New York Catalysis Society Excellence in Catalysis Award, the North American Catalysis Society Frank Ciapetta Lectureship Award, the ACS Heroes in Chemistry Award, and the Herman Pines in Catalysis.