Catalysis Club of Philadelphia

Thursday February 21st, 2013
DoubleTree Hotel
4727 Concord Pike Wilmington, DE 19803

Oxidative Dehydrogenation of Ethane to Ethylene

Anne M. Gaffney
AMG Catalysis and Chemistry Consulting, LLC

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Nomination of new CCP officers for 2013-2014

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

French cut Pork Chop, pan roasted with Maple Mashed Yams, Asparagus & a Madeira Sauce;

Black & Blue Cajun Spiced Chicken Breast over Whipped Potatoes with a Stilton Sauce & a touch of Fresh Crab;

Four Cheese Manicotti;

Meal reservations - Please notify your company representative or Jacob Weiner (jlweiner@udel.edu, phone: 302.831.2213) by ***Thursday February 14th***.

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).

Oxidative Dehydrogenation of Ethane to Ethylene

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Abstract:

This seminar will discuss a newly patented catalytic process and catalyst for the selective, oxidative dehydrogenation (ODH) of ethane to ethylene. Recent advances in shale gas technology, especially as practiced in the United States, has significantly improved the economics around producing ethylene and has revolutionized manufacturing approaches to basic chemicals, polymers and materials. Ethane is second to methane as a major hydrocarbon component of shale gas, serving as the precursor to ethylene. Ethylene is used to produce a wide variety of consumer goods, including packaging, building & automotive materials, fibers, tires and bottles. In 2012, a number of U.S. chemical companies announced plans to invest in new plant capacity, expand existing facilities, or re-open plants near shale gas supplies, primarily based on the assumption that the U.S. is entering a period of sustained low natural gas prices and growing supply.

This selective ODH process provides an alternative to ethylene production via naphtha or ethane cracking. In addition to replacing these crackers and recycle crackers, the ethylene product effluent from the ODH process may be used to feed ethyl benzene/styrene monomer and ethylene oxide plants. The synthesis, characterization and catalytic applications of the new, M1 structured, mixed metal oxide catalyst will be reviewed.

Biography:

Dr. Anne M. Gaffney joined INVISTA™ in 2011 as Director of R&D, Specialty Materials and is currently Program Leader for C11/C12™ R&D. She was previously VP of Technology at Lummus Technology. Other prior industrial roles include Senior Research Fellow at Rohm and Haas, Senior Research Associate at DuPont and Manager of Catalysis at ARCO Chemical Company. Anne is the inventor/co-inventor of over 100 patents and author/co-author of over 80 publications. She was selected as an ACS Fellow in 2010 and holds several other awards, including the 2013 ACS award in Industrial Chemistry and the 1999 Philadelphia Catalysis Club Award. Anne received her Ph.D. in Physical Organic Chemistry from the University of Delaware and her B.A. in Chemistry and Mathematics from Mount Holyoke College. Anne's endeavors and interests include R&D Leadership, break -through technologies, heterogeneous catalysis, selective oxidation, catalyst synthesis and characterization.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.