

## 22<sup>nd</sup> Annual Inorganic Alumni Mini-Symposium 2012

Friday, October 12, 2012 – Chemistry C033 – 3:00-6:00 pm

Coffee will be served from 2:30 – 3:00 p.m. in C033

**3:15 – 3:45**      **Dr. Brad Bailey** – (Associate Scientist, Dow Chemical – Midland, MI)



**“Selling Out to Industry and Loving It”** - In chemistry we are bound by the constraints of thermodynamics and kinetics, but in industry the law of economics can be equally as powerful. Working in a central research department at Dow has given me exposure to a wide range of chemistries including binders for insulation, atomic layer deposition, new surfactants, photolithography, and polyolefin catalysis. A taste of some of the challenges for each of these will be discussed as well as some lessons from a lightly seasoned industrial chemist.

**3:45 – 4:15**      **Dr. Sibaprasad Bhattacharyya** – (Senior Scientist, Frederick National Laboratory for Cancer Research, NIH/NCI – Frederick, MD)



**“Translating Radiolabeled Biomolecules - from Bench to Bedside”** –

**4:30 – 5:00**      **Dr. Falguni Basuli** – (Research Chemist, Imaging Probe Development Center (IPDC), National Heart, Lung, and Blood Institute, National Institutes of Health – Rockville, MD)



**“Fluorine-18 Labeled Radiotracers for Positron Emission Tomography (PET) Imaging”** –

**5:00 – 5:30**      **Dr. Xiaofan Yang** – (Staff Chemist, BASF Corporation – Iselin, NJ)



**“Catalysis, from Air Free to Air Rich”** - The impetus for deployment of lean gasoline and diesel engines (which typically operate very lean) comes from the need to reduce emissions of CO<sub>2</sub>, which is considered a major greenhouse gas. However, their deployment is inhibited by the lack of a suitable catalyst or a combination of catalysts that can selectively reduce NO<sub>x</sub> (NO + NO<sub>2</sub>) with available reductants in the engine-out exhaust to meet regulatory targets over practical driving cycles and vehicle life times. In the last decade, several NO<sub>x</sub> removal technologies have been actively pursued and, at present, the urea selective catalytic reduction (SCR) system is the leading candidate for deployment. In order for large scale deployment of zeolite based SCR catalysts, it is necessary to address two issues: catalyst’s operating temperature window and its

hydrothermal stability.