

Jeff Miller

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Professional Experience

July 2008 to present

Group leader of Argonne's heterogeneous catalysis group: research interests include developing, testing and characterization of new catalytic materials for the production of energy, chemicals and environmental protection. Catalytic materials include supported nano-particles and alloys, single site, supported homogeneous catalysts, supported colloidal nano-particles and nano-particles prepared by atomic layer deposition. Special interest in characterization of catalysts under realistic reaction conditions of high temperature and pressure, especially EXAFS and XANES spectroscopy at the Advanced Photon Source.

1998-2008

Team leader for development of proprietary catalyst technology for BP's chemical plants: responsibilities include material synthesis, pilot plant evaluations, transfer of proprietary methods to catalyst manufacturer and plant demonstrations. Additional responsibilities include development of advanced separation processes with polymer membranes and pressure swing adsorption.

1980-1998

Senior scientist at Amoco Oil Company's R&D center responsible for development of new refining catalysts: areas of expertise include syngas conversion to alcohols and hydrocarbons, synthetic fuels hydroprocessing, naphtha reforming, fluid catalytic cracking, heavy oil upgrading and distillate hydrocracking technologies.

Education

- Ph.D., Inorganic Chemistry, Oregon State University, 1980
- M.S., Inorganic Chemistry, University of New Mexico, 1973

Awards and Professional Activities

- 2009 Excellence in Catalysis Award from the Metropolitan Catalysis Society of New York
- 2007 Member of NSF-DOE International Catalysis Assessment Committee
- 2007 Special appointment to the Graduate Faculty of Purdue
- 2006 Herman Pines Award in Catalysis from the Chicago Catalysis Society
- 1998-present, Adjunct Professor, Department of Chemical Engineering, Univ. of Illinois at Chicago
- 1997-2004 Editorial Board, Applied Catalysis A: General
- 1997 Secretary of the North American Catalysis Society Meeting in Chicago

Publications & Patents

- Publications: 113
- Publications (in press) 2009: 5 (9)
- US Patents and Applications: 49

Recent University Collaborations

- **John Regalbuto**, Department of Chemical Engineering, University of Illinois at Chicago
- **Randall Meyers**, Department of Chemical Engineering, University of Illinois at Chicago

- **Fabio Ribeiro and Nick Delgas**, Department of Chemical Engineering, Purdue University
- **Chelsey Baertsch**, Department of Chemical Engineering, Purdue University
- **Jeroen van Bokhoven**, Department of Chemistry, ETH, Switzerland
- **Eduardo Wolf**, Department of Chemical Engineering, Notre Dame University
- **M. Ishaque Kahn**, Department of Chemistry, Illinois Institute of Technology
- **Rob Rioux**, Department of Chemistry, Pennsylvania State University
- **Chunshan Song**, Department of Energy and Geo-Environmental Engineering, Pennsylvania State University
- **Mike Wong**, Department of Chemical Engineering, Rice University
- **Levi Thompson**, Department of Chemical Engineering, University of Michigan
- **Hans Niemandverdriet**, Department of Chemistry, Eindhoven University of Technology, Eindhoven, Netherlands