

## **Hien N. Pham**

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## **Education:**

**Ph.D. University of New Mexico**, Chemical Engineering

**M.S. University of New Mexico**, Chemical Engineering

**B.Engr. University of New Mexico**, Biomedical Engineering

## ***Current Research/Management***

Collaborating with Iowa State University and University of Wisconsin-Madison, as part of the Center for Biorenewable Chemical (CBiRC) program, to develop more hydrothermally stable catalysts and catalyst supports. Specific projects include synthesis, characterization and testing of niobia-based catalysts and carbon-silica composites for use in aqueous phase reactions at elevated temperatures.

Hands-on materials characterization includes HR-TEM, STEM, EFTEM, EELS, EDS, HR-SEM, physisorption, chemisorption, GC, FTIR, TGA, XRD.

Lab manager of the Particle Characterization Laboratory. Duties include operating and maintaining working conditions of instruments such as Quantachrome Autosorb Physisorption/Chemisorption Analyzer and Gemini BET Surface Area Analyzer.

Co-lab manager of the Hitachi S-5200 Nano Scanning Electron Microscope (2 nm resolution at 1 kV; 0.5 nm resolution at 30 kV). Duties include training new users and maintaining working conditions of the microscope.

## ***Teaching Assistant***

**ChNE 251:** Introduction to Chemical Engineering

**ChNE 301:** Thermodynamics

**ChNE 454:** Process Dynamics & Control

**ChNE 461:** Chemical Reactor Engineering

## **Selected Publications:**

**Pham, H.N.**, Y.J. Pagan-Torres, J.C. Serrano-Ruiz, D. Wang, J.A. Dumesic, A.K. Datye, Improved Hydrothermal Stability of Niobia-Supported Pd Catalysts, *Applied Catalysis A*, 397, 153 (2011)

Tang, Y., S. Miao, S., **H.N. Pham**, A.K. Datye, X. Zheng, B.H. Shanks, Enhancement of Pt Catalytic Activity in the Hydrogenation of Aldehydes, *Applied Catalysis A*, 406, 81 (2011)

Pagan-Torres, Y.J., J.M.R. Gallo, **H.N. Pham**, J.A. Libera, D. Wang, J.W. Elam, C.L. Marshall, A.K. Datye, J.A. Dumesic, Synthesis of Highly Ordered Stable Mesoporous Niobia Catalysts by Atomic Layer Deposition, ACS Catalysis, 1, 1234 (2011)

Chia, M., Y.J. Pagan-Torres, D. Hibbitts, Q. Tan, **H.N. Pham**, A.K. Datye, M. Neurock, R.J. Davis, J.A. Dumesic, Selective Hydrogenolysis of Polyols and Cyclic Ethers Over Bifunctional Surface Sites on Rhodium-Rhenium Catalysts, Journal of the American Chemical Society, 133, 12675 (2011)

Roy, B., K. Loganathan, **H.N. Pham**, A.K. Datye, C.A. Leclerc, Surface Modification of Solution Combustion Synthesized Ni/Al<sub>2</sub>O<sub>3</sub> Catalyst for Aqueous-Phase Reforming of Ethanol, International Journal of Hydrogen Energy, 35, 11700 (2010)

Yang, J.H., J.D. Henao, C. Costello, M.C. Kung, H.H. Kung, J.T. Miller, A.J. Kropf, J.G. Kim, J.R. Regalbutto, M.T. Bore, **H.N. Pham**, A.K. Datye, J.D. Laeger, K. Kharas, Understanding Preparation Variables in the Synthesis of Au/Al<sub>2</sub>O<sub>3</sub> Using EXAFS and Electron Microscopy", Applied Catalysis A, 291, 73 (2005)

Bore, M.T., **H.N. Pham**, E.E. Switzer, T.L. Ward, A. Fukuoka, A.K. Datye, The Role of Pore Size and Structure on the Thermal Stability of Gold Nanoparticles Within Mesoporous Silica, Journal of Physical Chemistry B, 109, 2873 (2005)

Bukur, D.B., V. Carreto-Vazquez, **H.N. Pham**, A.K. Datye, Attrition Properties of Precipitated Iron Fischer-Tropsch Catalysts, Applied Catalysis A, 266, 41 (2004)

**Pham, H.N.**, L. Nowicki, J. Xu, A.K. Datye, D.B. Bukur, C. Bartholomew, Attrition Resistance of Supports for Iron Fischer-Tropsch Catalysts, Industrial & Engineering Chemistry Research, 42, 4001 (2003)

Rao, G.V.R., G.P. Lopez, J. Bravo, **H. Pham**, A.K. Datye, H.F. Xu, T.L. Ward, Monodisperse Mesoporous Silica Microspheres Formed by Evaporation-Induced Self Assembly of Surfactant Templates in Aerosols", Advanced Materials, 14, 1301 (2002)

**Pham, H.N.**, A.K. Datye, The Synthesis of Attrition Resistant Slurry Phase Iron Fischer-Tropsch Catalysts, Catalysis Today, 58, 233 (2000)