

## Catalysis on the Nanoscale:

### Recent Publications

The E-X Transition of Jet-cooled TiO Observed in Absorption, K. Kobayashi, G. E. Hall, J. T. Muckerman, T. J. Sears and A. J. Merer, *J. Molec. Spectrosc.* 212, 133-141 (2002)

Gas-Phase Production of Molybdenum Carbide, Nitride and Sulfide Clusters and Nanocrystallites, J. M. Lightstone, H. Mann, M. Wu, P. M. Johnson, and M. G. White, *J Phys. Chem.*, submitted

Synthesis, Electronic and Chemical Properties of MoO<sub>x</sub> Clusters on Au(111), Z. Chang, Z. Song, G. Liu, J.A. Rodriguez and J.Hrbek, *Surf. Sci.* 512, L353-360(2002)

Formation of Mo and MoS<sub>x</sub> Nanoparticles on Au(111) from Mo(CO)<sub>6</sub> and S<sub>2</sub> Precursors: Electronic and Chemical Properties, J.A. Rodriguez, J. Dvorak, T. Jirsak and J. Hrbek, *Surf. Sci.*, 490, 315-326 (2001)

Activation of Gold on Titania: Adsorption and Reaction of SO<sub>2</sub> on Au/TiO<sub>2</sub>(110), J.A. Rodriguez, G. Liu, T. Jirsak, J. Hrbek, Z. Chang, J. Dvorak and A. Maiti, *J. Am. Chem. Soc.* 124, 5242-5250(2002)

A Novel Growth Mode of Mo on Au(111) from a Mo(CO)<sub>6</sub> Precursor: An STM Study, Z. Song, T. Cai, J.A. Rodriguez, J. Hrbek, A.S.Y. Chan and C.M. Friend , *J. Phys. Chem. B* 107, 1036-1043(2003)

The Deposition of Mo nanoparticlces on Au(111) from a Mo(CO)<sub>6</sub> precursor: Effects of CO on Mo-Au Intermixing, P. Liu, J.A. Rodriguez, J.T Muckerman and J. Hrbek,*Surf. Sci.*, in press

Properties of CeO<sub>2</sub> and Ce<sub>1-x</sub>Zr<sub>x</sub>O<sub>2</sub> Nanoparticles: XANES, Density Functional, and Time-Resolved XRD Studies, Rodriguez, J. A., Hanson, J. C., Kim, J-Y., Liu, G., Iglesias-Juez, A. and Fernandez-Garcia, M., *J. Phys. Chem. B* 107, Web release date 3/25/03

The Behavior of Mo nanoparticles on Au(111): A Theoretical Study, P. Liu, J.A. Rodriguez, J.T Muckerman and J. Hrbek, *Phys Rev B*, in press