

**Cover**

See E. Ozensoy and D. W. Goodman, pp. 3765-3778.

A model heterogeneous catalytic system where the reaction takes place at the gas/solid interface at elevated temperatures and pressures ( $\sim 1$  bar,  $> 500$  K). Using polarization modulation infrared reflection absorption spectroscopy (PM-IRAS), a molecular level understanding of both surface and gas phase species associated with the catalytic reaction can be achieved *in situ* under conditions that mimic industrial catalysis in a more realistic manner than traditional surface science experiments at low temperatures and pressures ( $\sim 10^{-12}$  bar,  $\sim 100$  K).

Image kindly supplied by Professor David Goodman, Department of Chemistry, Texas A & M University, USA.



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