

Distinguished Lecture Series

Seminar

May 12, 2005

The McCollum Room

775B Tan Hall

2 pm

*Dr. Jeroen Anton van Bokhoven*

**Swiss Federal Institute of Technology Zurich**

“Structure and Activity in Zeolites”

*ABSTRACT:*

Zeolites are microporous crystalline silica-alumina framework structures. They are active and selective catalysts for a wide variety of reactions. Their structure is related to their catalytic performance, but, little is known about their structure under conditions that are relevant for catalysis.

Kinetic measurements of the cracking of alkanes and detailed structural characterization using Nuclear Magnetic Resonance and in-situ X-ray Absorption spectroscopies are discussed. These techniques provide insight into the zeolite structure under reaction conditions, which ultimately leads to the determination of structure/performance relationships.