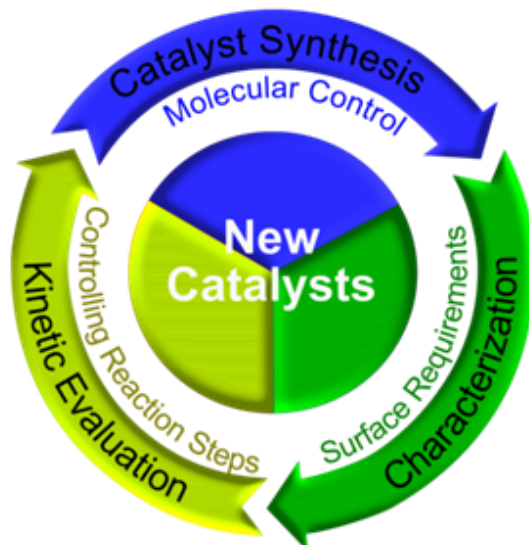


# Heterogeneous Catalysis Research Lab

## Research:

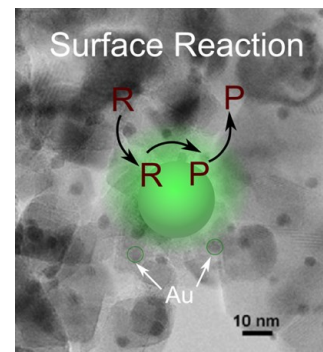
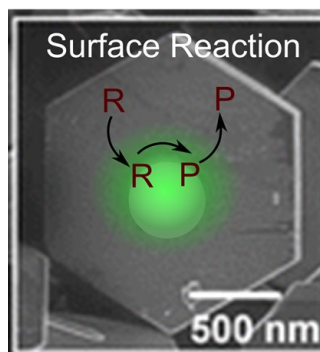
- Advanced Catalyst Synthesis
- In Situ Spectroscopy and Spectrokinetics
- Reaction Kinetics
- Biomass and Alternative Feedstock Conversion
- Fuels and Chemicals



## Collaborating Faculty:

Chemical & Petroleum Engineering:  
Bala Subramaniam, Ph.D., Raghunath V. Chaudhari, Ph.D., Franklin (Feng) Tao, Kevin Leonard, Ph.D.

Chemistry: Shenqiang Ren, Ph.D., Marco Caricato, Ph.D.



## Equipment:

High Pressure and Temperature Fixed Bed Reactor, Gas Chromatography, Mass Spectrometry

In Situ Spectroscopic Techniques: Fourier Transform Infrared, Raman, and Ultraviolet-visible Spectroscopy  
Nanoparticle Sizer and Zeta Potential Analyzer (Dynamic Light Scattering)

## Funding Sources:

National Science Foundation  
The University of Kansas  
Center for Environmentally

### Director:

**Juan J Bravo-Suarez**, Ph.D.  
(UIS, 2004)  
Assistant Professor,  
Chemical & Petroleum  
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### Courses:

- Mass Transfer
- Chemical Engineering Laboratory
- Chemical Engineering Kinetics and Reactor Design

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