



SACRAMENTO STATE

Department of Physics & Astronomy Fall 2007

Physics Colloquium Series

"Resonance Raman and Related Spectroscopies in Chemical Physics and Analytical Chemistry"

Raman spectroscopy is a type of inelastic laser light scattering that probes molecular vibrations. In its "resonance" versions, where the laser frequency falls within an electronic excitation of the molecule, Raman spectra also contain information about the structure and dynamics of the excited electronic state. This talk will summarize what can be learned about the photochemistry and photophysics of molecules from resonance Raman and its two-photon analog, resonance hyper-Raman. I will also describe how these normally weak scattering processes can be greatly enhanced by adsorbing the molecules of interest to the surfaces of metal nanoparticles, and summarize some applications of this surface enhanced Raman technique to ultrasensitive chemical analysis and single-molecule photophysics.

Prof. Anne Kelley

*Department of Chemistry
UC Merced*

Thursday, September 27, 2007

4:00-5:20 PM MND 1015

Open & Free to all Students, Faculty & Public