

Plasmon-enhanced Optical Phenomena

Frontiers in Chemical Physics and Analysis Seminar Series

Presented by...

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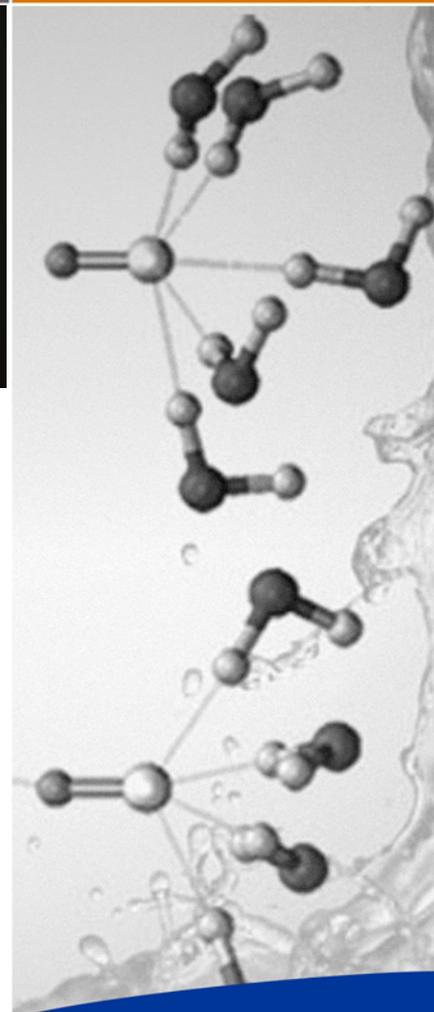
Abstract

Silver and gold nanoparticles have strong absorption and scattering in the visible and near-infrared as a result of plasmon excitation. The optical properties of these particles can be tuned by varying nanoparticle size (in the few nm to few hundred nm range) and shape, and generally these properties can be effectively modeled using classical electromagnetic theory. However there are aspects of these optical properties where the classical picture fails, and then it is necessary to incorporate quantum effects into the theoretical description. This talk describes our latest work with understanding surface enhanced Raman scattering (SERS) from silver and gold nanoparticles and nanostructures, with emphasis on data from the Van Duyne and Mirkin groups concerned with dimer structures that have a small gap (~1 nm) between 100 nm particles. I will also describe the use of silver coated nanoparticles for plasmon enhancement in dye-sensitized solar cells.

More info?

See <http://www.pnl.gov/cmsd/seminars/>

Bio <http://www.theory.northwestern.edu/schatz/>



Date: Monday,
March 14th

Location: EMSL
Auditorium

Time: 11:00 am