“Plasmonics: From Quantum Effects to Light Harvesting.”

The “plasmon hybridization” concept shows that the plasmon resonances in complex metallic nanostructures interact and hybridize in an analogous manner as atomic wavefunctions in molecules. The insight gained from this concept provides an important conceptual foundation for the development of new plasmonic structures that can serve as substrates for surface enhanced spectroscopies, chemical and biosensing, and subwavelength plasmonic waveguiding and other applications. The talk is comprised of basic overview material for a general audience interspersed with a few more specialized “hot topics” such as quantum plasmonics, graphene and molecular plasmonics, plasmon-induced vapor generation, active plasmonic nanoantennas for enhanced light harvesting and photocatalysis.

Peter Nordlander, Ph.D.
Wiess Chair and Professor of Physics and Astronomy, Electrical and Computer Engineering, and Material Science and Nanoengineering
Rice University

Wednesday, November 12, 2014
Tech LR5
4:00 – 5:00 p.m.