PLASMONIC NANOSTRUCTURES: ARTIFICIAL MOLECULES

PETER NORDLANDER
Laboratory for Nanophotonics, Rice University, Houston, TX, USA

The plasmon hybridization concept shows that plasmons in complex nanostructures interact and hybridize in an analogous manner as atomic orbitals in molecules. This insight provides a foundation for design of new plasmonic structures for enhanced spectroscopies, chemical sensing, subwavelength waveguiding, photodetection, photocatalysis and other light harvesting applications.

The talk is comprised of basic overview material for a general audience interspersed with a few more specialized hot topics.