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Nanoplasmonics: Generation and Control of Nanoscale Optical Fields

Nanoplasmonic phenomena are based on resonant excitation of surface plasmons causing highly enhanced and localized optical fields on nanoscale. These nanoscale fields induce a multitude of enhanced optical effects, in particular, surface enhanced Raman scattering (SERS) including single-molecule SERS, enhanced second- and third-harmonic generations, enhanced two-photon electron emission from nanostructured surfaces, and others. There are many existing and prospective applications of nanoplasmonics in nanoprobing, ultrasensitive detection, biomedical monitoring, etc. The talk will include a broad Introduction to the topic and also certain forefront, focus areas based partially on original contributions, including ultrafast, coherent, nonlinear, and stimulated phenomena. Spaser will be one of the focus points of the talk.

Monday
December 10, 2007
Starts at 12:15 PM
Coffee at 12:00 PM
Physics Conference Room, SB B326