

# Colloquium Notice

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### *Recent advances in all-dielectric and hybrid nanophotonics*

The resonant metallic nanoparticles are proven to be efficient systems for the electromagnetic field control at nanoscale, owing to the ability to localize and enhance the optical field via excitation of strong plasmon resonances. In turn, high refractive index dielectric nanoparticles with low dissipative losses in the visible range, possessing magnetic and electric Mie-type resonances, offer great opportunity for light control via designing of scattering properties. Such resonant nanoparticles made of high refractive index dielectrics (Si, Ge etc.) revolutionized the field of nanophotonics, opening a new branch - All-dielectric Nanophotonics. In this talk, we will discuss recent advances in the all-dielectric and hybrid (metal/dielectric) nanophotonics, including such effects as nonlinear reconfiguration of nanoparticle scattering properties and enhanced optical frequency conversion. Additionally, I will present our novel methods for fabrication of resonant all-dielectric and hybrid nanoparticles.

Wednesday

**March 30, 2016**

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326