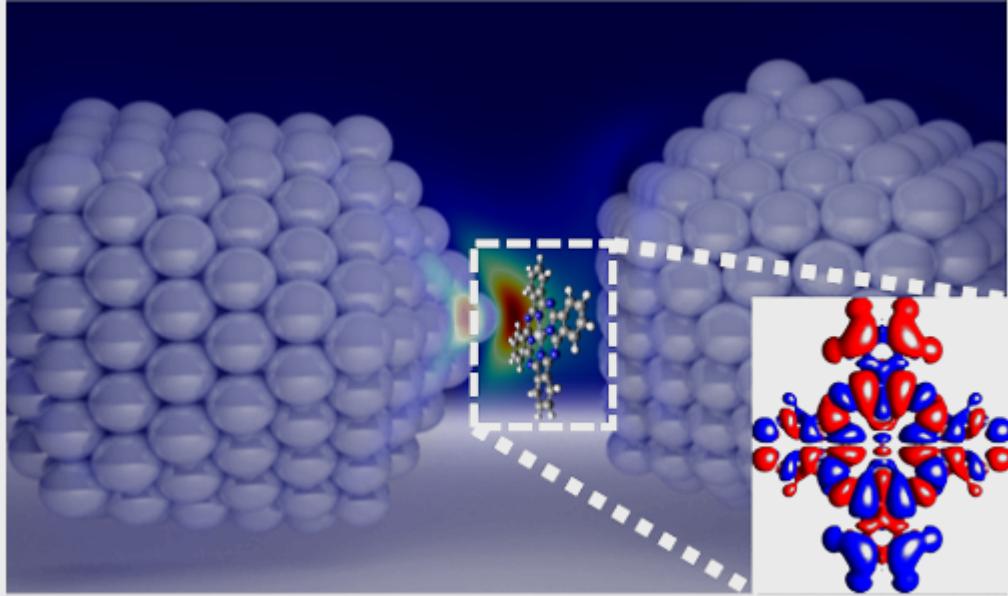


Coupling Molecules and Atomic-scale Plasmonic Fields



Title: Coupling Molecules and Atomic-scale Plasmonic Fields.

When: Monday, May 07, (2018), 12:00.

Place: Department of Theoretical Condensed Matter Physics, Faculty of Sciences, Module 5, Seminar Room (5th Floor).

Speaker: Rubén Esteban, Donostia International Physics Center, DIPC, San Sebastián, Spain.

One of the big advantages of metallic nanoparticles for optical applications is that they support plasmonic resonances that concentrate light much below the diffraction limit. We discuss how the presence of atomic-scale protrusions leads to subnanometer hot-spots that can interact efficiently with nearby molecules, affecting both coherent coupling and spectroscopic measurements. Notably, when the light confinement is similar to the extent of the molecules, submolecular spatial resolution becomes possible and the usual description of the molecular response break down.