Berliner Physikalisches Kolloquium

im Magnus-Haus, Am Kupfergraben 7, 10117 Berlin

Eine gemeinsame Veranstaltung der Physikalischen Gesellschaft zu Berlin e.V.,
der Freien Universität Berlin, der Humboldt-Universität zu Berlin,
der Technischen Universität Berlin und der Universität Potsdam
– gefördert durch die Wilhelm und Else Heraeus-Stiftung –

Am Donnerstag, dem **12. Dezember 2019, um 18:30 Uhr**

spricht

Prof. Dr. Stefan A. Maier
Hybride Nanosysteme, Fakultät für Physik, Ludwig-Maximilians-Universität München

über das Thema

„Nanophotonics for surface-enhanced light/matter interactions“

Moderation: Oliver Benson, Physikalische Gesellschaft zu Berlin

Metallic and dielectric nanostructures provide distinct and unique means for shaping the electromagnetic near field, and for channeling radiation from the far field to the nanoscale. The associated electromagnetic field hot spots can be exploited for the enhancement of interactions between light and matter, most prominently for surface-enhanced spectroscopy and sensing, the boosting of nonlinear interactions, and also for nanoscale spatial control over chemical reactions.
In my lecture I will give an introduction into the basic physics of the underlying electromagnetic and mixed light/matter modes in plasmonic (metallic), dielectric, and phonon-polaritonic systems, each providing unique light confinement opportunities from the UV to the mid-infrared part of the electromagnetic spectrum. Application examples in surface-enhanced Raman, fluorescence, and infrared absorption spectroscopy as well as in nonlinear photonics and nanochemistry will be given.

Auch zu lesen im Internet: http://www.pgzb.tu-berlin.de/