TECHNISCHE UNIVERSITÄT WIEN
Vienna University of Technology

INSTITUT FÜR ANGEWANDTE PHYSIK
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IAP-SEMINAR

EINLADUNG

Termin: **Dienstag, 2.11.2010 um 16:00 Uhr**
Ort: **Technische Universität Wien,**
Institut für Angewandte Physik,
Seminarraum 134A, Turm B (gelbe Leitfarbe), 5. OG
1040 Wien, Wiedner Hauptstraße 8-10

Vortragender: **Prof. Javier Garcia de Abajo**
IO-CSIC, Madrid/Spain

Thema: **Plasmons and their interaction with light and energetic electrons**

Kurzfassung

Plasmon excitations at metal surfaces allow us to confine light in nanometer-sized regions. This can be accompanied by a large enhancement of the optical intensity compared to the externally supplied light. These two features (confinement and field enhancement) are triggering a plethora of applications in ultrasensitive detection down to the single-molecule limit, as well as nonlinear optics at the nanoscale. Plasmons can be tailored through size and shape control of metal nanoparticles, and they can also be manipulated in lithographically patterned structures. Several examples of this will be discussed in the seminar, along with a tutorial introduction on how to understand plasmons. The seminar will conclude with recent advances in the study of light-electron interaction, which can be mediated by the evanescent electromagnetic field carried by plasmons.

Alle interessierten Kolleginnen und Kollegen sind zu diesem Seminar
(45 min mit anschließender gemeinsamer Diskussion) herzlich eingeladen.

W. Werner e.h.
(Seminar-Chairperson)

H. Störi e.h.
(LVA-Leiter)