

**Einladung
zum
Physikalischen Kolloquium
Montag, 07.12.2015
16:15 Uhr in N24/H13**

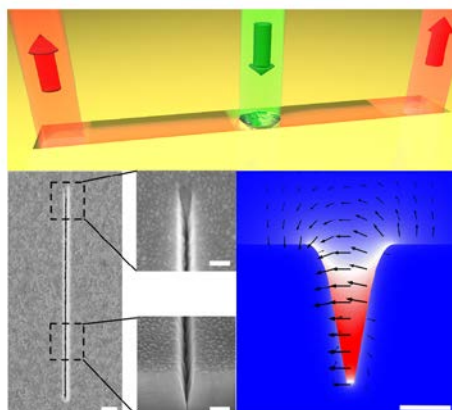


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Plasmonics: from Classical Electromagnetism to Quantum Optics

In this general talk I will present a personal overview of the research carried out in Plasmonics during the last twenty years. First I will introduce the different types of surface plasmons (propagating and localized) that can be supported by metallic surfaces. Then I will resume how, within the framework of classical electromagnetism, these surface plasmons have been used to create a kind of photonic circuitry, to detect the presence of bio-molecules and, more surprisingly, to enhance the transmission of light through subwavelength apertures. The last part of the talk will be devoted to present some of the last works that put emphasis on the quantum nature of the surface plasmons. In particular, I will show how surface plasmons can mediate the interaction between distant qubits and how the phenomenon of strong coupling can emerge when a collection of quantum emitters are in the vicinity of a plasmonic structure.



Ab 16.00 Kaffee, Tee und Kekse vor dem Hörsaal H13

Organisation: Prof. Dr. F. Jelezko, Tel. 23750

Host: Prof. Dr. S. Huelga, Tel. 22901, off.: 22911