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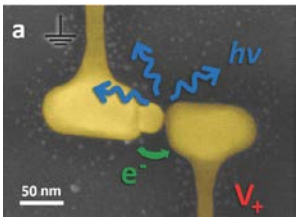
Einladung
zum
Physikalischen Kolloquium
Montag, 15.06.2015
16:15 Uhr in N24/H13

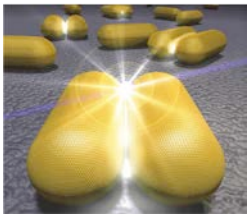
Prof. Dr. Bert Hecht
Nano-Optics & BioPhotonics group
Experimentelle Physik V
Universität Würzburg

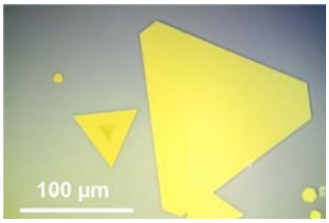
Confining light to atomic scale volumes

Using antenna-like plasmonic nano structures [1] photons can be controlled at the length scales far beyond the wavelength of light. Using such spatially localized photons, light-matter interaction can be manipulated and in particular enhanced to a large degree. To fully harness these opportunities, we create atomically-precise plasmonic nanostructures from single-crystalline gold [2] by top-down and bottom-up nano fabrication. Using such structures we demonstrated atomic-scale confinement of photons [3], ultrafast coherent control in plasmonic nano circuits [4] as well as electrically connected plasmonic nanoantennas for antenna-enhanced optoelectronics [5]. Furthermore, we have evidence for the occurrence of strong coupling between a single quantum dot and a plasmonic resonator at ambient conditions.

[1] Science 308, 1607 (2005)
[2] Nature Commun. 1, 150 (2010)
[3] Nano Letters, 12, 5504 (2012)
[4] Phys. Rev. Applied 1, 014007 (2014)
[5] http://arxiv.org/abs/1502.04935 (2015) & Nano Letters 12(8), 3915 (2012)







Ab 15.45 Kaffee, Tee und Kekse vor dem Hörsaal H13

Organisation: **Prof. Dr. F. Jelezko, Tel. 23750**
Host: **Prof. Dr. O. Marti, Tel. 23011, off.: 23010**