



Seminarankündigung

**Dienstag, 02. April 2013
17:15 Uhr**

ZNN, Seminarraum EG 0.001

“Quantum dots in optical nanocavities: From cavity QED to applications”

Optical nanocavities enable very large emitter-field interaction strengths as a result of the strong field localization inside of their sub-cubic wavelength volumes. Our research focuses in particular on the interaction of one or more self-assembled InAs quantum dots with modes of GaAs optical nanocavities or photonic molecules. In addition to the study of fundamentals of light-matter interaction (e.g., new regimes of cavity QED), this platform is also interesting for implementation of a number of devices, with applications ranging from quantum information processing to biophotonics. The examples include ultrafast quantum gates, nonclassical light sources, and spin-photon interfaces for quantum information processing; classical information processing devices such as ultrafast, low energy optical modulators and nanolasers; and even biophotonics - such as single cell nanophotonic probes.

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