



# Seminarankündigung

**Dienstag, 3. Dezember 2013  
15:00 Uhr**

**WSI, Seminarraum S 101**

## **“Exciton-polariton diode injection lasers”**

Semiconductor diode lasers play a major role in everyday life in our information society. These lasers generate coherent light by stimulated emission of photons. In contrast, laser-like operation can be obtained also by stimulated scattering of bosonic quasiparticles called exciton-polaritons into the ground state of strongly coupled light-matter systems in microcavities. This polariton laser regime can be reached with pump thresholds orders of magnitude lower than conventional lasing. The exciton-polaritons decay by the leakage of photons from a cavity, which produces a monochromatic and coherent light output. While sub-threshold emission from polariton light emitting diodes has been reported by various groups, by utilizing a magnetic field as a tool and probe for polaritonic lasing, we report in this talk exciton-polariton laser operation under electrical pumping, which is essential for developing practical applications.

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