SONDERSEMINAR/SPECIAL SEMINAR
LMU/MPQ

am:	**Montag, 28. November 2016**
Uhrzeit:	**11:00 a.m. s.t.**
spricht:	**Fr. Larissa K o h l e r** **Fakultät für Physik** **Karlsruhe Institut für Technologie (KIT)**
Thema:	**Untersuchung der oberflächenverstärkten Raman-Streuung in mikrofluidischen Analysesystemen**
Ort:	**Lehrstuhl Professor Theodor W. Hänsch,** **Fakultät für Physik der LMU, Schellingstr. 4/III. Stock** **Diskussionsraum H 311**

gez. Prof. T.W. Hänsch

ABSTRACT

Raman spectroscopy is a powerful tool to analyze compositions of liquids. For example, it enables the detection of cancer cells in blood or the quality assurance of portable water. To use Raman spectroscopy for real-time and out-of-lab investigations the integration in a Lab-on-a-Chip system is essential. The enhancement of the sensor signal can be achieved by an integrated surface-enhanced nanostructure, which increases the Raman cross section (engl. Surface enhanced Raman spectroscopy, SERS). Especially for medical applications only small amounts of the analyte are available, therefor the nanostructure is integrated in a microfluidic analysis system.

This presentation covers the fabrication of such an analysis system by roll-to-roll hot embossing and the investigation and optimization of the surface-enhanced nanostructure by FTDT simulations.