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Prof. Dr. B. Rosenow



Sächsische Forschergruppe FG877

UNIVERSITÄT LEIPZIG

Fakultät für Physik und Geowissenschaften

Institute für Physik

Physik-Kolloquium

Dienstag, den 24.05.2011, 17:00 Uhr

Prof. Dr. G. Ulrich Nienhaus

Institute of Applied Physics and Center for Functional Nanostructures (CFN),
Karlsruhe Institute of Technology (KIT), Karlsruhe

Optical Microscopy Studies of Biological Processes on the Nanoscale

Optical fluorescence microscopy is arguably the most important technique for the study of living systems because it is minimally invasive and allows three-dimensional imaging of cells and tissues under physiological conditions. Conventional far-field light microscopy is diffraction-limited; only structures on spatial scales larger than ~ 200 nm can be resolved. In recent years, sophisticated microscopy methods have become available featuring spatial resolutions of less than 20 – 50 nm, which truly justifies the use of the term ‘optical nanoscopy’. In this lecture, I shall discuss super-resolution optical imaging of cellular structures with fluorescence markers that we have developed for this purpose. I will also address other light-optical approaches (FCS, FRET) offering structural resolution on the nanoscale.

Ort: Hörsaal für Theoretische Physik, Linnéstraße 5

Alle Teilnehmer sind ab 16:30 Uhr zu Kaffee vor dem Hörsaal eingeladen.