



Polymers under Multiple Constraints

Polymer- & Soft-Matter-Seminar

Tuesday,
4th February
2020

Dr. Fritz Keilmann

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“Infrared near-field microscopy”

at: 5.15pm

VDP 4 1.27,
Von-Danckelmann-
Platz 4
06120 Halle

Infrared illumination of an AFM tip can produce infrared images on top of topography at, surprisingly, identical super-resolution of 20 nm. In my talk I explain how and why this is possible (hint: surface waves), and describe applications.

The technique called scattering-type optical near-field microscopy (s-SNOM) enables quantitative chemical recognition of nanoscale inhomogeneities, e.g., during insulator-metal phase transitions, in polymer mixtures, or in cometary matter. It has allowed to study the nanoscale architecture of biominerals and, recently, electron correlation on twisted bilayer graphene even at LHe temperature.

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