GRK 2905
Ultrafast
Nanoscopy

Special Lecture Series

Friday December 20, 2:00 PM, RUN auditorium

Scanning Tunneling Microscopy: Basics and Time-Resolved Advances

This tutorial presentation will offer an introduction to the basic concepts of scanning tunneling microscopy. Following a description of the experimental setup, the Bardeen tunneling approximation and the Tersoff-Hamann theory will be introduced. Various scanning and spectroscopy modes will then be examined in detail. Different approaches to introduce temporal resolution in scanning tunneling microscopy over a broad range of timescales will be presented. The talk will be illustrated with examples taken from the literature.

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