
S E M I N A R
aus
Halbleiterphysik und Nanotechnologie

Di, 9.5.2017, 10:30 Uhr, Hörsaal für Physik

**“Exploring Nano-Chemistry and Quantum Physics on Surfaces
with a Scanning Tunnelling Microscope“**

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Scanning tunnelling microscopy has considerably influenced our understanding of processes at the nanometre scale. The capability of a scanning tunnelling microscope (STM) to image surfaces with atomic resolution and to manipulate matter atom by atom has opened avenues to exploring the nano-cosmos. The talk will illustrate the opportunities of an STM by presenting recent findings on single-molecule chemical reactions [1], a novel confinement mechanism for surface-localized electrons [2], and Andreev reflection at single-molecule contacts [3].

[1] N. Néel, M. Lattalais, M.-L. Bocquet, J. Kröger, ACS Nano **10**, 2010 (2016).

[2] M. Müller, N. Néel, S. Crampin, J. Kröger, Phys. Rev. Lett. **117**, 136803 (2016).

[3] J. Brand, P. Ribeiro, N. Néel, S. Kirchner, J. Kröger, Phys. Rev. Lett. **118**, 107001 (2017).