

O 25: Overview Talk Jörg Kröger

Time: Tuesday 9:30–10:15

Location: H24

Topical Talk

O 25.1 Tue 9:30 H24

Exploring quantum physics with scanning probe methods —

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It is hardly possible to ignore the importance of scanning probe techniques for the understanding of mechanisms and principles in the quantum behavior of condensed matter. This Overview Talk presents con-

tributions of atomic force microscope experiments to controlling and quantifying interactions involved in bonding processes at the single-atom level. It then demonstrates that scanning tunneling spectroscopy is successfully used in exciting and detecting quantum vibrations and spins as well as in characterizing the charge transport across the metal-superconductor interface. Funding by the DFG through KR 2912/17-1, 18-1, 21-1 and the BMBF through ForLab is acknowledged.