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Seminar über Quanten-, Atom- und Neutronenphysik (QUANTUM)

April 15, 2021 at 2 p.m.
None

Prof. Dr. Peter Hommelhoff
Friedrich-Alexander-Universität Erlangen-Nürnberg

Controlling Free Electrons with Oscillating Fields Coherently

Free electrons are used in a plethora of instruments, ranging from electron microscopes to particle accelerators and modern light sources for decades. Yet, fundamentally new concepts are surfacing, taking advantage of electrons in an entirely new way, mainly based on quantum mechanical and nanophotonics concepts. In this talk, I will show recent results towards interaction-lean imaging with electrons and on-chip control of electrons. These results bring us closer to a quantum electron microscope and to a particle accelerator on a chip.

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