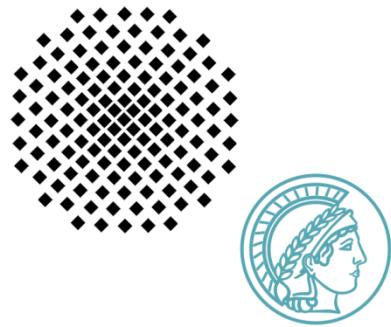


Stuttgarter Physikalisches Kolloquium

Fachbereich Physik, Universität Stuttgart
Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme

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Dienstag, 12. Dezember 2017

17:15 Uhr

Hörsaal V 57.01

Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

Gastgeber: Prof. Harald Gießen, Universität Stuttgart, Telefon: 0711 - 685-65111

Lightwave Electronics

Rupert Huber

Universität Regensburg

Abstract

Latest progress in ultrafast optics allows us to accelerate electrons in solids directly by the carrier wave of infrared light. A fascinating quantum world unfolds on the sub-optical-cycle scale, including Bloch oscillations, high-harmonic generation, and quasiparticle collisions^{1,2}. By combining this approach with ultramicroscopy we take the first femtosecond snapshot image of a molecular orbital and the first femtosecond single-molecule movie³.

¹ M. Hohenleutner et al., Nature **523**, 572 (2015)

² F. Langer et al., Nature **533**, 225 (2016)

³ T. L. Cocker et al., Nature **539**, 263 (2016)