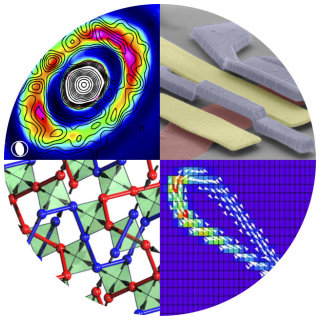

Münchner Physik-Kolloquium

Winter 2016/17

Charge transport in organic nanoscopic systems: From organic semiconductors to 2d layered materials

Prof. Dr. Thomas Weitz, *Physics of Nanosystems, Department of Physics, LMU München*

Monday, 7 November 2016, 17:15 h
Hörsaal 2, Physik-Department der TUM, Garching

In this seminar I will review our recent results in 1) the field of organic electronics and 2) on charge transport in bilayer graphene. 1) Charge transport in small-molecule organic semiconductors is not only dominated by the π-overlap of adjacent molecules, but also by discontinuities in the crystal such as grain boundaries and the semiconductor / dielectric interface. For example, we have recently shown, that such grain boundaries significantly contribute to degradation of the thin film during extended operation (Mueller et al. PSS RRL 10 (2016) 339). 2) Bilayer graphene is a fascinating material, since it has a finite density of states at the charge-neutrality point (i.e. where valence and conduction band meet). One of the consequences is, that exchange interaction in this system is large, even in the absence of a magnetic field. We have identified, that it opens a gap in the spectrum whose origin is still under discussion in the field (Weitz et al. Science, 330 (2010) 812).

Student event: Meet the speaker

*We invite you to a **student-only** discussion-round with Prof. Dr. Thomas Weitz before his Munich Physics Colloquium talk.*

Be curious and feel free to ask any question.

Monday, 7 November 2016, 16:00 h
Seminar room PH 3076 (upper floor), Physik-Department der TUM, Garching