Einladung zum hochschulöffentlichen Vortrag
im Rahmen des Status Assessments

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"Modeling organic semiconductor materials: a Kinetic Monte Carlo study"

Dienstag, den 23. Januar 2018, 14.00 Uhr

Nordgelände der TUM, Theresienstr. 90, Gebäude N1, 1. OG, Raum N1110a

Abstract:

Research into organic electronics has gathered a lot of pace over the past decades and will only increase with years to come. Recently there has been a lot of interest to use organic field effect transistors (OFETs) for radio frequency applications (RFID) and to drive organic LEDs in novel diplays. One of the main advantage of organic semiconductors is the use of solution processed deposition techniques which are easily to upscale and cheap. However, solution processed organic films usually show poor charge mobility due to the low crystallinity. This is a crucial limiting factor for the future development of this technology. There is currently a large effort, theoretical and experimental, to understand the relation between molecular composition and film morphology on one hand and final charge mobility on the other. In this talk we present a numerical model, based on kinetic Monte carlo, to investigate the connection between charge mobility and the nano and meso scale features in organic semiconductors.

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