Physik-Kolloquium

Dienstag, den 25.10.2011, 17:00 Uhr

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Organics-bad semiconductors for good devices

Organic semiconductors with conjugated electron system are currently intensively investigated since they offer the possibility for novel flexible, low-cost ubiquitous electronics. Prime examples are novel devices such as organic light-emitting diodes (OLED), and organic solar cells. In this talk I will discuss recent progress in this field. Although organic semiconductors are characterized by mobilities many orders of magnitude below silicon or GaAs, they allow in certain applications surprisingly efficient devices. For instance, white OLED have recently achieved very high efficiencies of 90lm/W /1/, significantly higher than fluorescent tubes, opening the path to a new form of high-efficiency area lighting devices. For solar cells, efficiencies and lifetimes are still quite low, but have also improved significantly: Recently, we have achieved solar cells with certified efficiency reaching over 8% on larger area.

Ort: Hörsaal für Theoretische Physik, Linnéstraße 5
Alle Teilnehmer sind ab 16:30 Uhr zu Kaffee vor dem Hörsaal eingeladen.