



SONDERKOLLOQUIUM

AM 7. JANUAR 2016 UM 15 UHR S.T.

IM PHYSIK-HOCHHAUS, HÖRSAAL II

Polymer Solar Cells: From Fundamental Device Function to Large Area Upscaling

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The presentation will briefly discuss fundamental relations between structure and device properties based on a model polymer-fullerene donor-acceptor bulk heterojunction system. As next the technological question of upscaling devices to solar modules will be treated. One requirement when upscaling devices is to ensure homogeneous operation, which can be followed by various imaging techniques. Modelling of solar module device operation is used for optimization of the device geometry. The by modelling predicted inhomogeneous device operation for the case of a relatively high sheet resistance of the semi-transparent electrode could be evidenced by advanced Light-Beam-Induced-Current measurements. Finally device operation of homogeneous and inhomogeneous devices is demonstrated by finite-element-method (FEM) simulations.

*Um 14:00 Uhr findet im SR III eine **Lehrprobe** von Dr. Hoppe zum „Bloch-Theorem“ statt (Zielgruppe: Bachelor-Studierende ab dem 4. FS). Studierende sind herzlich eingeladen.*