



ΑΡΙΣΤΟΤΕΛΕΙΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΘΕΣΣΑΛΟΝΙΚΗΣ

ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑ ΦΥΣΙΚΗΣ

Τετάρτη 16 Μαΐου 2012

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Αίθουσα Α₃₁

Κύκλος σεμιναρίων



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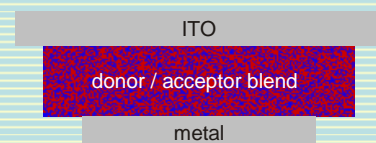
στο Τμήμα Φυσικής

Structures and Interfaces in Organic Solar Cells

Organic Solar Cell architectures



bilayer heterojunction



bulk heterojunction

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In this seminar an overview on the activities in the field of small molecule organic photovoltaics at Helmholtz-Zentrum Berlin will be given. A brief introduction of the functional principles of organic solar cells (OSC) and vacuum thermal evaporation techniques for the preparation of ultra-thin molecular absorber films will be presented. The structure and morphology of organic donor-acceptor layer systems will be analyzed. Effects of thermally induced phase separation on the formation of crystalline agglomerates will be discussed. The hybrid interface at the front contact between indium-tin-oxide (ITO) and the organic absorber will be studied. Effects of chemical modifications at this interface on the growth of the organic absorber will be demonstrated. The influence of structures and interfaces on the performance of bilayer as well as bulk heterojunction OSC will be evaluated.

Το προφίλ του ομιλητή



Dr. Konstantinos Fostiropoulos, Physicist (1988), PhD (1992) with title: "C60 - a new form of Carbon". He joined the Institute of Heterogeneous Materials Systems at HZB in 2001 and since then he has been participating in and coordinating 6 German national and European projects in the field of Organic Photovoltaic. Since 2003 he is head of the "Organic Solar Cells Group" at HZB and from 2006 to 2009 he represented 20 German national OPV research groups and industry partners in the European Coordination Action "OrgaPVNet". In 2007-2008 he was lecturer at the University of Potsdam. Since 2011 he is lecturer and consultant to the Aristotelian University of Thessaloniki in the frame of the European "ROleMAK" project. Since 2008 he joined the scientific and organizing committees of ISFOE, NN, ISSON and NAPEN. He is the author of about 50 peer review journals and several patents concerning OPVs.