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Skoltech, room 402

SKOLTECH / ENERGY COLLOQUIUM

ORGANIC PHOTOVOLTAICS: THE CURRENT STATE OF THE ART AND THE ROLE OF DELOCALIZATION

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Organic photovoltaics have long held out promise as an emerging solar energy technology due to their potential for low-cost manufacture and mechanical flexibility. Despite steady improvements these systems still lag behind in terms of efficiencies required for any significant applications. One reason is that the best devices have a complex microstructure that is difficult to characterize and for which there remain fundamental questions regarding what limits their ultimate efficiencies.

A broad overview of this class of materials will be presented that will focus on polymer/fullerene blends that have received the most attention. Recently the role of delocalized states in both the polymer and fullerene in these systems has been of broad interest in terms of understanding the fundamental steps in charge generation. Results on single polymer spectroscopy studies to examine the extent of this delocalization will be presented.

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FOR FURTHER INFORMATION OR QUESTIONS, PLEASE CONTACT

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