

## Structuring of thin films for application in organic photovoltaics

*Tuesday 16 June 2015 16:40 (1 minute)*

Organic photovoltaics using thin polymer films to convert light to electric energy are gaining interest as a promising alternative to conventional solar cells. Potential advantages include low-cost production processes, material availability and device flexibility, but power conversion efficiencies are still comparatively low. Several methods have been described to enhance the cell performance, among them the utilization of high-efficiency materials as well as nano- and microstructuring methods. We combine both strategies, using model low band gap systems and structuring techniques like nano-imprint lithography (NIL) to enhance the charge carrier separation and performance of the active layer. The optical properties of active layer thin films are investigated using UV/Vis and PL measurements. Morphological studies include optical microscopy, AFM and X-ray diffraction methods.

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**Session Classification:** Poster Session