

## **degradation in printed polymer:fullerene thin films for organic photovoltaics**

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In comparison to conventional silicon solar cells, organic photovoltaics (OPVs) offer several advantages, like ease of production and a high versatility. Nevertheless, their lifetime needs to be prolonged, so that a profitable large-scale production becomes feasible. Therefore a detailed understanding of the degradation mechanisms is necessary. In our investigations, the degradation of OPVs is investigated by means of atomic force microscopy (AFM), X-ray reflectivity (XRR), UV/Visible light spectroscopy (UV/Vis) and photoluminescence spectroscopy (PL). We address UV induced aging of P3HT:PCBM active layers, printed in a positive shim mask slot dye coater. The possibility of printing OPVs enables large-scale fabrication, in contrast to other production methods, like spin-coating. A lot of research has already been done with OPVs produced by spin-coating. However, it is not clear how the method of film application affects the aging behavior.

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