

Sputter deposition of Al & Ag on nanostructured PMMA-*b*-P3HT and PS-*b*-PMMA copolymer thin films

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Nanostructured polymer-metal-composite films demonstrate great perspectives for optoelectronic applications, e.g. as sensors or photovoltaics. To enhance properties of such devices the self-assembly process needs to be understood. We studied the cluster morphology growth by grazing incidence small-angle X-ray scattering (GISAXS), as well as the crystallinity of the metal film formation with grazing incidence wide-angle X-ray scattering (GIWAXS) in situ during sputter deposition. The scattering experiments were combined with surface differential reflectance spectroscopy (SDRS). Our study reveals the selective wetting of aluminum and silver on the polymer blocks and the influence of the template on the percolation behavior of the metal layers.

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