SYSA 7: Organic Polymer-Metal Interfaces (further abstracts see DS 20.2-6)

Time: Wednesday 17:45–19:30 Location: H 2013

Invited Talk SYSA 7.1 Wed 17:45 H 2013

Designing the nanostructure of the organic polymer - metal interface — •Stephan V. Roth — HASYLAB at DESY, Notkestr. 85, D-22607 Hamburg, Germany

Thin film organic-metallic nanocomposites play an important role in biosensoring [1], solar cell applications [2] or organic electronics [3]. Depending on the desired application, one must tailor the interface metal - organic layer, e.g. selective contacting [4] or exploiting the plasmon resonances of the nanostructured metal layer [2,5,6]. Therefore, understanding the growth kinetics of the nanoparticle layer during deposition is of utmost importance to be able to design the nanocomposites' properties [6].

We exploited different deposition methods ranging from vacuum deposition [5,7] to solution casting [8] to install different metal layer morphologies. In combination with grazing incidence small-angle x-ray scattering we were able to observe the metal nanolayer growth kinetics on different organic and inorganic layers in real-time and present first results.

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Joined session with DS: Further abstracts are listed under DS 20.2-6