Abstract Submitted
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Interfacial Structure imaging of Pentacene/Si(111) by model- independent method SONGTAO WO, HUA ZHOU, RANDALL HEADRICK, University of Vermont, ALEXANDER KAZIMIROV, Cornell High Energy Synchrotron Source, CORNELL HIGH ENERGY SYNCHROTRON SOURCE TEAM — Synchrotron x-ray reflectivity is utilized to study the Pentacene/Si(111) interfacial structure in the direction normal to the surface. Model-independent algorithm is used to analyze the reflectivity data to extract the electron density profile. It indicates two partially ordered layers along the interfacial normal with thickness ∼0.6 nm and an interfacial water layer ∼0.9 nm as we reported in our previous work. A pentacene monolayer ∼1.6 nm can also be revealed.

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