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Investigation of the Potential Difference between C60 and TiOPc on Ag(111) by Local Probe Techniques KRISTEN BURSON, YINYING WEI, WILLIAM CULLEN, JANICE REUTT-ROBEY, University of Maryland-College Park — One challenge for increasing efficiency of organic photovoltaics is to understand the barrier to exciton separation that exists at the interface between organic molecules. Here we report a local probe measurement of the potential barrier at the interface between submonolayer C60, a good electron acceptor, and honeycomb phase TiOPc, an organic with high hole mobility, on Ag(111). We employ UHV AFM (atomic force microscopy) and KPFM (Kelvin probe force microscopy) to obtain simultaneous images of the potential and topographic landscapes. This technique allows for high spatial resolution of both the potential and the topography. In addition to reporting the work function difference between C60 and TiOPc, we investigate the work function for C60 on Ag(111).

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