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Nanomorphological study of polymer bulk heterojunction used in flexible solar devices GABRIEL CALDERÓN-ORTIZ, HECTOR CARRASCO, JOSEE VEDRINE-PAULEUS, Univ of Puerto Rico - Humacao — Solar cells fabricated with organic polymeric materials can enable large area fabrication on printable and flexible substrates, but increasing their efficiency is coupled to understanding their electrical properties and mechanical function on the nanoscale. In this study we measure the nanoscale conducting and mechanical properties of organic bulk heterojunction polymers coated on graphene and flexible PET or Si substrates. We characterize the nanomorphology of bulk heterojunction conducting polymers by applying conductive atomic force microscope (c-AFM), and force volume mapping for quantitative nanomechanical property calculations.

Gabriel Calderón-Ortiz
Univ of Puerto Rico - Humacao

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