

Abstract Submitted
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Band structure and device fabrication using thin-films of p-benzoquinonemonoimine zwitterion/P3HT blends¹ STEPHANIE RODRIGUEZ MARMOL, GERSON DIAZ, FREDDY WONG, GRACE FONTANEZ, FERNAND TORRES, EDUARDO VEGA, Univ of Puerto Rico - Humacao, LUCIE ROUTABOUL, PIERRE BRAUNSTIEN, Universit de Strasbourg, YANG LIU, XIN ZHANG, PETER DOWBEN, University of Nebraska, BERNARD DOUDIN, Universit Louis Pasteur Strasbourg, LUIS G. ROSA, Univ of Puerto Rico - Humacao, University of Nebraska — The electronic structure of some p-benzoquinonemonoimine zwitterion molecular films have a definite, although small, density of states evident at the Fermi-level as well as a nonzero inner potential and thus is very different from a true insulator. Photoelectron emission spectroscopy studies of polymer blends of three types of p-benzoquinonemonoimine zwitterion and regio-regular poly(3-hexylthiophene) (P3HT) thin-films provide evidence of changes in the molecular band structure due to interaction of such bands. Electric drain-source measurements done with these polymer blends show evidence of higher transport currents in comparison to P3HT polymer thin-films alone for one of the blends.

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