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The Electronic structure at the copper phthalocyanine to P(VDF-TrFE) copolymer thin films interface JIE XIAO, CAROLINA ILIE, PETER DOWBEN, Department of Physics and Astronomy, University of Nebraska-Lincoln — Copper phthalocyanine (CuPc) is an organic semiconducting material which has a potential application in organic thin film transistors. We explore the band offsets of CuPc deposited on crystalline polyvinylidene-trifluroethylene P(VDF-TrFE) copolymers through combined photoemission and inverse photoemission studies. Other work indicates that dipole orientation affects the band alignments of adsorbate molecules, so the possibility exists that the band offsets of the adsorbate molecule may be affected by ferroelectric phase transition in the P(VDF-TrFE) copolymer thin film substrate. Alternatively such a change, in the band alignment of CuPc, may be affected by a reversal of dipole orientation in the adjacent P(VDF-TrFE).

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