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Conjugated Polymer Chemical Sensing Materials

Conjugated polymers have shown promising properties as sensing materials for chemical detection as well as both temperature and humidity sensing. Specifically, hemi-isoindigo (HID) copolymers have shown excellent potential as active layers for these types of sensors with good solubility in common solvents. To develop these materials, HID monomers are copolymerized with bithiophene monomers, and different functionalizations are used to optimize performance, solubility, and stability.