

Abstract Submitted
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Crosslinkable P3HT as Hole Transport Layer of Polymer Based Solar Cells JUNG-KEUN KIM, Department of Polymer Science and Engineering, University of Massachusetts Amherst, MA 01002, JAE WOONG JUNG, Department of Materials Science and Engineering, Seoul National University, Seoul 151-742, Korea, WON HO JO, Department of Materials Science and Engineering, Seoul National University, Seoul 151-742, Korea, THOMAS P. RUSSELL, None — A photocrosslinkable bromine-functionalized poly(3-hexylthiophene) (P3HT-Br) copolymer was synthesized and used as the hole transport layer in polymer solar cells based on poly(3-hexylthiophene), and low band gap polymer, poly[2,6-(4,4-bis-(2-ethylhexyl)-4H-cyclopenta[2,1-b;3,4-b?]dithiophene)-alt-4,7-(2,1,3-benzothiadiazole)] (PCPDTBT) with [6,6]-phenyl-C61-butyric acid methyl ester. Electrochemical stability of crosslinked P3HT-Br is superior to poly(3,4-ethylenedioxythiophene): poly(styrenesulfonate) (PEDOT:PSS), which has widely been used as the hole transport material in polymer solar cells.

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