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102

INVESTIGATION OF RECOMBINATION PROCESS OF P3HT:PCBM ORGANIC SOLAR CELL

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ABSTRACT
A computational study on a recombination mechanism in a bulk heterojunction (BHJ) organic solar cells of P3HT:PCBM was done. Using the simulation tools SCAPS, the electrical performances of organic solar cells and the intensity-dependent current density -voltage (*J-V*) were simulated and compared with the actual experimental result. Various light intensity dependent simulations were performed, and the results found showed that the higher the light intensity, the higher the current in reverse bias, since more photo-generated charge carriers were available to participate in the current.
Keywords: Bulk Heterojunction; organic solar cells; simulation; SCAPS; recombination; P3HT/PCBM; modeling

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