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(57) Abstract :

The present invention relates to the organic solar cell has been simulated by GPVDM software at different device temperatures. This device model consists of mixture of P3HT and PCBM materials as active layer. In this device ITO is a transparent electrode, PEDOT: PSS is buffer layer and Al is a back electrode. In this study the electrical simulation has been done at different device temperatures 270K, 290K, 320K, and 345K. It is observed that J-V characteristics are affected by the device temperature. We obtain maximum efficiency 5.2% at temperature 345K with active layer thickness 250 nm.

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