Effect of Device Annealing in Bulk Hetero-Junction Solar Cells With Blends of P3HT Polymer and Nano Particles

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Here we show that enhanced efficiency of bulk hetero-junction solar cells using blends of CdSe nanoparticles and poly (3-hexylthiophene) (P3HT) polymer by annealing process and loading CdSe amount. Blends films (CdSe: P3HT = 7:3 by weight) were prepared using chlorobenzene and pyridine as solvent. Under loading and annealing conditions. The increased crystallinity of semiconducting polymer and the pecolation point pathway of charge carrier transport could be developed. We observed that power conversion efficiency was increased. Further, power conversion efficiency was approached 0.1 % under air mass 1.5 simulated solar illuminations (100 mW/cm2).
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