A fabricated solar cell from ZnO/a-Si/polymers

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Abstract:

In this paper, a Al/ZnO/a-Si/polymer solar cell is fabricated by using the sputtering technique. The current–voltage characteristic curve indicates that the cell efficiency increased from 0.05453% to 0.484% for ZnO/Si/poly (3-hexylthiophene) as the Si film thickness increased. When the cell was fabricated using ZnO/Si/polyvinyl chloride and ZnO/Si/paraphenylene vinylene, the efficiencies increased from 0.505% to 2.793% and from 1.6% to 2.934%, respectively, as the Si film thickness increased.