

Photovoltaic Performances Of Dye-sensitized Solar Cells assembled with Ionic Polymer electrolyte

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Dye-sensitized solar cells (DSSCs) have been considered one of the promising candidates for the next generation solar cells. DSSCs based on liquid electrolytes exhibit high conversion efficiency, but the long-term durability of the cell is limited by leakage or evaporation of the liquid electrolytes. To overcome this problem, a lot of efforts have been made to replace the liquid electrolyte with polymer electrolyte. In this study, we synthesized novel ionic polymer from the ionic liquid monomer containing iodide ion. We investigated the electrochemical properties of highly conductive polymer electrolytes based on ionic polymer, and the photovoltaic performance of the dye-sensitized solar cells assembled with these polymer electrolytes will be presented.