

## Efficiency Improvement of Organic Photovoltaic Cells

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Because of high oil price and exhaustions of energy resources, highly efficient organic solar cells are needed. Among the factors that related to organic solar cells efficiency, electron transfer plays an important role. PCBM is widely used for acceptor material and should show good dispersion to make electron transfer easily . Futhermore, well dispersed PCBM makes it easy to diffuse the excitons produced by photon absorption. Because materials have tendency to make clusters with that of similar property, PCBM may form the aggregated clusters. Since excitons can diffuse only 10nm from donor materials to the donor-acceptor interface without recombination, the uniform dispersion of PCMBs with small size is needed to improve efficiency.