



On the exciton blocking layer at the interface organic/cathode in planar multiheterojunction organic solar cells

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Mots-clés	Exciton blocking layer [11], interfaces [12], Organic solar cells [13], Physical vapour deposition [14]
Résumé en anglais	<p>A successful approach to improve organic solar cell (OSC) performance is the introduction of a thin layer called exciton blocking layer (EBL) at the interface organic material/cathode. It is shown that, the EBL allows improving significantly the solar cells performances whatever the molecule used, either the well known bathocuproine (BCP) or the new molecule Z, 5[4-Me-3-N (2-OMe Phenyl)D4 thiazolidene], 2-thioxo-3-N(2-OEthylphenyl)thiazolidine-4-one (ROETOM). The optimum thickness of the EBL in the case of ROETOM is 6 nm, while it is 9 nm in the case of BCP. These different behaviours are justified by the very high homogeneity of the ROETOM layer. Homogeneity which prevents easily metal atom diffusion when it is introduced in OSC and therefore 6 nm are sufficient to prevent metal atom diffusion into the acceptor.</p>
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