



Improved electron collection in fullerene via caesium iodide or carbonate by means of annealing in inverted organic solar cells.

Submitted by Christian Bernède on Thu, 06/04/2015 - 21:44

Titre	Improved electron collection in fullerene via caesium iodide or carbonate by means of annealing in inverted organic solar cells.
Type de publication	Article de revue
Auteur	El Jouad, Zouhair [1], Louarn, Guy [2], Praveen, Thappily [3], Predeep, Padmanabhan [4], Cattin, Linda [5], Bernède, Jean Christian [6], Addou, Mohammed [7], Morsli, Mustapha [8]
Editeur	EDP Sciences
Type	Article scientifique dans une revue à comité de lecture
Année	2014
Langue	Anglais
Pagination	50401
Volume	5
Titre de la revue	EPJ Photovoltaics
Résumé en anglais	<p>Inverted organic photovoltaic cells (IOPVCs), based on the planar heterojunction C60/CuPc, were grown using MoO₃ as anode buffer layer and CsI or Cs₂CO₃ as cathode buffer layer (CBL), the cathode being an ITO coated glass. Work functions, Φ_f, of treated cathode were estimated using the cyclic voltammetry method. It is shown that Φ_f of ITO covered with a Cs compounds is decreased. This decrease is amplified by the annealing. It is shown that the thermal deposition under vacuum of the CBL induces a partial decomposition of the caesium compounds. In parallel, the formation of a compound with the In of ITO is put in evidence. This reaction is amplified by annealing, which allows obtaining IOPVCs with improved efficiency. The optimum annealing conditions is 150 °C for 5 min.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua12274 [9]
DOI	10.1051/epjpv/2014003 [10]
Lien vers le document	http://dx.doi.org/10.1051/epjpv/2014003 [10]

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