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Structural, morphological and optical properties of PEDOT:PSSRDs nano-composite films prepared by spin-casting

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Abstract

This paper describes the structural, morphological and optical properties of the nano-composite of poly (3,4-ethylenedioxythiophene) polystyrene sulfonate (PEDOT:PSS) and quantum dots (QDs). The ZnSe and CdSe QDs have been synthesized, with the aid of Mercaptoacetic acid (MAA), by a colloidal method with an average size of 5 to 7 nm. QDs have been embedded in PEDOT:PSS using a simple solution processing approach and has been deposited as thin films by spin coating technique. The QDs embedded PEDOT:PSS enhances the light absorption spectra of samples, prominently in terms of absorption intensity which may consequently improve sensitivity of the optoelectronic devices. (C) 2016 Elsevier B.V. All rights reserved.

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