



Inverted hybrid solar cell based on PbS nanocrystals embedded in P3HT: C60 system

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Ternary system hybrid solar cells, with an inverted structure, that are composed of P3HT, PbS nanocrystals (PbS NCs) and C60; with weight ratio (1:0.6:0.3) were investigated and compared with our control cell without PbS nanocrystals. The incorporation of PbS nanocrystals showed increased power conversion efficiency (PCE) compared with that of a binary system with P3HT and C60. The effect of active layer thickness was also studied. Through thickness, structural, optical, electrical measurements and SEM micrographs, it is evident that low-cost PbS NCs in such devices can efficiently improve charge carrier transport and exciton dissociation. This simple approach for increasing the photocurrent by NCs will be useful for the development of the organic solar cells.

Definition of terms of reference mean power satellites power system

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The article presents the work of the definition and justification of the terms of reference for the medium-power satellites power system. Byorbital sequence diagram, technical engineering requirements of the selected block. Calculated energy components for resource sources. The term of active work of a spacecraft is provided by the energy needs of its payload with all its on-board systems

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