

عنوان مقاله:

Effect of WO₃ Nanoparticles on performances of organic solar cells

محل انتشار:

نخستین همایش ملی توسعه در علوم و صنایع شیمیایی (سال: 1395)

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نویسندگان:

Ahmad. Azimy - *Department of Chemistry, Shahid Bahonar University of Kerman, ۷۶۱۶۹ Kerman, Iran*

Seyed Mohammad Ali Hosseini - *Department of Chemistry, Shahid Bahonar University of Kerman, ۷۶۱۶۹ Kerman, Iran*

Navid. Ramezani - *Department of Chemistry, Faculty of Science, Ferdowsi University of Mashhad, Mashhad, Iran*

خلاصه مقاله:

In this study, we examine the effect of various ratios of WO₃ nanoparticles in the active layer of organic solar cells (OSC). The organic polymers used in active layer are poly (3-hexylthiophene) (P3HT) and acceptor fullerene (C60). The active layer blend was prepared in 1,2,4-trichlorobenzene using various amount of metal oxide, while keeping the constant ratio of P3HT and C60. The use of Nanoparticle (WO₃) into the P3HT/C60 layer to improve the power conversion efficiency (PCE) of the device is investigated. The power conversion efficiency (PCE) of the devices is found to increase in presence of Wo₃ in the blend of active layer of the devices. The absorption increased with addition of the metal oxid in the active layer of the devices. The performances of the devices depend upon the .(optimum ratios of metal oxides with P3HT and (C60

کلمات کلیدی:

P3HT, C60, ITO, PEDOT:PSS

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