

عنوان مقاله:

Room nanorods coated by 2Room temperature methanol sensor Based on MoSAg Nanoparticles

محل انتشار:

دومین کنفرانس بین المللی تحقیقات بین رشته ای در مهندسی برق، کامپیوتر، مکانیک و مکاترونیک در ایران و جهان اسلام (سال: 1398)

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خلاصه مقاله:

Recent years, MoS₂ due to its 2D structure that is similar to graphene and its nonzero changeable band gap has been used in many different fields such as Nanoelectronics, optics and gas sensing applications. Therefore, in this work, in order to detect methanol vapors, MoS₂ Nanorods was prepared by a hydrothermal method and to evaluate the effect of adding Ag nanoparticles (in the range of 30-70 nm) in the response of sensor, different Ag 0.5 wt% was added to MoS₂ Nanorods. Analytical tests such as SEM, EDX, TEM, and XRD are provided to approve the structural and morphological properties of the prepared materials. MoS₂/Ag 0.5 wt%, has the best effect on the response of sensor that could increase the response by 250% at room temperature. Reproducibility, chemical stability and selectivity of sensor to methanol vapors beside its preferable response, are the features that can make the sensor .more preferable in sensing methanol in different fields and industries

کلمات کلیدی:

Methano sensor, MoS₂, nanorods, Ag nanoparticles

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