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Decoration of CdS nanorods with Cu nanoparticles for photocatalytic removal of Rhodamine B contaminant

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Photocatalytic degradation of Rhodamine B by cadmium sulfide nanorods decorated with copper nanoparticles is an effective method for water treatment. In this study, Cu nanoparticles are synthesized on the surface of CdS nanorods (NRs) which act as auxiliary catalysts. Achieving the reduction of Cu ions through chemical reduction and consolidated correlation between nanoparticles and NRs has been analyzed using XRD, SEM, TEM, FTIR, and UV-Vis spectra [1]. The acquired results showed that the composition of Cu nanoparticles and CdS NRs oversees the formation of new bonds with bridging sulfur in the form of Cu-S-Cd, which leads to a substantial increase in the photocatalytic activity of CdS [2].

Keywords: Photocatalysis, Nanocomposite, CdS nanorods, Copper nanoparticles.

References

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