

Electrochemical assisted synthesis of ZnO/graphene nanosheets: An efficient photocatalyst

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Herewith we have demonstrated the simple and efficient way to synthesize the ZnO/Gr nanosheets with high yield using electrochemical pathway. With optimum synthesis condition, we have successfully synthesized the ZnO/Gr nanocomposite with varying weight composition. The X-ray diffraction and diffuse reflectance spectroscopy analysis confirms the formation of ZnO/Gr nanocomposite with reduced band gap energy. Methyl orange and Rhodamine B degradation study indicates that the ZnO/Gr nanosheets can greatly enhance the photocatalytic activity under UV light due to the strong synergistic effect and low ratio electron recombination between graphene sheets and ZnO.