

Synthesis of Graphene-CdSe Composite by a Simple Hydrothermal Method and Its Photocatalytic Degradation of Organic Dyes

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摘要 A graphene-CdSe composite was synthesized by a facile hydrothermal method, and characterized by X-ray diffraction, scanning electron microscopy with energy dispersive X-ray analysis, transmission electron microscopy and UV-vis diffuse reflectance spectrophotometry. The graphene-CdSe composite efficiently catalyzed the photodegradation of methylene blue (MB), methyl orange (MO) and rhodamine B (Rh.B) in aqueous solution under UV or visible light irradiation. The graphene-CdSe composite exhibited a higher photocatalytic activity for the MB solution.

关键词: [grapheme](#) [cadmium selenide](#) [organic dye](#) [photocatalytic activity](#)

Abstract: A graphene-CdSe composite was synthesized by a facile hydrothermal method, and characterized by X-ray diffraction, scanning electron microscopy with energy dispersive X-ray analysis, transmission electron microscopy and UV-vis diffuse reflectance spectrophotometry. The graphene-CdSe composite efficiently catalyzed the photodegradation of methylene blue (MB), methyl orange (MO) and rhodamine B (Rh.B) in aqueous solution under UV or visible light irradiation. The graphene-CdSe composite exhibited a higher photocatalytic activity for the MB solution.

Keywords: [graphene](#), [cadmium selenide](#), [organic dye](#), [photocatalytic activity](#)

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