

## Functionalized Magnetic Graphene oxide: Efficient Wastewater Treatment

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Polymeric nanocomposite materials have been acclaimed as potential candidates for environmental remediation application. Recently, a variety of carbon based functional nanomaterials have been developed as adsorbent for water treatment applications. Among them, graphene oxide, a two dimensional (2D) carbon nanomaterial is considered as a potential candidate for its attractive properties like huge aromatic surface area, tunable surface functionality and mechanical strength. However, the high surface energy of graphene sheets make them agglomerated through Van der Waals interaction, referring to lower surface area. Herein, we have demonstrated an approach for generating a three dimensional (3D) network of biopolymeric graphene oxide with well dispersed active adsorption sites.<sup>1</sup> The nanocomposite was structurally examined by FTIR, FESEM, TEM and XPS analyses. Subsequently, the adsorptive behavior of the nanocomposite to methylene blue (MB) dye was thoroughly examined. The complete adsorption mechanism was explained by FESEM and XPS analyses.