

A Green and Facile Route for Preparing Graphene/TiO<sub>2</sub>/Ag Nanocomposite Aerogel with Improved Adsorption Capacity and Photocatalytic Activity

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Graphene-based 3D macrostructures are electrically conductive, mechanically strong and thermally stable. On the other hand, TiO<sub>2</sub> displaying unique optical and electronic properties, has been widely employed in the area of sustainable energy and environmental remediation. Here, we reported a green and facile route for preparing graphene/TiO<sub>2</sub> and graphene/TiO<sub>2</sub>/Ag nanocomposite aerogel. Graphene oxide nanosheets are first in situ deposited with TiO<sub>2</sub> nanoparticles, then Ag nanoparticles are decorated on the surface to improve quantum yield. The hybrid is assembled to be a bulk gel by a mild chemical reduction, followed by supercritical CO<sub>2</sub> drying. The application of them for photocatalytic degradation of MB under UV and visible light has been investigated.

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