

## عنوان مقاله:

Improved Photocatalytic Performance of Titanium Dioxide Nanoparticles in Visible Region via Graphene and Manganese Codoping

## محل انتشار:

پنجمین کنگره بین المللی نانو و فناوری نانو (ICNN2014) (سال: 1393)

تعداد صفحات اصل مقاله: 4

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## خلاصه مقاله:

The novel visible light activated Mn-Gr/TiO<sub>2</sub> nanocomposite photocatalyst was synthesized hydrothermally and utilized for organic pollutants abatement. Prefect abatement performance for methyl orange, an improved photocatalytic performance of 68%, has been observed. The crystallographic properties of photocatalyst were investigated using XRD; the results showed prefect crystalline structure and suitable phase distribution and crystallite size of 22.9 nm. The main structural phase was anatase. The morphology and size distribution of nanoparticles was studied via field emission scanning electron microscopy; narrow size distribution of nanoparticles was observed with average size of 46 nm. The FTIR spectroscopy indicated organophilic functional groups on Mn-Gr/TiO<sub>2</sub> nanocomposite which enhances organic compound adsorption.

## کلمات کلیدی:

photocatalyst, hydrothermal, TiO<sub>2</sub>, graphene

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/397616>

