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# Photocatalytic degradation of p-xylene over doped titania thin film

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**ABSTRACT**

Doped titania thin film was made by deposition of nano $TiO_2$ doping with transitional metals (Fe, Cr and V) and non-metal (N) on glass reactor. The thin film was consisted of particles ranging from 15 nm to 20 nm uniformly dispersed on the surface and the thickness of thin film determined by Alpha-Step IQ was 286 nm. The thin film also was characterized by FE-SEM and AFM. To evaluate the photocatalytic activity of the thin film, photocatalytic degradation of p-xylene under UV and visible light irradiation was tested. It showed that doped titania thin film exhibited much higher photocatalytic activity as compared to that of non-doped titania thin film.

*Keywords:* Nano $TiO_2$ and doped $TiO_2$ thin film; Photocatalytic activity; p-xylene degradation

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