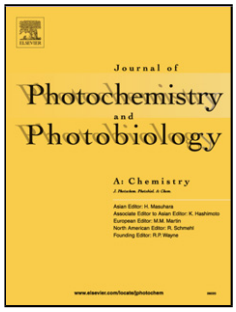

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PII: S1010-6030(18)30860-8
DOI: https://doi.org/10.1016/j.jphotochem.2018.10.004
Reference: JPC 11520

To appear in: *Journal of Photochemistry and Photobiology A: Chemistry*

Received date: 19-6-2018
Revised date: 7-9-2018
Accepted date: 2-10-2018

Please cite this article as: Wang L, Gao X, Cheng Y, Zhang X, Wang G, Zhang Q, Su J, TiO_2@MgAl-Layered Double Hydroxide with Enhanced Photocatalytic Activity towards Degradation of Gaseous Toluene, *Journal of Photochemistry and amp; Photobiology, A: Chemistry* (2018), https://doi.org/10.1016/j.jphotochem.2018.10.004

TiO_2@MgAl-Layered Double Hydroxide with Enhanced Photocatalytic Activity towards Degradation of Gaseous Toluene

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Graphical abstract

A facile method was developed to synthesize TiO_2@LDH photocatalyst with TiO_2 nanoparticles supported on the surface of LDHs nanoplates. The composite exhibited an enhanced photocatalytic activity towards degradation of gaseous toluene under sunlight, which is ascribed to the separation of photoinduced electron (e^-) - hole (h^+) pairs and the active HO• and $•O_2^-$ radicals generated at TiO_2@LDH interface. This work offers a novel insight for degradation of VOCs in air.