



## Ti/Cr-pillared clay as photocatalysts for 4-chlorophenol removal in water

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Received 1 August 2009; accepted 5 November 2009

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### ABSTRACT

Ti-pillared and Ti/Cr-pillared montmorillonite have been prepared from natural bentonite and characterized by UV-Vis DRS and X-ray diffraction. The photocatalytic activities have been tested for the removal of 4-chlorophenol in water. The influence of the Ti/Cr ratio and the calcinations method on these activities has been investigated. It was found that the photocatalytic activities increase with increasing the Cr/Ti ratio up to 0.1 after which it becomes almost constant.

**Keywords:** Photocatalysis; Pillared clays; Chlorophenols; Water reuse

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