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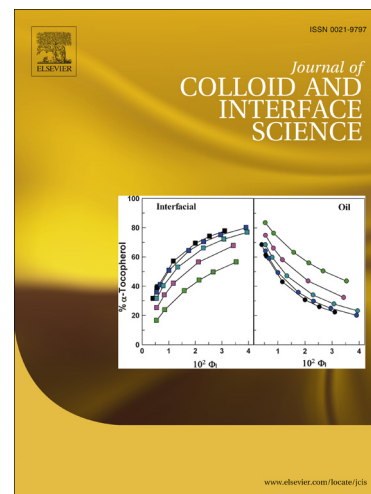
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**Novel approach for synthesis of boehmite  
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oxide nanostructures for remove Congo Red**

**Xueming Liu <sup>a</sup>, Chungu Niu <sup>b</sup>, Xinping Zhen <sup>b</sup>, Jide Wang <sup>a</sup>, Xintai Su <sup>a\*</sup>**

*<sup>a</sup>. Ministry Key Laboratory of Oil and Gas Fine Chemicals, College of Chemistry and  
Chemical Engineering, Xinjiang University, Urumqi 830046, China*

*<sup>b</sup>. Petrochemical Research Institute, Karamay Petrochemical Company, Karamay,  
Xinjiang 83400, China*

*\* Corresponding author, Tel. & fax: +86 0991 8582335*

*E-mail address: [suxintai827@163.com](mailto:suxintai827@163.com) (X. Su).*

**Abstract:**

A phase transfer method was developed to prepare boehmite ( $\gamma$ -AlOOH) nanostructures with various morphologies including nanofragments, nanorods, nanoflakes and multiply stacked nanostructures. The effect of the reaction temperature on the morphology of the as-prepared  $\gamma$ -AlOOH was investigated systematically. After calcination, the corresponding aluminium oxide ( $\gamma$ -Al<sub>2</sub>O<sub>3</sub>) nanostructures were obtained from the as-prepared  $\gamma$ -AlOOH products and preserving the same morphology. The obtained samples were characterized by several techniques, such as X-ray diffraction (XRD), field-emission scanning electron microscopy (FESEM), transmission electron microscopy (TEM) and N<sub>2</sub> adsorption-desorption technique.

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