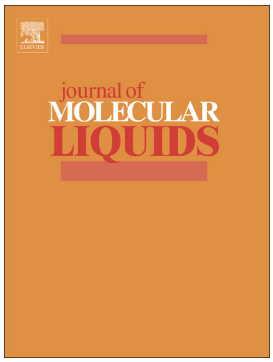

Chitosan-Guar gum blend silver nanoparticle bionanocomposite with potential for catalytic degradation of dyes and catalytic reduction of nitrophenol

Ageetha Vanamudan, Mohini Sadhu, Padmaja Sudhakar

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Chitosan-Guar gumblendSilver Nanoparticle bionanocomposite with potential for Catalytic Degradation of Dyes and Catalytic Reduction of Nitrophenol

*‡AgeethaVanamudan, ‡Mohini Sadhu, and ‡PadmajaSudhakar**

‡Department of Chemistry, Faculty of Science, The M. S. University of Baroda, Sayajigunj, Vadodara, 390002. India.

*Corresponding author. Tel. +91-265-2795552; Fax +91-265-2795552; E-mail address: p_padmaja2001@yahoo.com (Padmaja P. Sudhakar).

Abstract:

Chitosan-Guar gum blend Silver Nanoparticle bionanocomposite(CGS)was synthesised by incorporating palm shell extract capped nano silver particles during the formation of blend. The nanocomposite was characterised with IR, TEM, XRD and Raman spectroscopic techniques. The catalyst was further investigated for degradation of single and binary mixture of dyes as well as for reduction of nitrophenol.Further the prepared catalytic composite CG could be conveniently separated from the aqueous solution after the reaction andcould be reused upto three cycles without loss in activity.

Keywords: Chitosan Guar gum blend, silver nanoparticles, bionanocomposite, catalyst, dyes, nitrophenol