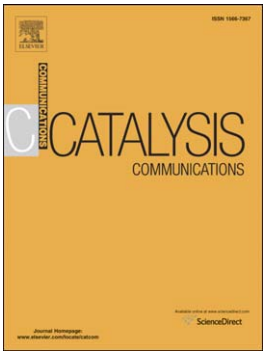

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Anand S. Burange, Radha V. Jayaram, Rakesh Shukla, Avesh K. Tyagi

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Oxidation of benzylic alcohols to carbonyls using tert-butyl hydroperoxide over pure phase nanocrystalline $CeCrO_3$

Anand S. Burange[a], Radha V. Jayaram[a]*, Rakesh Shukla[b], Avesh K. Tyagi[b]*

[a]Department of Chemistry, Institute of Chemical Technology, Mumbai – 400019, India.

[b]Chemistry Division, Bhabha Atomic Research Centre, Mumbai – 400085, India

*Corresponding author. Tel.: + 91- 22 3361 2607; Fax: +91- 22 3361 1020.

Email: rv.jayaram@ictmumbai.edu.in , aktyagi@barc.gov.in

Abstract

Nanocrystalline phase pure $CeCrO_3$ was synthesized by a two step preparation method. The prepared material was characterized by techniques such as X-Ray Diffraction (XRD), High Resolution Transmission Electron Microscopy (HR-TEM), EDX and SEM analysis. The catalytic activity of $CeCrO_3$ was investigated for the oxidation of benzylic alcohols to the corresponding carbonyls using TBHP as oxidant. Oxidation of several structurally diverse primary and secondary benzylic alcohols were studied with the $CeCrO_3$/TBHP catalytic system. The catalyst exhibited significant catalytic activity and selectivity in most of the cases.

Keywords: Selective oxidation, Perovskites, Heterogeneous catalyst, $CeCrO_3$, benzylic alcohol oxidation.