TEMPO radical functionalized SBA-15: A Heterogeneous Catalyst for Facile Oxidation of Alcohols to Aldehydes

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2,2,6,6-tetramethylpiperidine-1-oxyl (TEMPO) radicals or its derivatives in combination with secondary oxidants have attracted great attention for oxidation of various alcohols in a metal-free environment. The immobilization of TEMPO radical on a heterogeneous support provides various advantages in terms of catalytic activity as well as convenient catalyst recovery and recycling. In this work, 4-hydroxy-TEMPO radical was covalently attached on SBA-15. The developed catalyst was characterized by various techniques. The study of its catalytic activity for the selective oxidation of various alcohols to aldehydes is under investigation. This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Ministry of Science, ICT & Future Planning (No. 2012R1A2A1A01009683) and the Ministry of Education (No. 2009-0093816).