SciTechnol
International Publisher of Science, Technology and Medicine

Journal of Chromatography Research

Recyclable and recoverable catalytic systems based on Ionic liquids and clays: A green step towards sustainable development

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Abstract

Recovery of homogeneous catalysts from the reaction mixture and their recyclability represents a crucial challenge for industrial applications. A possible solution to this problem is to heterogenize the active homogeneous catalyst on to some solid support or to immobilize it in an appropriate phase system. Among the various inorganic supports, clays as a heterogeneous support material, have several economic and ecological advantages. Clay minerals occur abundantly in nature and their high surface area, sorptive and ion exchange properties have been exploited for various applications through decades. Further , the use of ionic liquid media for various catalytic reactions provides the advantages of ease of immobilization, recyclability and recoverability of the catalytic systems. The use of ionic liquid and clay based recyclable and recoverable catalytic systems for various organic transformations will be discussed.

Biography

Rajni Ratti has obtained her Ph.D from PEC University of Technology, Chandigarh in 2012 followed by a Post-doctoral fellowship from the prestigious Indian Institute of Technology, Ropar, India. Besides, she has worked for a Joint Indo French project in the area of Green chemistry for four years. She has published seven papers and delivered several talks related to Geen chemistry.

9th World Congress on Green Chemistry and Green Energy, Prague, Czech Republic, 20-21 July, 2020

Citation: Rajni Ratti, Recyclable and recoverable catalytic systems based on Ionic liquids and clays: A green step towards sustainable development, Green Chemistry 2020, 9th World Congress on Green Chemistry and Green Energy, Prague, Czech Republic, 20-21 July, 2020, 26