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Designing of nano catalysts for sustainable multi-component synthesis of 3-substituted indoles

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Heterogeneous catalysis using nano materials as recyclable catalysts for organic transformations has attracted the attention of scientists with the goal of improving "green" and sustainable chemistry The E-factor and atom economy concept has played a significant role in organic synthesis in view of minimizing waste generation during the manufacture of pharmaceutical intermediates 3-Substituted indoles are of special interest as medicinally potent lead molecules with wide range of biological activities To the best of our knowledge, there is no report on the development of heterogeneous catalytic system for the synthesis 3-substituted indoles. In this context, we have succeeded in the designing of various novel nano catalysts such as RGO/ZnO, ionic liquid grafted Fe_3O_4 Nps and Cu(0)/hydromagnesite for sustainable multi-component synthesis of 3-substituted indoles.

Biography

U Chinna Rajesh has received master's degree in Organic Chemistry from Oil Technological Research Institute, Jawaharlal Nehru Technological University (OTRI-JNTUA), India in 2009. He is pursuing PhD under the supervision of Prof. Diwan S Rawat, University of Delhi, India. He has been involved in interdisciplinary research area including nanotechnology, heterogeneous catalysis and medicinal chemistry. Till date, he has eight research papers and two patents in his credit. He has been elected as life member in Indian Society of Chemists and Biologists (ISCB), life member in Indian Science Congress Association (ISCA) and Fellow member in International Science Congress Association (ISCA).

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