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Synthesis of Ibuprofen using nano-preyssler as a green and environmentally friendly catalyst

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Green sustainable chemistry (GSC) is, in a word, chemistry and chemical technology for environmentally friendly products and processes. Green chemistry uses highly efficient and environmental benign synthetic procedures to deliver life saving medicines, accelerating guide optimization processes in drug discovery, with reduced needless environmental impact. HPAs have several advantages as catalysts which make them economically and environmentally attractive. Basic characteristics of heteropolyacids as green catalysts are overviewed, focusing on the various reaction fields in which the heteropolyacid catalysts function as acid. This research describes an alternative and simple procedure for the synthesis of Ibuprofen using Silica-Supported Preyssler Nanoparticles ($H_{14}[NaP_5W_{30}O_{110}]/SiO_2$), (SPNPs), as an eco-friendly, inexpensive and efficient catalyst. High yields, simplicity of operation and easy work-up procedure are some advantages of this protocol. Silica-Supported Preyssler Nanoparticles ($H_{14}[NaP_5W_{30}O_{110}]/SiO_2$), (SPNPs) offer the advantages of a higher hydrolytic and thermal stability. The salient features of Preyssler's anion are availability, non-toxicity and reusability.

Biography

Ali Gharib completed his BSc in Pure Chemistry and MSc from Islamic Azad University and graduated with a first class honour degree in PhD in Organic Chemistry. His research interests include synthesis of organic chemistry and heterocyclic compounds by heteropolyacids (HPAs) catalysts. He is supervisor of chemistry laboratories in Agricultural Research Center. He has published a book on *Applications of Polyoxometalates (POMs) in Chemistry and Medicine*. He has collaboration for the publication of Green Chemistry: Synthesis of Bioactive Heterocycles by Springer Publishing Company.

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