

عنوان مقاله:

Investigation of different catalysts at ring opening reaction of epoxides

محل انتشار:

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نویسندگان:

Samaneh Mohamad Ebrahimzadeh Sepasgozar - *PhD student in Organic Chemistry, Department of chemistry, Quchan Branch, Islamic Azad University, Quchan, Iran*

Sharareh Mohseni - *Assistant Professor, Department of chemistry, Quchan Branch, Islamic Azad University, Quchan, Iran*

خلاصه مقاله:

Epoxides are important synthetic intermediates for a large number of bifunctional alcohols. There are simple and general procedures for efficient and regioselective ring-opening reaction of epoxides under solvent-free and mild conditions at room temperature. the epoxide ring opening has to be performed under conditions with high regioselectivity towards the desired product(s). [Fe (BTC)] is an extremely efficient and regioselective heterogeneous catalyst for opening epoxide ring by alcohols and amines. GaCl₃/PVP in the ring-opening reaction of epoxides by alcohols and azide act as nucleophiles. Sc(OTf)₃ is a new, highly efficient and reusable catalyst for the opening of epoxides with amines. also, in this review, we would like to present the other variety of applied catalysts at ring opening reaction of epoxides. It consists of ring opening of epoxide by conventional methods and solvent free methods. There are several difficulties in ring-opening reaction of epoxides viz reaction conditions, role of catalyst, stereo effects etc. This review focuses on ring opening of epoxides with different catalysts. This catalyst is a stable and recoverable catalyst and easily separate from reaction mixture by a simple filtration and reused repeatedly. Also, These can be stored for long time without any changing and reduction of its reactivity. This catalyst has good handling .and excellent regio- and stereoselectivity, cheaper, available and reusable reagents, and (f) solvent free conditions

کلمات کلیدی:

catalysts, ring-opening, epoxides, synthetic

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