



Mesoporous carbon as an efficient catalyst for alcoholysis and aminolysis of epoxides

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ABSTRACT

The ring opening reaction of epoxides by alcohols and amines using mesoporous activated carbon as efficient and environmentally friendly heterogeneous catalyst is reported. Carbon xerogels were synthesized by polymerization of resorcinol and formaldehyde. The surface of the activated carbon was oxidized in liquid phase with HNO_3 and then functionalized with H_2SO_4 .

Chemical and textural characterization by elemental analysis, pH_{ZPC} , TPD, BET and XPS indicates that oxidation in liquid phase is effective in the introduction of strong acid groups in the carbon surface. The functionalization with H_2SO_4 led to more acid functional groups, as expected. The activated carbons were tested in alcoholysis and aminolysis of epoxides, having been obtained excellent results of conversion and selectivity, both over 95%.

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