

Solid Superacid Catalysts and Their Applications

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An acid that is stronger than the acid strength of 100 % H_2SO_4 is known as a superacid. Environmental concerns about the use of toxic liquid superacids and liquid inorganic acids in the transformation of hydrocarbons provide an impetus for a search of stable and more environmentally friendly solid acid catalysts. This special issue entitled "*solid superacid catalysts and their applications*" is focused on developments in methods of preparation, characterization tools including both surface and textural properties as well as their applications. In addition, this issue examines an important opportunity related to green chemistry where solid superacids lead to new gas- and liquid-solid phase reactions, which are environmentally benign processes in the chemical industry. Superacid catalysts can be applied for different catalytic reactions such as; esterification, isomerization, alkylation, polymerization, cracking, other acid catalyzed reactions (acylation, etherification, acetalization, nitration, disproportionation, etc.). This special issue, on *American Journal of Materials Science*, focuses on recent advances in superacid catalysts; preparation, characterization and applications.

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