

## Direct Synthesis of Mesoporous Sulfated Zirconia

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Sulfated zirconia as solid superacid has attracted much attention because it is potentially important for industrial reactions such as hydrocarbon isomerization, alkylation and etherification. Its catalytic activity was strongly influenced by the porous structure and surface acidic properties. Therefore mesoporous sulfated zirconia with large surface area and strong acid strength is desirable.[1-2]

We have synthesized mesoporous sulfated zirconia using surfactant as structure directing agent via microwave irradiation. X-ray diffraction patterns and TEM image were indicated the formation of mesoporous structure. FT-IR spectrum showed existence of functionalized sulfonic groups on the surface of zirconia this material was applied in the Friedel-Crafts acylation of 2-methoxynaphthalene.

Reference

- [1]C.T. Kresge, M.E. Leonowicz, W.J. Roth, J.C. Vartuli, J.S Beck, Nature 359 (1992)710
- [2]Y. sun et al. / Applied Catalysis A : General 268 (2004) 17-24