

## Synthesis of mesoporous materials by using ionic liquids as surfactant structure directing agents

한대수, 박상언\*, 수잔디, 이승철  
인하대학교  
(separk@inha.ac.kr\*)

New type of ionic liquid-based surfactants were synthesized from the reaction between methyl imidazole and long alkyl halides. The obtained ionic liquids were used as structure directing agents for the synthesis of new mesoporous materials. With precisely controlled experiment and the used of ionic liquid surfactant with different alkyl chain length, various mesoporous materials with different morphologies and pore structures can be synthesized. The ionic liquid surfactants were also used for the direct synthesis of organic-inorganic hybrid mesoporous materials. The obtained materials were characterized by means of XRD, N<sub>2</sub> sorption analysis, SEM, TEM, FTIR and NIR.