

**Immobilization of ionic liquids on MOFs ; efficient heterogeneous catalysts for chemical fixation of  
to cyclic carbonate**

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Recently, Metal-Organic Frameworks (MOFs) are widely used as a catalyst material for many chemical reactions. In this work, a series of ionic liquids including quaternary ammonium and imidazolium salts were immobilized on MOFs. To investigate the performance of the catalysts, they were used as heterogeneous catalysts for the synthesis of cyclic carbonate via cycloaddition reaction of epoxide and CO<sub>2</sub>. The effects of immobilized ionic liquids structure and reaction conditions have been discussed. It was shown that the halide anion and different cations in the catalyst were responsible for the high yield of cyclic carbonates and excellent selectivity. The effect of reaction parameter such as temperature, CO<sub>2</sub> pressure, time and catalyst amount were also studied,