

## Fuctionalized Metal–Organic Frameworks as Catalysts for the Synthesis of Cyclic Carbonate from CO<sub>2</sub> and Epoxide

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MOFs (Metal–organic frameworks) are crystalline materials assembled from metal ions and organic bridging ligands. It has both advantages and characteristics of organic and inorganic materials. In other words, by using different organic ligands, the structure and composition can be varied and tuned. In this study, crystals of MOFs were obtained by adding triethylamine, to a N,N–dimethylformamide (DMF) solution containing a mixture of Zn(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O and benzenedicarboxylic acid (BDC) with selected functional groups such as –NH<sub>2</sub> and –Br. The structure of MOFs were characterized by XRD, FT–IR and N<sub>2</sub>–adsorption. The catalytic performance of the different MOFs was investigated for the cycloaddition of carbon dioxide to epoxide without solvent and co–catalyst.