

Zinc Acetate-based Catalysts for the Cycloaddition Reaction between CO₂ and Epoxides

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The synthesis and characterization of zinc(II) complexes such as [Py(Pz)₂]Zn(OC(=O)Me)₂ (1) and [Py(Me₂Pz)₂]Zn(OC(=O)Me)₂ (2), where ligands Py(Pz)₂ and Py(Me₂Pz)₂ are tridentate 2,6-bis(pyrazol-1-yl)pyridine and 2,6-bis(3,5-dimethylpyrazol-1-yl)pyridine, respectively, will be shown. The single crystal X-ray diffraction analysis demonstrated that compound 2 was monomeric with six-coordinated zinc center. We will present their application of new zinc compounds 1 and 2 as effective catalysts for the cycloaddition between CO₂ and epoxides in the presence of various kinds of cocatalysts such as n-Bu₄PBr, n-Bu₄NI, n-Bu₄NBr, n-Bu₄NCl, PPnCl, and DMAP.

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