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Diethyl zinc is used for a firing agent, solar battery element, conductive film for display, semiconductor element and for other electronic materials. However diethyl zinc is very unstable in air because it is sensitive to oxygen and water. This property of diethyl zinc restricts its wide use, and it is expected that application will expand if it improves its stability. In this study, focused on the Lewis acidity of diethyl zinc and tried to stabilize diethyl zinc by reacting with the electron donating ligand. Diethyl zinc become relatively stable in air by reacting with a bidentate ligand and the complex can be used for radical polymerization of methyl methacrylate.

Figure. DEZ complex with ligands and Polymerization of MMA using DEZ complex