

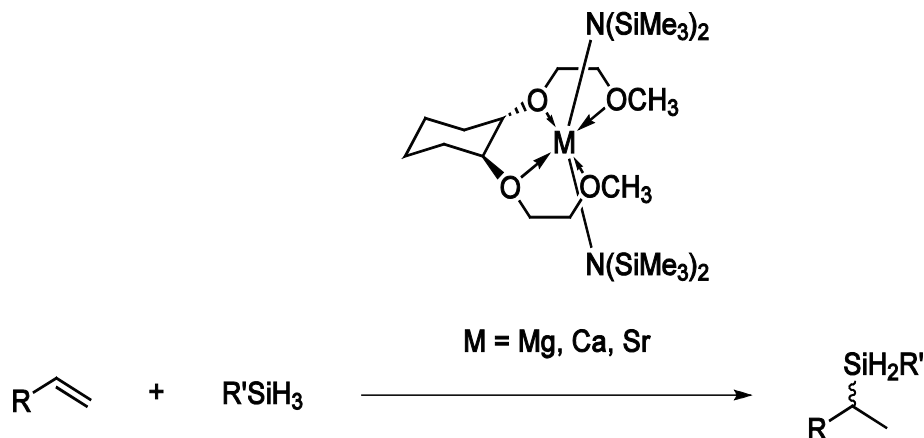
New Polyether Complexes of Alkaline Earth Metals as Catalysts for the Asymmetric Hydrosilylation of Alkenes

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Alkaline earth metal complexes show organolanthanide-like reaction behavior and can similarly be exploited in catalytic applications. These metal complexes combine Lewis-acidity with nucleophilic reactivity, which is the basis for substrate binding and activation.^[1]

A chiral (also enantiopure), tetradentate polyether has been synthesized, found to coordinate alkaline earth metal precursors^[2] forming unexpectedly inert complexes and homogeneously catalyze the hydrosilylation of alkenes.



Further experiments are being performed to investigate the catalytic potential of these complexes in organic transformations and polymerizations.

References:

[1] Harder, S. *Chem. Rev.* **2010**, *110*, 3852–3876. [2] Jochmann, P.; Dols, T.; Perrin, L.; Maron, L.; Spaniol, T. P.; Okuda, J. *Angew. Chem. Int. Ed.* **2009**, *48*, 5715–5719.