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# Recent Topics of the Metallacycles Composed of the Heavier Group 14 Elements

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## **Abstract**

This article reviews recent advance of metallacycles with chelating Si-, Ge-, and Sn-ligands. Dehydrogenative bond-forming reactions of organosilanes, -germanes, and -stannanes promoted by Pd and Pt complexes afford four- and five-membered metallacycles composed of heavier group 14 elements. It has a couple of advantage in easier preparation of the starting compounds and reaction procedure than the common metathesis reactions of dianions with transition metal dihalide complexes. These metallacycles are regarded as possible intermediates in catalytic dehydrocoupling polymerizations or as convenient precursors to form the discrete oligomers.

*Keywords: Metallacycles, Dehydrocoupling reactions, Cyclic polymers, Group 14 elements,*

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