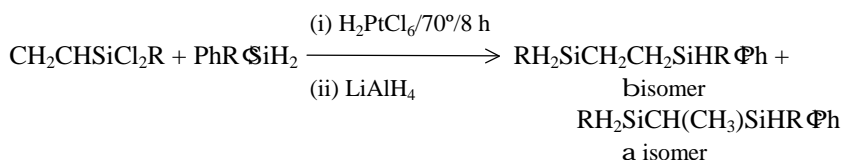


Titanium-catalysed dehydrocoupling of chiral carbosilanes

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Transition metal-catalysed dehydrocoupling of organosilanes containing primary, secondary and tertiary SiH groups has been developed as an effective route to short chain oligosilanes¹. Studies have been extended using NMR spectroscopy² to understand the underlying stereochemistry of these oligomers.

In the present studies, some hitherto unknown carbosilanes containing SiH groups have been prepared via hydrosilylation method.



where [R = H; R' = Me(1); R = R' = Me(2); R = H, R' = Ph(3)].

The CpTiCl₂/BuLi catalysed dehydropolymerization of these monomers afford Si–Si bonded oligomers with chiral functional groups. The microstructure of the oligosilanes have been elucidated by one- and two-dimensional [¹H, ¹³C{¹H}]DEPT–135°, ²⁹Si{¹H} DEPT–135°, TOCSY, HSQC] NMR studies.

References

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