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Title:	ROMP of Norbornene Derivatives - A Possible Route for the Preparations of Helical Polymers by Post-Polymerization Modifications
Authors:	Ramesh, Asha (/jspui/browse?type=author&value=Ramesh%2C+Asha)
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Abstract:	Fascinating helical polymers in biological systems like DNA and protein performing different functions always inspired scientists. Synthetic helical polymers have wide variety of applications in material science. We tried to synthesize a Norbornene based helical polymer with the help of ring opening metathesis polymerization (ROMP) and post polymerization functionalization. ROMP using Grubbs catalysts is one of the most used functional group tolerant living polymerization known. Since organic azides are not tolerated by ruthenium carbene initiators and non-protected alkynes can slow down the propagation reaction and lead to broad molecular weight distributions. Here we report the polymerization of Norbornene based monomer carrying a trialkylsilyl-protected alkyne by ROMP. The polymer was obtained in good yield with a low polydispersity index and high molecular weight. The findings of this studies will contribute to the development of functional and responsive polymeric systems.
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