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SPIROCYCLIC N-ALKOXYAMINES WITH-HYDROGEN AS INITIATORS IN NITROXIDE MEDIATED POLYMERIZATION (NMP) OF STYRENE

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In this work, new spirocyclic N-alkoxyamines **1** leading to initiators for controlled polymerization were synthesized. These compounds constituted by an indene system connected through a carbon atom to a pyrrolidine nucleus, and containing an alpha H to the N atom, are able to generate the corresponding nitroxides **2**. The cleavage temperatures were determined by ESR spectroscopy. In order to evaluate the effectiveness

of the initiators, styrene **3** polymerizations were carried out. In general, it was observed that at higher temperatures the conversion percentage increased, and both the dispersity index and polymer molecular weight decreased, suggesting that the reaction mechanism proceeds similar to that expected for a nitroxide-mediated polymerization (NMP).

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