

عنوان مقاله:

A Thermodynamic Study on the Cationic Ring-Opening Polymerization of Tetrahydrofuran

محل انتشار:

دهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1391)

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خلاصه مقاله:

Polymerization of tetrahydrofuran (THF) is one of the widely studied cationic ring opening polymerizations [1]. The products of THF polymerization are commercially used as mediate materials for polyurethane and polyester elastomers. Since the original report of THF polymerization by Meerwein in the late 1930s, various types of compounds have been reported as initiators [2]. However, only a few systems are suitable for preparing polymer of narrow molecular weight distribution in high conversion with good molecular weight control. One of these systems is perchloric acid (HClO_4)-acetic anhydride (Ac_2O) mixture which has been used in commercial production of poly(tetrahydrofuran) (PTHF) in some cases [3]. Although, there is much information about mechanistic features of THF polymerization in this particular system, there is a few thermodynamic data for it. In this article, we report the results of thermodynamic study of THF polymerization initiated by HClO_4 - Ac_2O mixture

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