

WATER STRUCTURE IN POLYMER MEMBRANES

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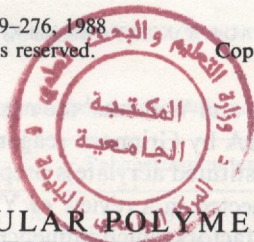
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EXCLU DU PRÊT

STEREOREGULAR POLYMERIZATION OF α -SUBSTITUTED ACRYLATES

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Abstract — This article reviews recent investigations on the stereospecific polymerization and oligomerization of α -substituted acrylates by radical and anionic initiators, including the preparation of highly isotactic and syndiotactic PMMAs and also a heterotactic PMMA. Side reactions in the anionic polymerizations by organolithium and -magnesium compounds are discussed in detail. Matrix and plasma polymerizations, group transfer polymerization and preparation of macromonomers are reviewed from the viewpoint of stereoregularity. Tacticity dependence of properties and reactivity of polymethacrylates and polyacrylates, as well as recent developments in the analysis of tacticity of polymethacrylates, are also described.

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1. INTRODUCTION

Stereoregular poly(methyl methacrylate)s were first prepared by Fox *et al.*¹ and Miller *et al.*² in 1958. Since then a large number of papers have been published on the stereospecific polymerization of methyl methacrylate (MMA) and other methacrylates. A variety of lithium, magnesium and aluminum compounds have been used for the preparation of highly stereoregular polymethacrylates. A review on polymerization by lithium compounds was presented by