Pulsed laser polymerization of methyl methacrylate using Wilkinson's catalyst as a photoinitiator. Hussain, M. Sakhawat; Awan, Shafique Ahmad; Khan, M. A.; Hamid, Haleem. Department of Chemistry, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. ACS Symposium Series (2003), 847(Photoinitiated Polymerization), 451-461. Publisher: American Chemical Society, CODEN: ACSMC8 ISSN: 0097-6156. Journal written in English. CAN 139:197804 AN 2003:453698 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Pulsed laser polymn. (PLP) of Me methacrylate (MMA) with (Ph3P)3RhCl (Wilkinson's catalyst), with and without AIBN was investigated at room temp. PLP of a MMA sample without Wilkinson's catalyst produced 0.107% PMMA, while a sample having 1.3 mM Wilkinson's catalyst yielded 0.565% polymer. Wilkinson's catalyst was found to act as a mild photoinitiator promoting the process. GPC revealed that the values of the polydispersity index became narrower in the presence of Wilkinson's catalyst. The 1H NMR spectra indicated the atactic nature of the resulting PMMA.