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X-ray Diffraction Study of the Changes Induced During the Thermal Degradation of Poly (Methyl Methacrylate) and Poly (Methacryloyl Chloride)

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<u>Abstract:</u> Poly (methyl methacrylate) -- PMMA -- and poly (methacryloyl chloride) -- PMACI -- were synthesized by free radical solution polymerization. The thermal stabilities of these polymers were determined with the help of thermogravimetry and differential thermal analysis. The structural changes in these materials at different temperatures (90, 140, 220 and 410 °C) were studied by X-ray diffraction. These studies indicate that PMACI is less amorphous than PMMA due to the presence of bulky chloride groups



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