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**COPOLYMERIZATION OF TRIOXANE WITH DIOXOLANE CATALYZED BY MAGHNITE-H<sup>+</sup>**

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polyoxymethylene is called polyacetal resin, and is a useful engineering plastic to replace metal. there are two routes for the production of polyacetal resin. the ring-opening copolymerization of trioxane can be initiated by lewis acide such as  $\text{BF}_3(\text{Et})_2$ ,  $\text{TiCl}_4$ , and  $\text{CH}_3\text{COClO}_4$ . in the present paper we present a new approach to synthesis a copolymer of trioxane by the cationic copolymerization of trioxane with dioxolane in solution catalyzed by Maghnite H<sup>+</sup>. this catalyst is a Montmorillonite sheet silicate clay, with exchanged protons, a new non toxic cationic initiator. copolymerizations were performed in dichloromethane at 40° C. At the end of the reaction, the resulting mixture was filtered the polymeric product ( copolymer trioxane-dioxolane) were characterized by <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and FT-IR spectroscopy. the influence of the amount of catalyst, of dioxolane and of solvent of copolymers was studied, we also propose mechanisms involved in the synthesis of copolymers (polyoxymethylene).