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A promising environmentally-friendly manganese-based catalyst for alkyd emulsion coatings

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Abstract:

A manganese(IV) complex (MnMeTACN) containing 1,4,7-trimethyl-1,4,7-triazacyclononane (MeTACN), in the presence of polyamines, significantly accelerated the oxidation of ethyl linoleate (EL) emulsions, and appeared to be a potential environmentally-friendly alternative for Co-based driers that are currently widely used for alkyd emulsion coatings. The polyamines greatly enhanced the catalytic activity of MnMeTACN in decomposing the formed hydroperoxides during the oxidation of EL.

Key-words: Polymer chemistry, polymer materials