

Abstract Submitted  
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**EPR study of radical trapping of RAFT polymerization of Multifunctional Acrylates** AAYUSH REGMI, ASHUTOSH DAHAL, D. BLANE BAKER, William Jewell College, JOHN POJMAN, Louisiana State University, PATRICK BUNTON, William Jewell College — Electron Paramagnetic Resonance (EPR) was used to monitor radical trapping during Reversible Addition-Fragmentation chain Transfer (RAFT) polymerization of acrylate monomers with different degrees of functionality. Monomers used for the study were 1, 6-Hexanediol Diacrylate (HDODA), Trimethylpropane Triacrylate (TMPTA), and Pentaerythritol Tetracrylate (PETA). X-band EPR spectra were obtained for approximately 0.2 g of samples in a 4 mm quartz tube heated at 50<sup>0</sup>C inside the cavity. The trapped radicals' signals were first observed after the samples were heated for 400-500 minutes. Radical density continued to increase for an additional 180 -190 minutes. EPR spectra of RAFT samples of TMPTA and PETA were compared with subsequent spectra produced by traditional free radical polymerization.

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