

Synthesis of Polymer Nanoparticles by Novel Mechanisms via Reversible Addition-Fragmentation Chain Transfer (RAFT) Polymerization

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RAFT polymerization as one of the controlled radical polymerizations has gained extensive attention due to its advantageous process in synthesizing well-controlled nano-structures of various polymers. Recently, we have proposed two novel mechanisms of RAFT polymerization applied to the synthesis of polymer nanoparticles using a functionalized RAFT agent. Throughout these methods, functionalized or stability-enhanced monodisperse PMMA or PS nanospheres were successfully obtained. In this presentation, these novel techniques for preparing such nanoparticles employing emulsion or miniemulsion polymerization will be introduced.