RESEARCH ABSTRACT FORM

TITLE: Preparation of 2-Ferrocenyl Thiol as a precursor to Fe-S monomers for Atom Transfer Radical Polymerization.

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The primary objective of this project was to prepare a ferrocenyl complex through a polymerization technique known as Atom Transfer Radical Polymerization. This technique is interest to many chemists because it is fast, simple and more economically feasible than any other polymerization technique today. Atom Transfer Radical Polymerization, which is most commonly, called its abbreviated name ATRP is reasonable for the making 50% of the commercial polymers used today.

The special feature of ATRP that other polymerization techniques lack is that it has the ability to terminate chemical reaction when the desired product is formed. Other polymerization techniques such as living Polymerization keeps the chemical reaction going continuously never ending to make one large compound.

In our experiment, our hope is to fabricate 2-Ferrocenylethyl thiol using a 1-pot synthesis. The 2-Ferrocenylethyl thiol is the precursor to monomer that we would use in ATRP. The targeted monomers are sulfur analogues of 2-Ferrocenylethyl Acrylate (FEA) and 2-Ferrocenylethyl Methacrylate (FEMA).