

Scott Flynn

Prof. Y. Li

Synthesis and Characterization of Novel Ethynyl-Substituted Thiophene Semiconducting Materials for Organic Solar Cells

Organic solar cells are a rapidly developing field, with several important advantages including flexibility, light weight, low cost, and easy processability. This project aims to develop novel ethynyl-substituted thiophene monomers, which will be used as the acceptor portion of the D-A donor polymer material in the solar cell active layer. The goal is to achieve a rigid triple bond side chain structure that will result in minimal twisting of the polymer backbone, while increasing the polarity of the polymer; thus, in theory, resulting in good performance.