McGill Chemical Society

Prof. David E Bergbreiter
Dept. of Chem, Texas A&M University

Polymer Solubility as a Tool for Chemistry

Wednesday May 2nd, 1:00pm
Otto Maass room 217

This seminar will discuss ways to study and use polymer solubility. For example, we have used the inverse temperature dependent solubility of many polymers (i.e. their LCST behavior) to advantage in the design of smart catalysts, in the design of soluble affinity resins and in synthesis. Such polymer solubility behavior also serves as a useful probe of the effects of aqueous solution components on biomacromolecule solubility and has afforded us new insights into venerable phenomena like the Hofmeister effect. Polymer solubility in one of two liquid phases has also proven to be especially useful in the design of new sorts of soluble recoverable catalysts where catalysis can occur in a miscible mixed solvent phase but where phase selective solubility of a polymer in a liquid/liquid biphasic mixture after a reaction leads to a simple method for catalyst recovery and separation.

Everyone is welcome