

Post Doctoral Opening—Synthesis and Characterization

There is an opening in Prof. Litt's group at Case Western Reserve University for a person to work on synthesis and characterization (structure/property relationships) of rigid-rod cationic polyelectrolyte polymers and copolymers. The research has concentrated on polymers containing p-biphenyl disulfonic acid and p-phenylene disulfonic acid units. The challenge is to develop water insoluble materials with good mechanical properties and stability in long term use while retaining the exceptional high conductivity at low RH of the water soluble materials. This requires some facility in organic synthesis (comonomers) and much experience with characterization techniques such as NMR, DMTA, TGA, conductivity measurements, x-ray analysis, etc. Each backbone organizes differently and properties are strongly correlated with morphology (nano-structure). Modeling experience, both with standard programs such as Origin, etc., and with Accelrys (for molecular structure) will be a large plus.

All the materials are new; there is almost no guidance from the literature. Any candidate must be able to think critically and outside the box to help solve the problems that we have now as well as those that will arise during his or her research.

CWRU is an equal opportunity employer and stipends are competitive.

For those interested, please contact:

Prof. Morton Litt
Case Western Reserve University
Macromolecular Science Department
10900 Euclid Ave.
Cleveland, OH 44106

Or at the e-mail address: mhl2@case.edu