

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Electrostatic Effect on the Solution Structure and Dynamics of PEDOT:PSS MICHAEL LEAF, MURUGAPPAN MUTHUKUMAR, Department of Polymer Science and Engineering, University of Massachusetts at Amherst, Amherst MA 01003 — Poly(3,4-ethylenedioxythiophene):poly(styrene sulfonic acid) (PEDOT:PSS) is a popular material used in organic electronic devices as a conductor. It consists of PEDOT polycations complexed with PSS polyanions which are initially suspended in aqueous solution and eventually cast into a film. Various annealing and doping methods dramatically enhance PEDOT:PSS film conductivity. To understand the physical interactions at play, we explore structural and dynamic aspects of PEDOT:PSS solutions through scattering and rheology techniques. We highlight several aspects of the phase behavior of PEDOT:PSS, and the significance of electrostatic interactions.

Michael Leaf

Department of Polymer Science and Engineering, University of Massachusetts at Amherst, Amherst MA 01003

Date submitted: 04 Nov 2015

Electronic form version 1.4