Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Characterization of iPP/CNT PCN through Transmission Ellipsometry[1] GEORGI GEORGIEV, Assumption College, YANIEL CABRERA, TUFTS University, MARK CRONIN, CHRISTOPHER ROCHELEAU, Assumption College, BRIAN FEINBERG, PEGGY CEBE, TUFTS University, ASSUMPTION COLLEGE COLLABORATION, TUFTS UNIVERSITY COLLABORATION — Microscopic Transmission Ellipsometry is a fast and efficient technique for studying anisotropic organization in polymers. Polymer Carbon Nanotube Composites (PCNs) are the largest commercial application of carbon nanotubes (CNT) in nanotechnology. Isotactic Polypropylene (iPP) is one of the best model systems to study in this field because iPP/CNT PCNs can form alpha, beta, and gamma crystallographic phases under a variety of crystallization conditions: nonisothermal and isothermal melt crystallization, shear, stress, fiber extrusion, etc. The morphological structure and the orientation of the crystals can also be finely controlled under those conditions. We complement Microscopic Transmission Ellipsometry studies with other techniques: Differential Scanning Calorimetry, X-ray scattering and dielectric spectroscopy.

[1]Research supported by: the National Science Foundation, Polymers Program of the Division of Material Research, grant (DMR-0602473) and NASA grant (NAG8-1167).

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Date submitted: 30 Nov 2007 Electronic form version 1.4