Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Unusual Spherulite Radial Growth Rate Kinetics of Poly(ethylene adipate): Observation of a Double Maximum in Growth Rate Curve KATHY SINGFIELD, ASHLEY ROWE, Saint Mary's University — Poly(ethylene adipate) (PEA) is an aliphatic polyester often blended in small amounts with aromatic polyesters in order to impart some of its biodegradability to the resultant blend. Hot-stage polarized-light microscopy and differential scanning calorimetry have been used to investigate the isothermal melt-crystallization kinetics and thermal behaviour of PEA. The unusual spherulite radial growth rate dependence on isothermal crystallization temperature exhibits two maxima. A change in spherulite morphology from banded to non-banded spherulites is associated with the phase behaviour anomaly. The results are interpreted in terms of traditional Hoffmann-Lauritzen growth kinetics.

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Date submitted: 21 Nov 2008 Electronic form version 1.4