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[Session A44: Friction, Adhesion, and Fracture of Polymers](#)

8:00 AM–11:00 AM, Monday, March 21, 2011

Room: A309

Sponsoring Unit: DPOLY

Chair: Al Crosby, University of Massachusetts--Amherst

Abstract ID: BAPS.2011.MAR.A44.13

Abstract: A44.00013 : Optical Properties of Isolated MEH-PPV polymers in Developing Crazes

10:24 AM–10:36 AM

[Preview Abstract](#)

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Potential applications in light emitting devices and solar cells have led to extensive research into optimizing the optical properties of Luminescent Conjugated Polymers. Straining MEH-PPV/polystyrene thin films has been observed to result in craze formation and an enhancement of photoluminescence (PL). Using confocal microscopy, the optical properties of these crazes were investigated. Emission from developed crazes was found to be highly polarized while a variety of effects were found for developing crazes. The survival time of polymers in the crazed regions was increased by over 30% relative to the bulk. This suggests a stretch induced alignment of emitting segments in MEH-PPV as well as an increased resistance to photobleaching.

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