

Abstract Submitted
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Analysis of the spincoating of thickness gradient polymer films

MONIKA MICHALEK, JOHN DUTCHER, University of Guelph — Thickness gradient polymer films can be prepared by dropping one drop of a polymer solution onto a spinning substrate at a position that is displaced from the axis of rotation, resulting in films in which the thickness increases with increasing radial distance. We have studied the spincoating of polystyrene thickness gradient films in two ways: (1) by fitting the measured radial thickness profiles of the dry films to a simple analytical model; and (2) by measuring the drying of the films during the spincoating process by monitoring the time dependence of the intensity of laser light reflected from the film. The results obtained for solutions of polystyrene dissolved in solvents of different volatility will be compared.

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