Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

An efficient pseudo-spectral algorithm for the RPA response of ordered phases of block copolymer melts AMIT RANJAN, DAVID MORSE, Department of Chemical Engineering and Materials Science, University of Minnesota — We present a pseudo-spectral algorithm for calculating the linear response of monomer concentration field in ordered phases of block copolymer melts to small perturbations of the monomer chemical potential fields. The method is both considerably simpler and more efficient than the fully spectral perturbation theory presented by Laradji, Shi and coworkers.[1] The method will be used to re-examine the stability of the gyroid phase in diblock copolymer melts.

[1] Laradji *et al.*, *Macromolecules*, **30**, 3242 (1997).

Amit Ranjan
Department of Chemical Engineering and Materials Science, University of Minnesota

Date submitted: 22 Nov 2005 Electronic form version 1.4