

Abstract Submitted  
for the MAR06 Meeting of  
The American Physical Society

**Dynamics of Block copolymer films**<sup>1</sup> HYUNJUNG KIM, Dept. of Physics and Interdisciplinary Program of Integrated Biotechnology, Sogang University, Korea, HEEJU LEE, YOUNG JOO LEE, Dept. of Physics, Sogang University, Korea, ZHANG JIANG, SUNIL SINHA, Dept. of Physics, UC San Diego and LANSCE, XUESONG JIAO, Northern Illinois University, ADRIAN RUEHM, Max Planck Institute for Metal Research, Germany, S. G. J. MOCHRIE, Yale Univ. — We have investigated the dynamics of thin block copolymer films of poly(styrene)-b-poly(dimethylsiloxane) using X-ray Photon Correlation Spectroscopy (XPCS). The films were supported on Si substrates and measured at melt. The results are compared with the theory of overdamped thermal capillary waves on thin films. The lateral length scales examined were between 600 and 6000 nm. We selectively measured the dynamics from the surface and from the micelles by changing incident angles and found the different behaviors between them.

<sup>1</sup>This research was supported by International Cooperation Research Program of Ministry of Science & Technology of Korea, Interdisciplinary Program of Integrated Biotechnology of Sogang University and NSF (DMR -0209542), U.S.A.

Hyunjung Kim  
Dept. of Physics and Interdisciplinary Program of Integrated Biotechnology, Sogang University, Korea

Date submitted: 06 Dec 2005

Electronic form version 1.4