

Abstract Submitted  
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**Tribological properties of adsorbed PEO nanolayers on planar solids**<sup>1</sup> WENDUO ZENG, NAISHENG JIANG, JAKE LINDBERG, MAYA K. ENDOH, TADANORI KOGA, State University of New York at Stony Brook — We report tribological properties of irreversibly adsorbed poly(ethylene-oxide) (PEO) nanolayers onto planar Si substrates. The adsorbed nanolayers ( $\sim 3$  nm in thickness) were derived from spin-cast polymer thin films ( $\sim 50$  nm in thickness) via thermal annealing and subsequent solvent leaching with water. We characterized the formation process of the adsorbed nanolayers and the detailed surface/film structures by using x-ray reflectivity, grazing incidence x-ray diffraction, and atomic force microscopy. In addition, the contact angle and adhesive property of the adsorbed layers were characterized. We will discuss the structure-property relationship of the adsorbed nanolayers.

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