Supporting Information

Exploring the Surface Sensitivity of ToF-SIMS by Measuring the Implantation Depths and Sampling Depths of Bi_n and C_{60} Ions in Organic Films

Shin Muramoto,^{1,3} Jeremy Brison,^{1,2} David G. Castner^{1-3, §}

National ESCA and Surface Analysis Center for Biomedical Problems¹ Departments of Bioengineering² and Chemical Engineering,³ University of Washington, Seattle, WA 98195

§ Corresponding author David G. Castner 1-206-543-8094 (phone) 1-206-543-3778 (fax) castner@nb.engr.washington.edu (e-mail)



Figure S-1. (a) An example of a C₆₀⁺ single-beam depth profile of an implanted tetraglyme film showing the signal intensities related to the tetraglyme film, implanted bismuth and silicon substrate. Bismuth intensity depth profiles obtained for Bi₁⁺, Bi₃⁺, Bi₃⁺⁺, and Bi₅⁺⁺ implanted (b) tetraglyme and (c) trehalose films. A guassian peak has been fit to each bismuth profile. The bismuth signals (offset) are normalized to the number of incident C₆₀ ions.



Figure S-2. The relative intensity of the secondary ion $C_4H_8N^+$ at m/z 70 versus tetraglyme overlayer thickness for Bi_1^+ (\blacklozenge) and Bi_3^+ (O) primary ions. The data points obtained using Bi_3^{++} , Bi_5^{++} , and C_{60}^{++} primary ions were not included for ease of viewing.