Supporting Information

ToF-SIMS Depth Profiling of Cells: Z-correction, 3D Imaging, and Sputter Rate of Individual NIH/3T3 Fibroblasts

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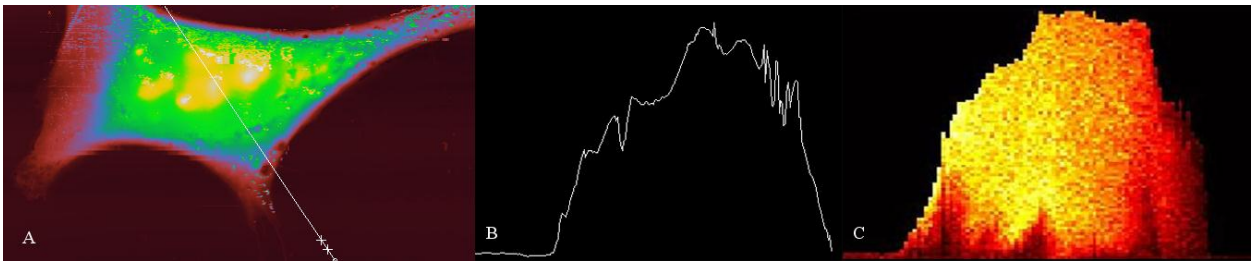

Figure S-1. A comparison of AFM topography and corrected ToF-SIMS data from a chemically fixed NIH/3T3 fibroblast. (A) An AFM topographic image of a formaldehyde-fixed NIH/3T3 fibroblast. Scale bar represents height. The image is 80 μm x 50 μm. The maximum height is 905 nm. (B) The AFM height profile across the line shown in A. The maximum height is 905 nm. (C) Corrected ToF-SIMS total ion intensity from the same slice represented in B.

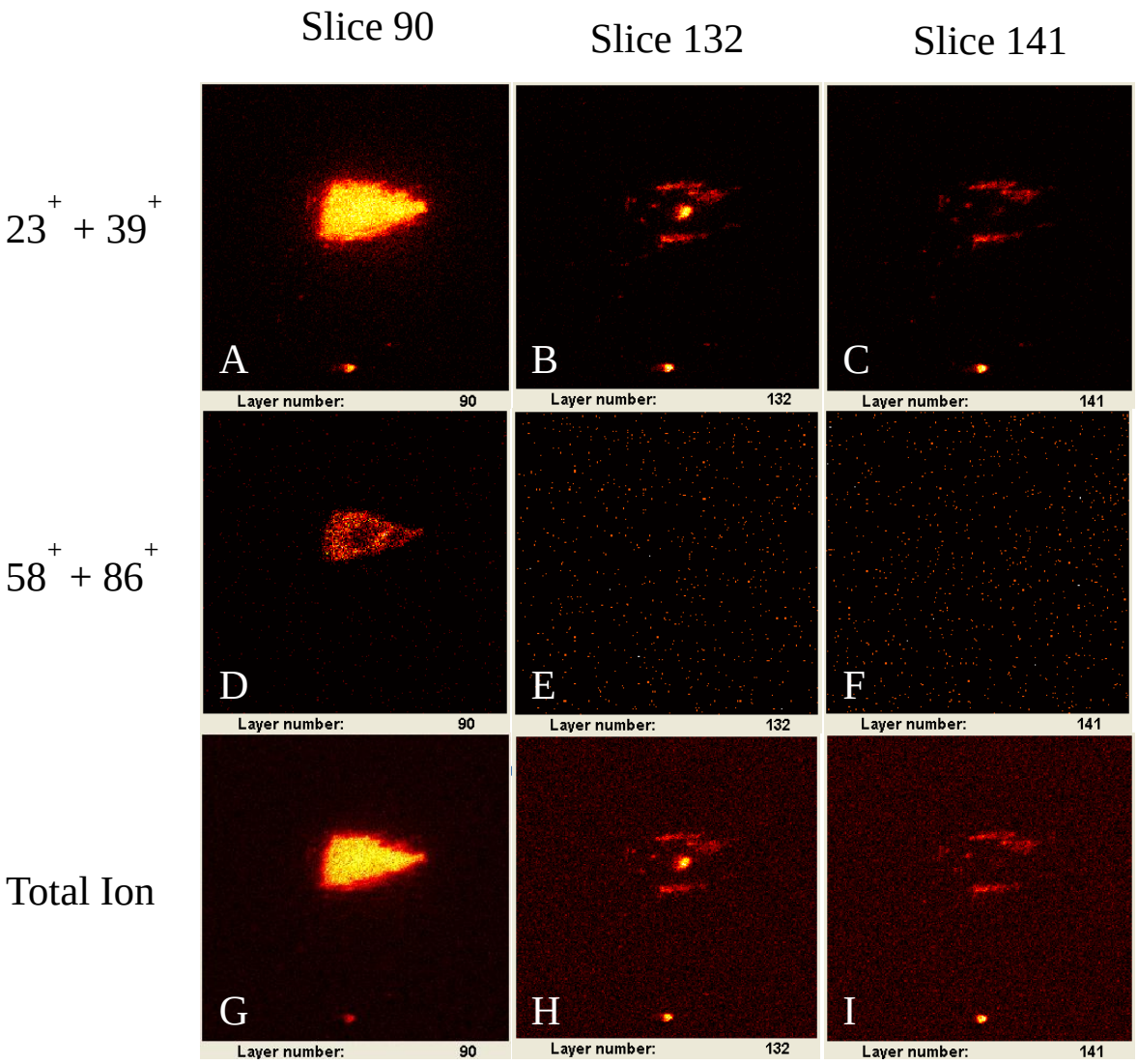

Figure S-2. (A-C) The sum of the salt peak intensities at m/z 23^{+} (Na) and 39^{+} (K) at slices 90, 132, and 141, respectively. (D-F) The sum of the lipid peak intensities at m/z 58^{+} and 86^{+} at slices 90, 132, and 141 respectively. (H-I) The total secondary ion intensity from slices 90, 132, and 141 respectively. The organic lipid peaks are not detectable at slice 132. All of the sputterable material is removed by slice 141. A salt residue still remains and is resistant to sputtering. These are raw, uncorrected 86x86 μm^{2} images containing 256x256 pixels.

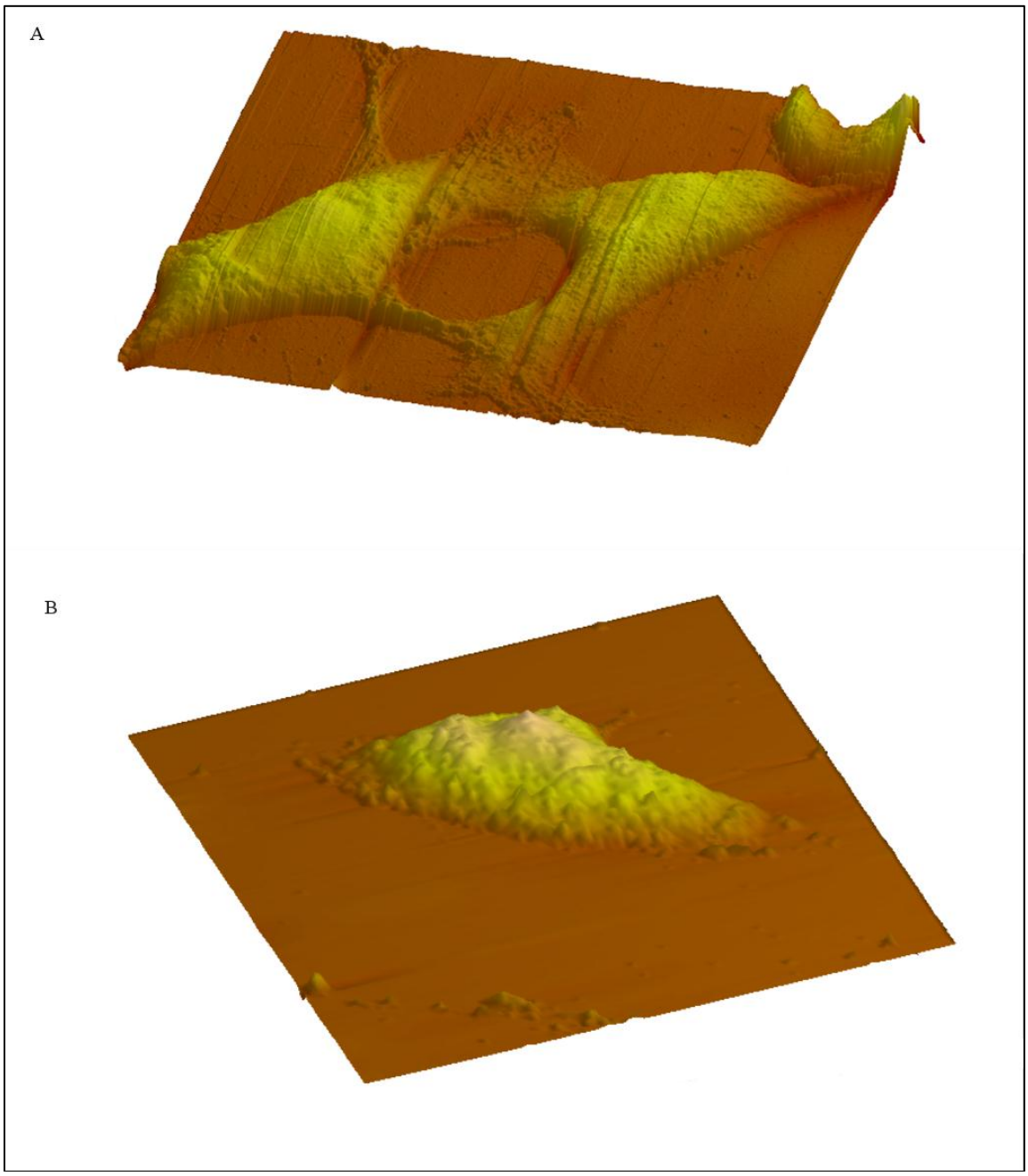

Figure S-3. AFM topographic images of cells that were (A) not sputtered with C_{60} and (B) sputtered with C_{60} for 400 seconds. Both images are 80 µm x 80 µm in size.