Electronic Supplementary Material (ESI) for Journal of Analytical Atomic Spectrometry. This journal is concerned on Chemistry 2019 for Secondary Ion Mass Spectrometer N. T. Kita, P. E. Sobol, J. R. Kern, N. E. Lord, and J. W. Valley Electronic Supplemental Information (ESI) -2

(a) 455 nm (b) 365 nm

Fig. S2. Images of resolution calibration targets using the new UV-light optics for different wavelengths of illumination sources. (a) 455 nm blue LED illumination. 2  $\mu$ m lines are resolved, but not 1.5  $\mu$ m lines. (b) 365 nm UV-light LED illumination. 1.5  $\mu$ m lines are resolved but not 1.0  $\mu$ m lines. These images were taken before front-face mirror was used.

UV light microscope: Improvements in optical imaging for Secondary Ion Mass Spectrometer N. T. Kita, P. E. Sobol, J. R. Kern, N. E. Lord, and J. W. Valley Electronic Supplemental Information (ESI) -2

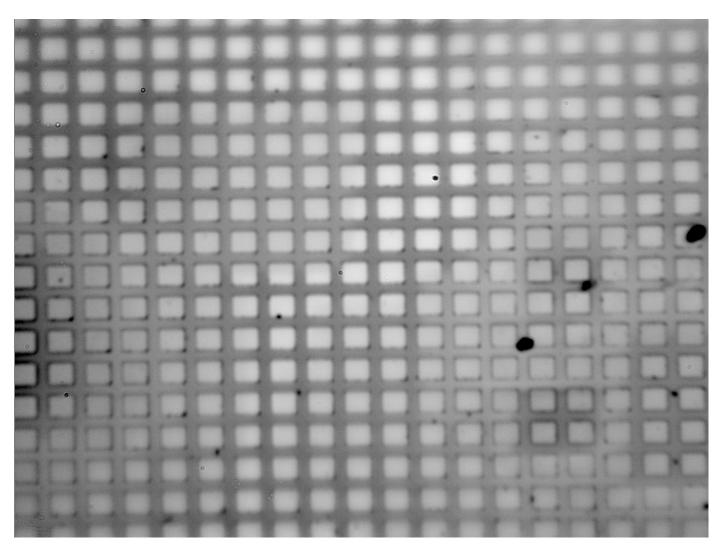


Fig. S3. Optical microscope image of  $25\mu$ m Si-grid using the new UV-light optics. The field of view is 450  $\mu$ m × 380  $\mu$ m using maximum zooming of the zoom lens. Grid lines are slightly defocused at the top and bottom of the image.