

## **Polycapillary X-Ray Optics with Optimized High Energy Performance for $\mu$ XRF Analysis**

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Polycapillary Optics have been successfully used for a broad range of industrial applications, among which  $\mu$ XRF analysis is one of the most popular. The accuracy of  $\mu$ XRF analysis is impacted by a factor referred to as a “halo effect.” This effect is due to high-energy radiation passing through the capillary walls at the output end, creating a high-energy halo around the focused spot. The high-energy halo radiation excites an area much larger than the focal spot of the optic and generates signals outside of the area of interest.

In this poster, we will highlight the experimental  $\mu$ XRF analysis using a high performance halo-reduction polycapillary optic. The benefit of the high performance halo-reduction polycapillary optic will be demonstrated by comparing  $\mu$ XRF data for different samples and under various power settings of the x-ray tube. Practical considerations to optimize the high energy performance of polycapillary optics will be discussed.