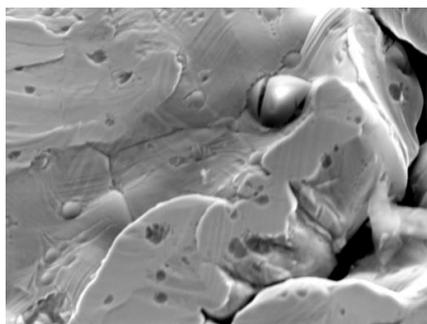
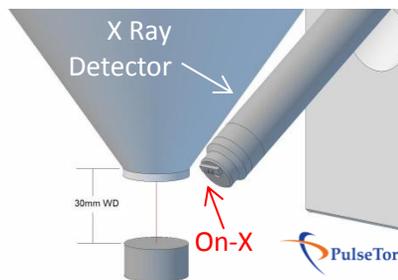


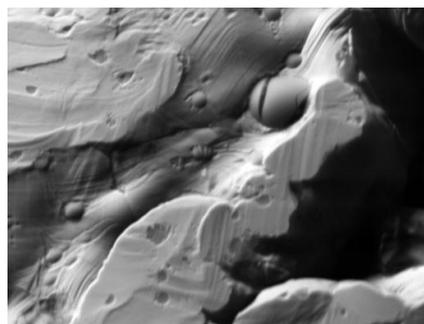
The «On-X» detector

Unique Electron Detector for SEM and Microprobes

The On-X detector is a miniaturized electron detector, based on Silicon PhotoMultiplier technology, to be placed on the top of the EDS X Ray Detector.

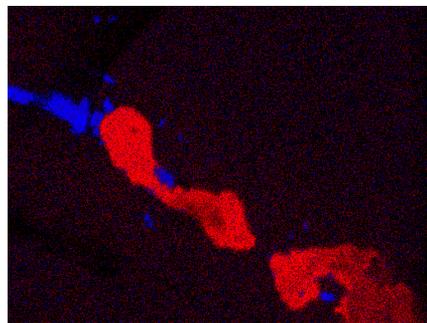


Sintered stainless. SED
20kV 150pA 1500X
original magnification

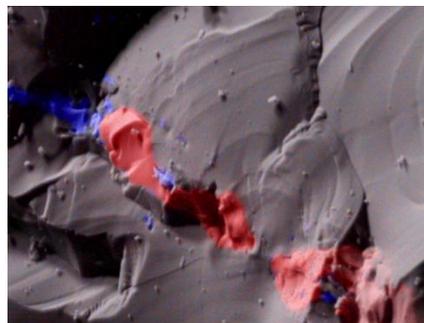


Sintered stainless. «On-X»
20kV 150pA 1500X
original magnification

It provides «take-off» images, that is an electron image from the same view direction of the X Ray image. Therefore the morphological and X Ray information are perfectly correlated.



Ferro Silicon
Cu (blue) and Cr (red)
maps (20kV 500pA 700X)



Ferro Silicon
Cu and Cr maps combined
with «On-X» image

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Application Note

The «On-X» detector

Unique Electron Detector

for SEM and Microprobes

The correlation between the TOA image and X-ray map, demonstrated in the following example, suggests that the On-X image can be used to help orient samples with macroscopic topography such that the SDD has a direct view of the region of interest.



BSED image obtained using a state-of-the-art annular 4-segment solid-state detector in which the segments are arranged under the pole piece of the SEM

The bright regions within the black rectangle of the BSED image are shown to be Mo-rich in the X-ray map. Based on this correlation, one would also expect that the circled region in the annular BSED image would similarly show high Mo content. It does not. The reason for the absence of this feature in the map is revealed in the On-X image which shows that the circled region is topographically shadowed from the X-ray detector.

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The figure shows X-ray map of a Mo-containing ferro-silicon material having a rough surface, similar to a fracture surface, mounted on a flat, untilted stub.

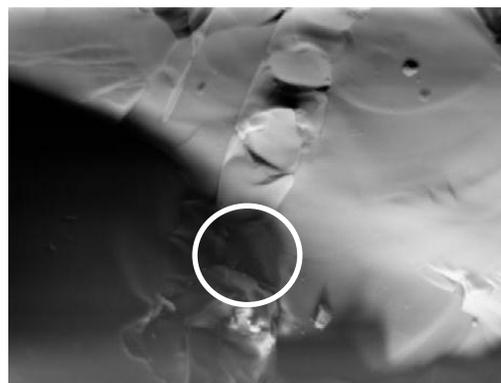


Image taken by means of the innovative On-X electron detector, mounted directly on top of the SDD X Ray detector.