

## Discover the New Reality for Your Analytical Electron Microscope

*Wednesday, May 20, 2015 4:15 PM (15 minutes)*

In this presentation, the latest 5-on-1 system for SEM will be introduced. The presentation will focus on the four channel SDD FlatQUAD EDS, XTrace micro-XRF and micro-CT systems, and briefly discuss on the new developments on EBSD and WDS.

Quantax FlatQUAD is the EDS microanalysis system based on the revolutionary XFlash® FlatQUAD. This special annular four-channel silicon drift detector is inserted between SEM pole piece and sample, achieving maximum solid angle ( $>1.1\text{sr}$ ) and take off angle ( $>60^\circ$ ), allowing maximum input count rates (ICR) (up to 4,000,000 cps) and output count rate (OCT) (up to 1,600,000 cps) for low KV (3kV) and probe current ( $<10\text{pA}$ ) EDS analysis.

XTrace is a micro-spot X-ray source for attachment to SEM with a free inclined port on the specimen chamber. It adds the capabilities of a complete micro-XRF spectrometer to the microscope. Limits of detection are improved 20 to 50 times in the mid to heavy element range. Additionally, up to 1cm information depth become accessible as X-rays have a higher penetration power than electrons. With ESPRIT analytical software suite, a combined micro-XRF and EDS quantification provides reliable light element results and pushes the limit of detection of medium to heavy elements down to 10 ppm, which offers the highest quality attainable by energy-dispersive analysis.

Micro-CT for SEM adds true 3D microscopy to your SEM with visualization as three orthogonal sections or as slice-by-slice movie. It extends the surface information gained with conventional SEM imaging by allowing a unique insight into a specimen's internal microstructure down to a size of 400nm non-destructively.

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