



NEW!



EDS

XFlash® 7200 FIRE

The Future of EDS Starts Here

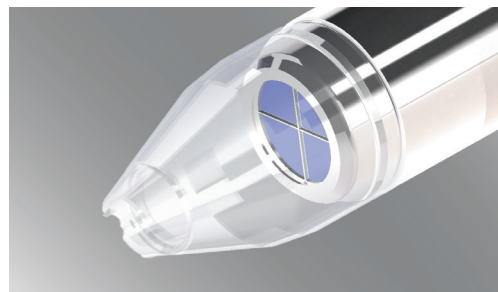
The XFlash® 7200 FIRE is a unique **F**our-segment **I**ntegrated detector for **R**apid **E**DS analysis and the fastest inclined EDS detector on the market. Through the integration of four individual SDDs into a single detector the throughput and energy-resolution limitations associated with conventional large-area single-segment detectors are overcome.

The XFlash® 7200 FIRE delivers outstanding count rates and energy resolution for high-speed accurate quantitative elemental analysis, making measurement times shorter than ever before. An active detector area of 200 mm² ensures the highest possible solid angles to maximize X-ray collection whilst additionally supporting parallel ultra-fast EBSD and micro-XRF on SEM analysis. The XFlash® 7200 FIRE enables elemental analysis across the full SEM voltage range, from ultra-low-voltage operation at 500 V to high-kV analysis at 30 kV.

As the flagship detector in Bruker's QUANTAX EDS portfolio, the XFlash® 7200 FIRE sets a new standard in SEM-based elemental analysis. Delivering exceptional speed at best energy resolution, the detector empowers users to generate superior analytical results from even the most challenging samples.

The Fastest Inclined EDS Detector Ever

- Featuring the largest SDD for EDS on SEM with four segments and a 200 mm² active area
- Achieves ultra-high spectral resolution down to 126 eV at Mn K α or better
- Delivers output count rates (OCR) of up to 2,400,000 cps
- Ensures ultra low dead times thanks to highly efficient parallel 4x signal processing
- Covers the full EDS energy range up to 30 keV
- Detects light elements with maximized low-energy X-ray efficiency



Innovation with Integrity

XFlash® on FIRE

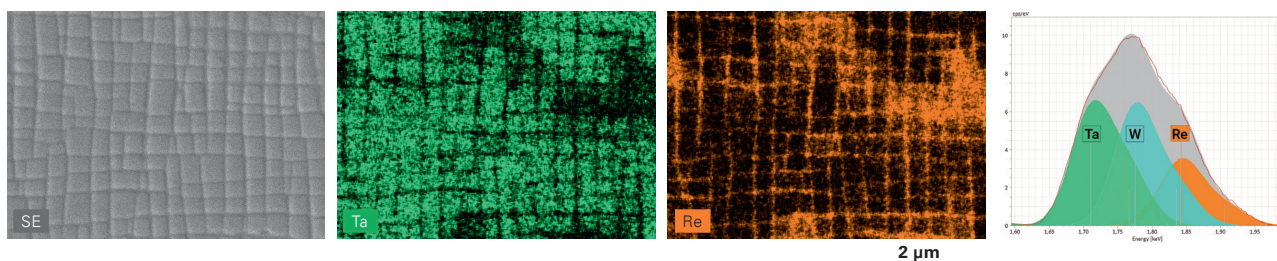
- Industry-leading X-ray collection efficiency
- Best accuracy at unprecedentedly short measurement times
- Nanometer-scale elemental mapping
- Ultra-fast parallel EDS and EBSD mapping
- STEM-in-SEM analysis with enhanced elemental sensitivity
- High analysis accuracy at reduced sample exposure (lower probe current)

Push the Limits of EDS Analysis

The XFlash® 7200 FIRE provides exceptional performance in EDS, from routine analysis to even the most challenging applications:

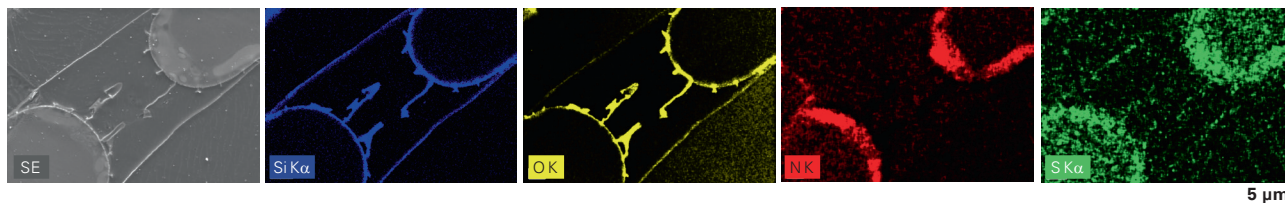
- Semiconductor and nanostructured materials with demanding peak overlaps
- Energy storage and conversion materials with light elements
- Biological and beam-sensitive samples containing light elements

Analysis of Nickel-Based Superalloys



EDS elemental maps acquired at 6 kV and 430 pA (10 min acquisition time, 40,100 cps output count rate, energy resolution < 126 eV at Mn K α) reveal the distribution of the principal alloying elements Ta (green) and Re (orange) within the γ and γ' phase of a nickel-based superalloy. Despite of their overlapping M1 lines, both elements are clearly resolved in only a few minutes thanks to the excellent energy resolution of the XFlash® 7200 FIRE.

Analysis of a Single-Celled Algae



EDS maps of the marine plankton *Stephanopyxis Turris*. This beam-sensitive sample was analyzed using the XFlash® 7200 FIRE at 5 kV and 2.1 nA (5 min acquisition time at 1024 x 768 px, 129,500 cps output count rate). Thanks to its outstanding sensitivity to light elements and the low-energy L, M, and N lines, the detector enables high-resolution mapping of elemental distribution (Si in blue, O in yellow, N in red, S in green) at a remarkable speed.

Electron Microscope Analyzers

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