CAMECA
SCIENCE & METROLOGY SOLUTIONS

SX Five FE

CAMECA EPMA Expertise, now with Field Emission Source.

SX Five FE for **quantitative microanalysis** and X-Ray imaging **at the highest possible spatial resolution**.

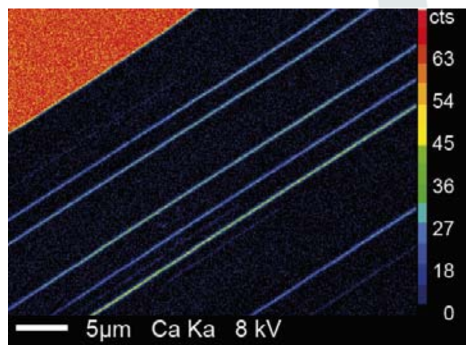
The **SX Five** is CAMECA's **fifth generation Electron Probe Microanalyser**, bringing together all the best features from the previous generation, plus reliability improvements from our automated EPMA for the semiconductor industry, control systems from our SIMS product line, a novel Field Emission source and redesigned electron column.

Our new EPMA platform is available is two configurations:

- **SXFive** with W and LaB_6 sources,
- **SXFiveFE** with FE source.

Resolution
Sensitivity
Quantification

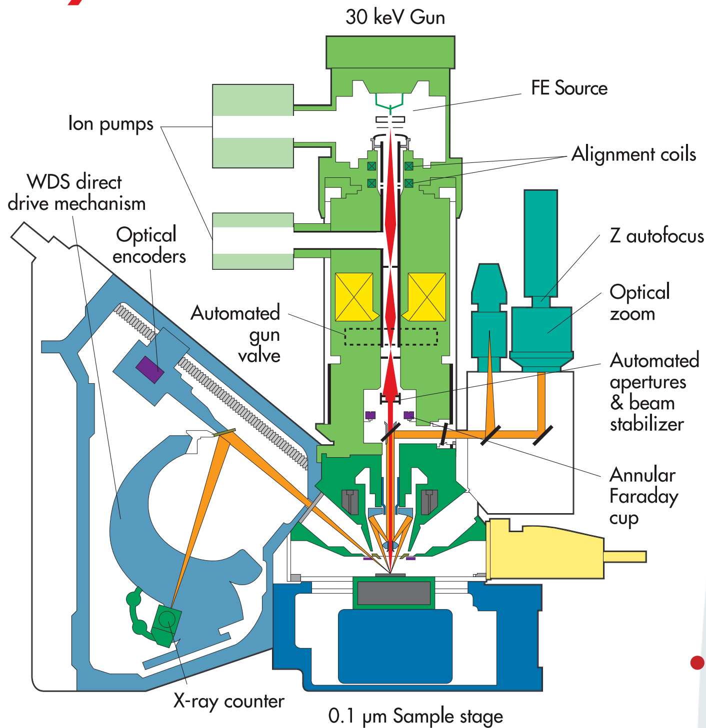
FE Source.
W & LaB_6 also available.



Clinopyroxene lamellae of **few hundreds of nanometers**.

Exsolution lamellae of clinopyroxene in orthopyroxene, both phases analyzed by **SXFiveFE with a fully focused spot**.

	Na_2O	MgO	SiO_2	Al_2O_3	CaO	FeO	MnO	Total
Cpx	0.42	16.84	52.32	1.57	25.53	3.44	0.17	100.31
Opx	0.02	30.96	54.68	1.13	0.71	11.74	0.47	99.71



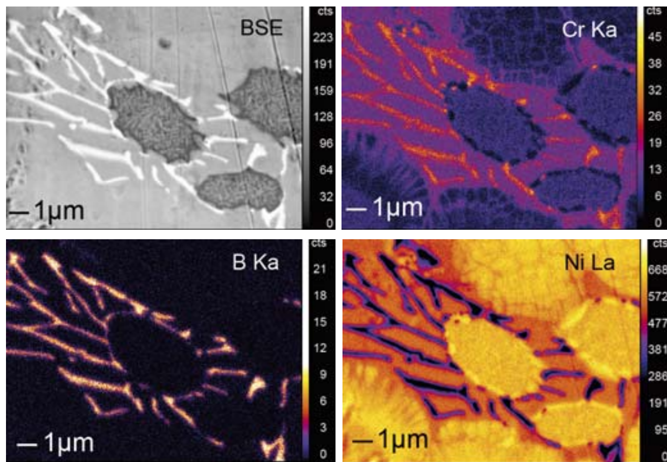
New features:

- **Field Emission source** and **electron optics**
- Optimized **vacuum system**
- Enhanced **automation**
- **Annular** Faraday Cup

The **SXFiveFE** integrates mature technologies from CAMECA's SIMS and other EPMA product lines, with the latest developments in general purpose EPMA.

The SXFiveFE provides:

- Quantitative analysis at **submicron scale**
- High quality **minor and trace element analysis**
- **Mapping** at high spatial resolution
- Highest precision spectrometers for **greatest reproducibility**
- Full automation for long-term **unattended analysis**



Light element analysis and mapping at high spatial resolution

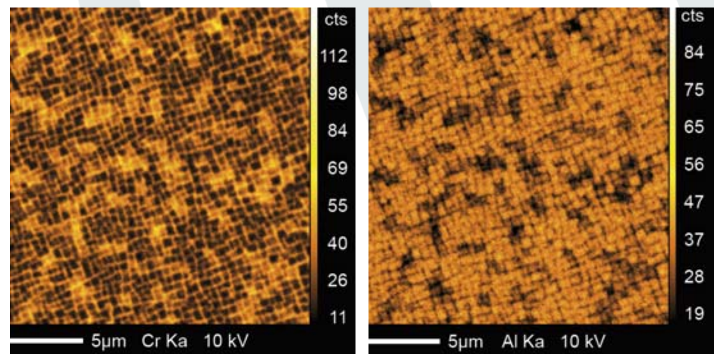
Interdiffusion of elements during the heat release between a nickel-based braze and a substrate of nickel-based superalloy.

Sample courtesy of C. Pascal, R.M. Marin-Ayral, J.C. Tédenac, C. Merlet. Materials Science and Engineering A. Volume 341, Issues 1-2, p. 144-151.

X-Ray imaging at sub-micron scale

Cr and Al distribution among gamma-gamma' phases in Ni-based superalloy.

Sample courtesy of Dr.-Ing. I. Lopez-Galilea, Lehrstuhl Werkstofftechnik, Ruhr-Universität Bochum.



SXFive - 0511. Noncontractual document. CAMECA reserves the right to alter the specifications of its products without notice.

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