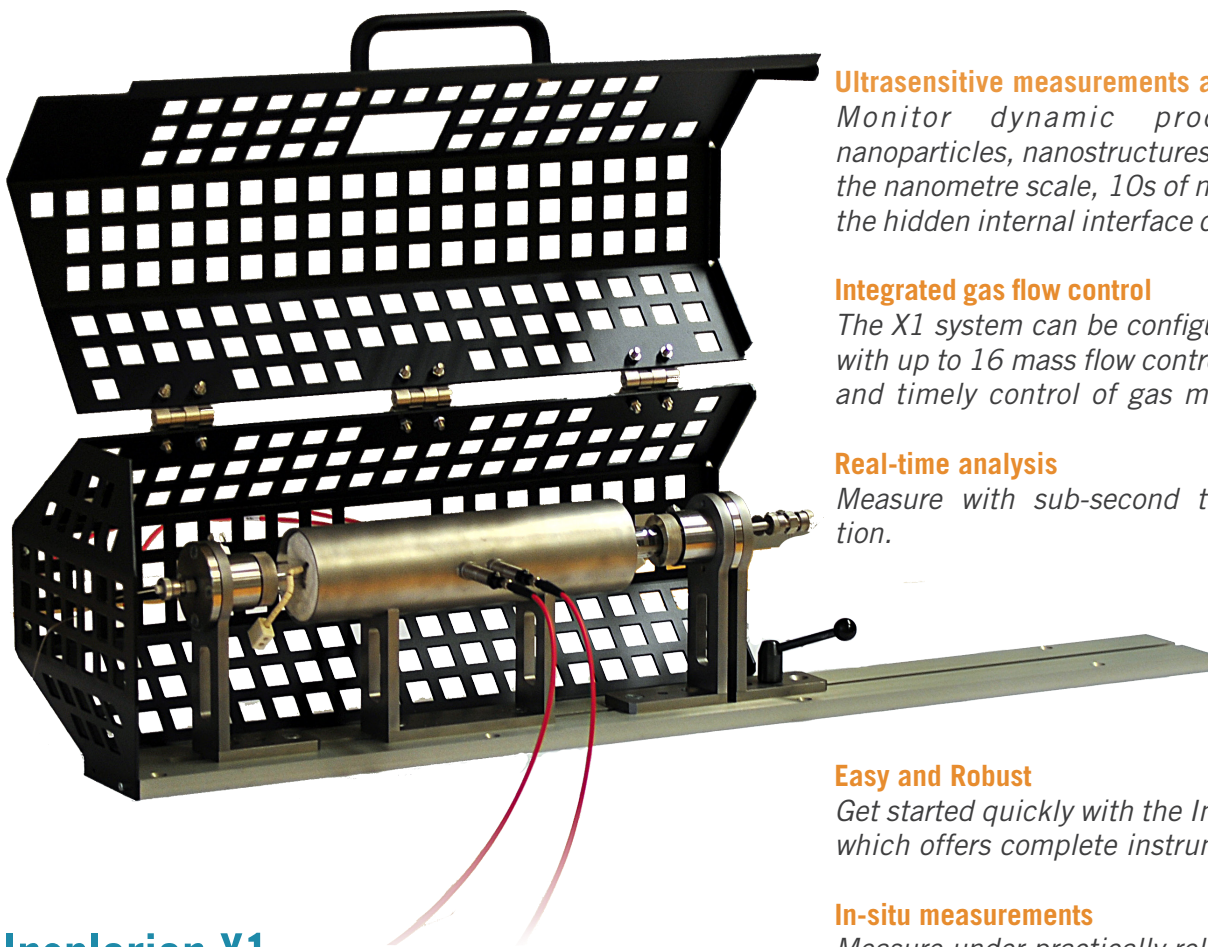




Insplorion

Insplorion X1

Product Information



Insplorion X1

The X1 system offers controlled flow of unique and multi-gas mixtures, while performing measurements at up to 600°C.

Each system is custom built to your specifications, giving you maximum freedom in your experimental set-up.

Ultrasensitive measurements at the nano-scale

Monitor dynamic processes in/on nanoparticles, nanostructures, or thin films, at the nanometre scale, 10s of nanometres, or at the hidden internal interface of thick coatings.

Integrated gas flow control

The X1 system can be configured to interface with up to 16 mass flow controllers for precise and timely control of gas mixture and flow.

Real-time analysis

Measure with sub-second temporal resolution.

Easy and Robust

Get started quickly with the Insplorer software which offers complete instrument control.

In-situ measurements

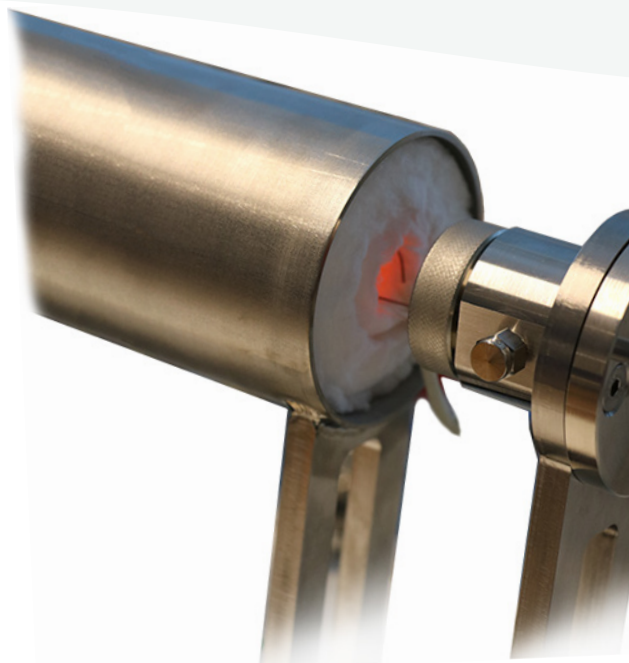
Measure under practically relevant conditions at temperatures up to 600°C.

Dual sample system

Measure simultaneously on up to two samples.

Insplorion

Sahlgrenska Science Park
Medicinaregatan 8A
413 90 Göteborg
Sweden
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Insplorion Sensors, suitable for use with the X1 and XNano instruments.

Specifications

Measurement cell

Sensor Chip Position	Single or Dual Channel
Connections	Inlet 1/8 inch, Outlet 1/4 inch
Mass Flow Regulation*	Up to 16 Mass Flow Controllers can be connected
Materials	Quartz, Stainless Steel
Temperature Range	Room Temperature up to 600°C

* Not included, The Insplorer Software is compatible with Mass Flow Controllers from Bronkhorst.

Sensors

Size	9.5 x 9.5 mm, 1 mm thick
Substrate	Fused Silica
Surface	Nanostructured gold
Standard coatings*	Au, SiO ₂ , Al ₂ O ₃ , TiO ₂

* Sensors can be ordered with custom thin film coatings.

Measurement characteristics

Light source*	Tungsten-Halogen lamp, minimum lifetime 2000 hours
Measured spot diameter	2 mm
Time resolution**	Up to 10 sample points per second
Typical noise	<0.01 nm in wavelength
Wavelength range***	450-1000 nm

* Custom choices and replacements are available, ** At a sample rate of 1 Hz. *** Custom wavelength ranges are available. ***

Dimensions (Width x Depth x Height)

High Temperature Reactor incl. safety guard	28x28x100 cm
Insplorion optics unit	25x27x9 cm
Temperature control unit (2 parts)	25x27x9 cm and 22x40x9 cm

Software

Compatible software	Insplorer
Operating system	Microsoft Windows compatible
Output data format	ASCII compatible for straightforward use with any graph drawing software
Analysed parameters	Multiparameter readout (e.g. resonance wavelength and extinction at the LSPR peak)

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