

MidiSIMS ToF-HR

High flexibility, high throughput

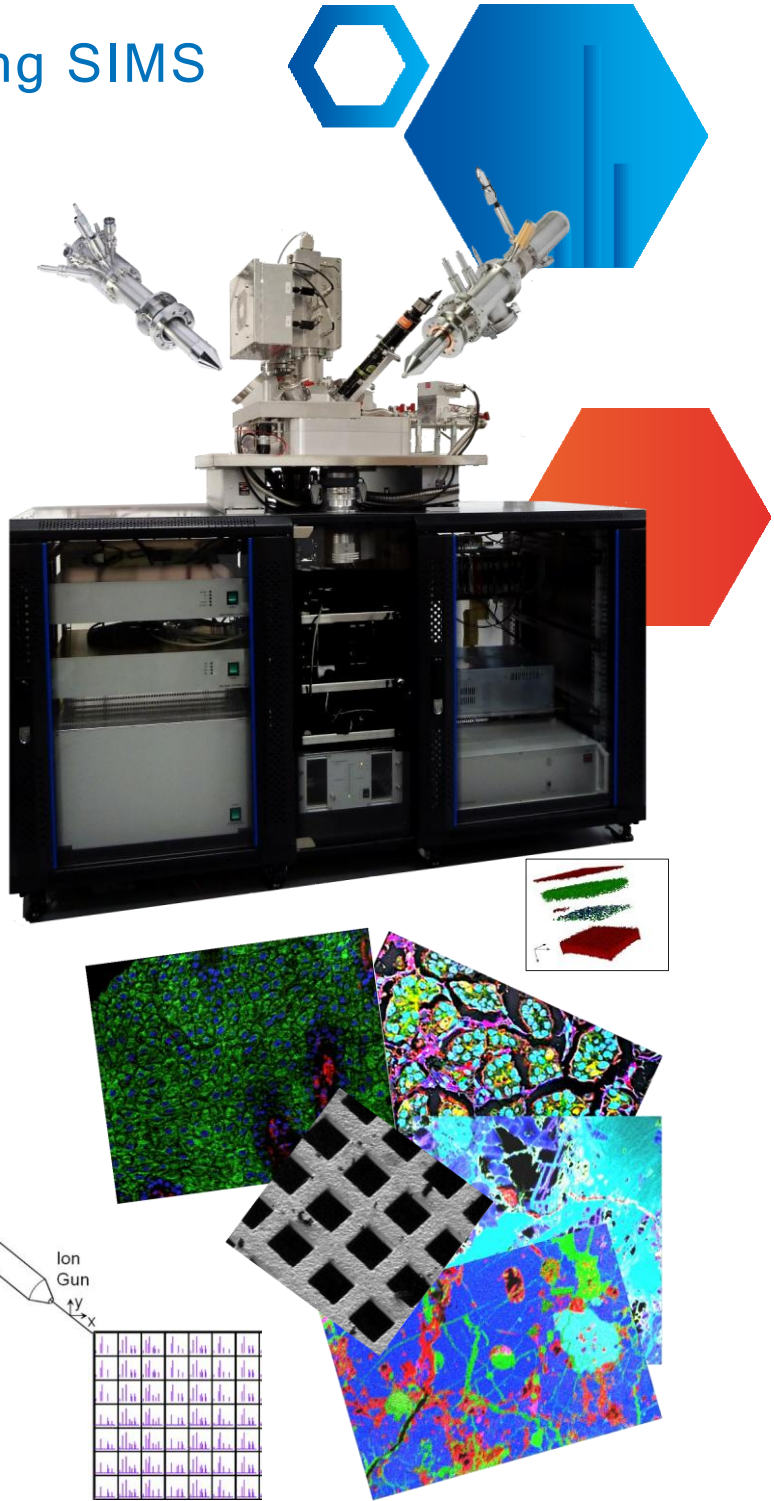
High resolution imaging SIMS

- Orthogonal Reflectron ToF
- High Duty Cycle Operation
- Interchangeable Primary Ion Guns
- HV Vacuum System, Fast Pump Down
- High Sample Throughput
- Continuous PI beam Operation
- Fast Data Acquisition
- Cost Effective and User Friendly
- Suited to Multiplexed Ion Beam Imaging
- Active Anti-vibration Platform
- High Spatial Resolution SIMS Imaging
- Live Optical Sample Imaging
- Optional Energy Filtering, SED, e-Beam

With its stable, vibration isolated vacuum chamber equipped with twin opposing 114mm OD gun ports, the SAI MidiSIMS can accept a range of high resolution primary ion guns (LMIS, C60, GCIB, DUOplasmatron) to cover a huge range of application areas. In addition the orthogonal reflectron ToF mass analyser allows these guns to run in continuous beam mode maximizing their imaging performance and running with a high duty cycle allows for very fast data acquisition. This combined with an HV based system design for fast sample pump down times provides the user with the ultimate in sample throughput.

Why SIMS ?

Unlike many spatially resolved elemental techniques (acquiring information only from individual atoms), SIMS is not restricted to inorganic analysis and is equally capable of mapping distributions of complex organic species too. The sampling depth of SIMS is also significantly less than most other surface techniques which, combined with superior sensitivity, provides the analyst with much more detailed (3D) information from surfaces, thin layers and interfaces in a wider range of materials and at a relatively high speed.



MidiSIMS ToF-HR



Specifications

Specification	Performance
Mass Resolution	> 1600 m/Δm (Δm=FWHM) @ 27m/z
Mass Range	+/- 5000 m/z max (Dependent on ToF cycle frequency)
Mass Accuracy	< 50 ppm with internal calibration
Imaging LMIS PI Beam size [FOV]	<100nm : (Ga, Au), other gun options:Duo, C60, GCIB 2 gun ports available. [range of FOV circa 1mm x1mm]
Sensitivity	>1x10 ⁶ cps/nA (98Mo + 98MoO) [@ 100pA sample current with O ₂ ⁺ Duoplasmatron primary ion gun]
Base vacuum, [time to operation from sample exchange]	<1x10 ⁻⁶ mbar base [pump down < 10 minutes, dry N ₂]
Dimensions with Au gun, [Weight]	149x82x170 (WxDxH cm) [approx. 300 kg] (figures exclude computer)
Power (quiescent)	<1.5 kVA (including computer), single phase 50,60Hz
Motorized (X,Y,Z) Sample Stage	Max sample dimensions : 100mm (X,Y), 20mm (Z)
Data System	PC, Windows®, Dual Monitors
<i>Optional equipment</i>	
Static SIMS Library, e ⁻ gun, SED, optical imaging, SI energy filter	On request

Product Note

P 202

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RELATED PRODUCTS

MiniSIMS- alpha P200
MiniSIMS- ToF P201



EXAMPLE APPLICATIONS

- SURFACE COATINGS
- ELECTRONIC COMPONENTS
- SENSORS
- TRIBOLOGY
- CATALYSIS
- BIOLOGICAL IMAGING [MIBI]
- THIN FILMS
- BIOMATERIALS
- CORROSION
- CONTAMINATION STUDIES
- STORAGE DEVICES



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