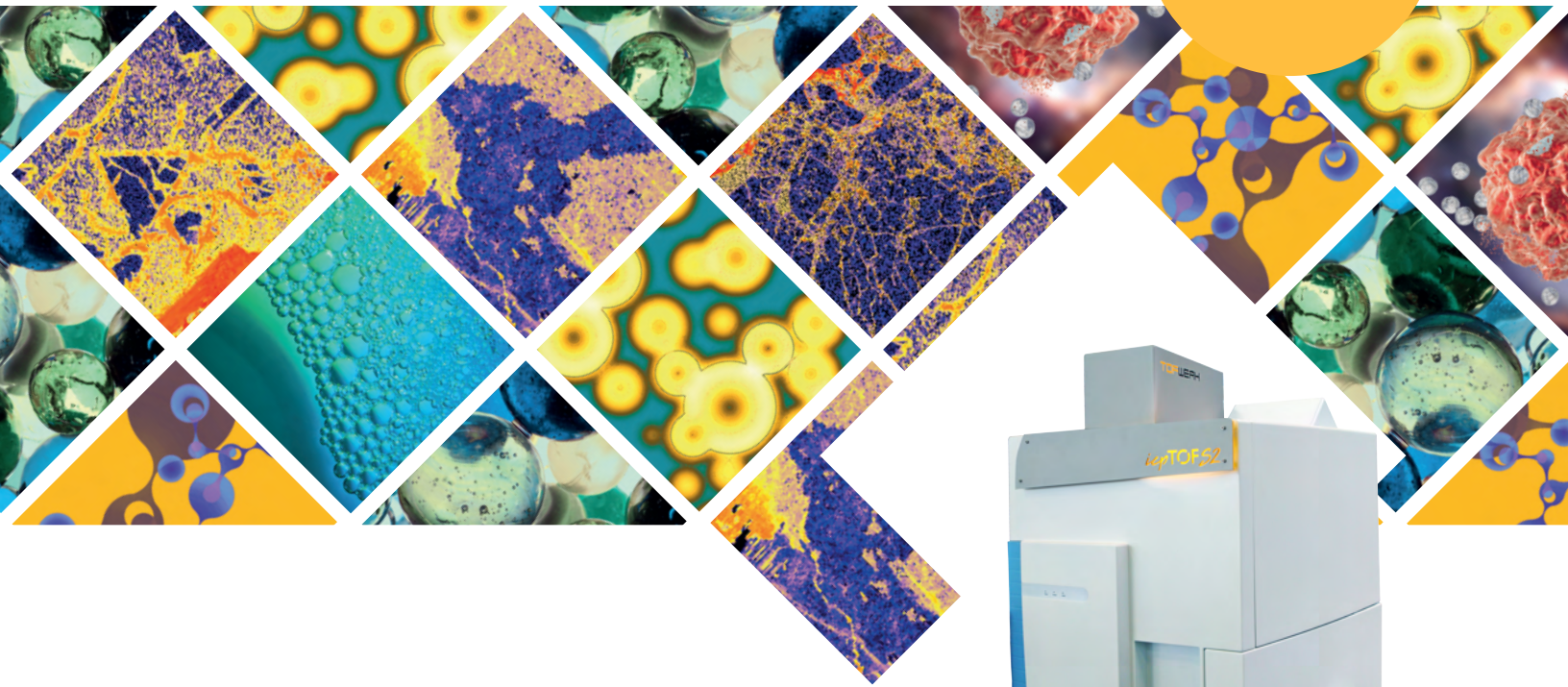


*icp*TOF



icpTOF

All-element, high-resolution detection for single particles, individual cells, and laser ablation imaging

TOPWERK

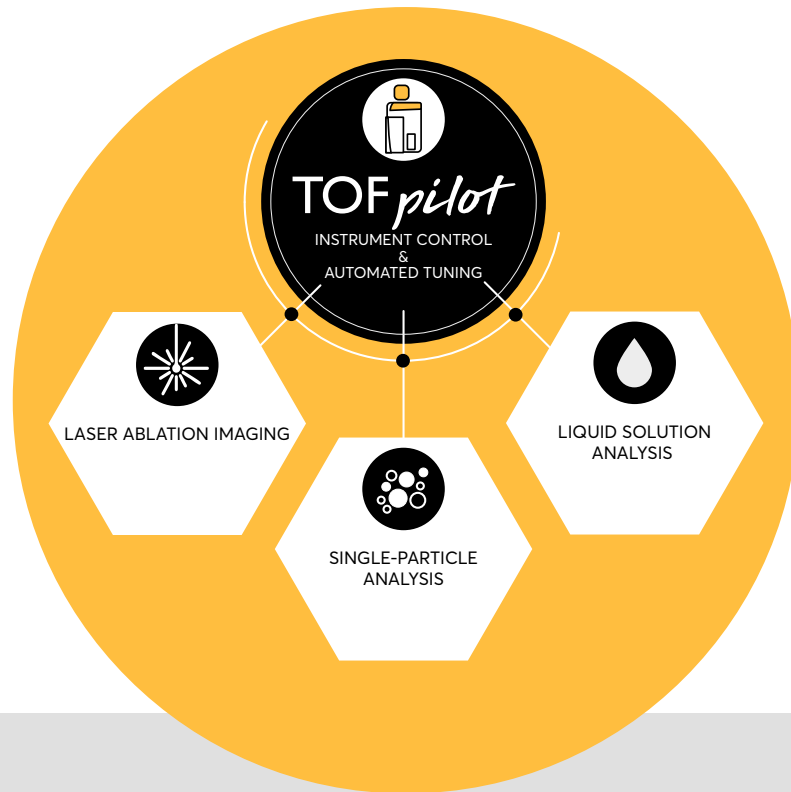


All the elements.
All the time.

An inductively coupled plasma mass spectrometer (ICP-MS) that simultaneously measures all isotopes at unprecedented speed.

TOFpilot : Instrument Control and Automated Tuning

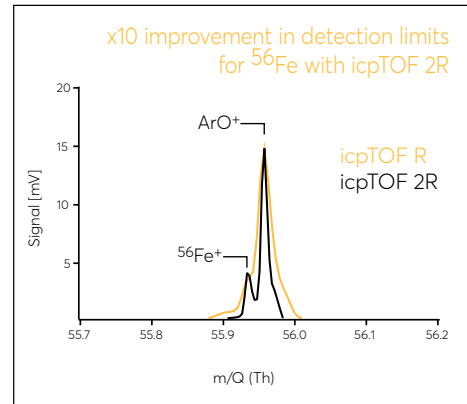
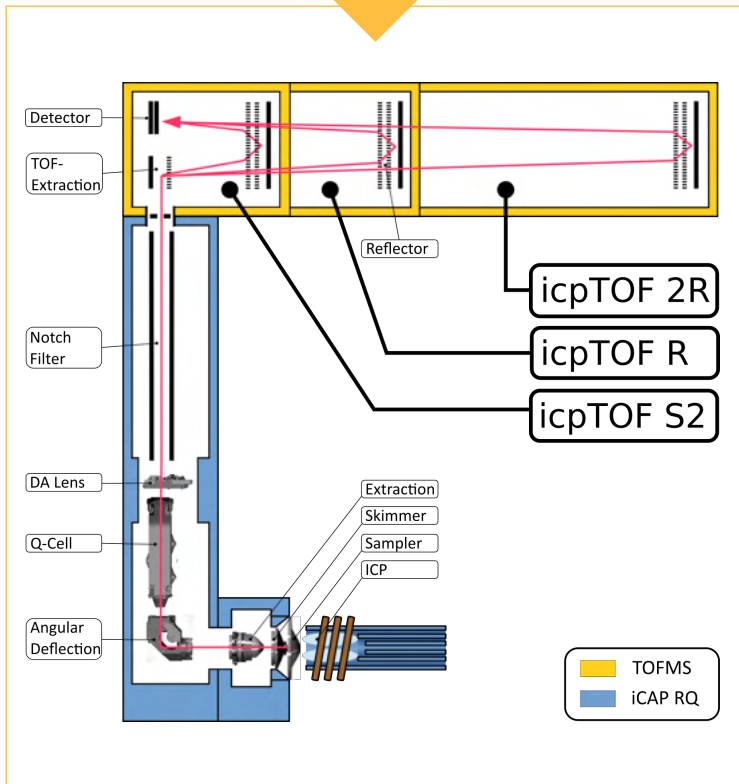
TOFpilot software greatly simplifies the workflow for the user by integrating control of the icpTOF with different sample introduction systems. Integrated workflows support the efficient analysis of liquids, particles, cells, and solids. Interfaces to external software facilitate the control of complex workflows with different hardware components such as liquid autosampler and laser ablation systems.



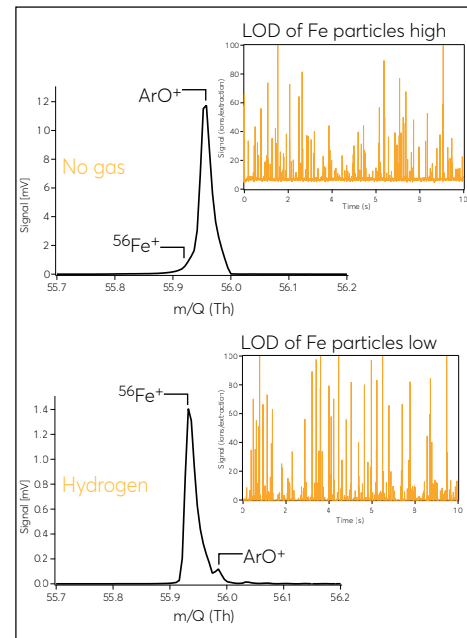
Related Applications

High-speed mass spectral acquisition and simultaneous, all-element analysis are inherent performance features of all TOFWERK TOFs, making the icpTOF product line the ideal ICP-MS detector for multi-element single-particle/cell analysis or laser ablation imaging.

- All the elements. All the time. The icpTOF always records complete mass spectra, so you never miss an analyte or interference signal.
- High mass resolution. The icpTOF 2R has a mass resolving power of 6000 allowing you to separate interfering ions.
- Precise isotope ratios. The icpTOF simultaneously measures all isotopes, thus eliminating the susceptibility of your measurements to source and sample fluctuations. Precision approaches statistical limits.
- High speed detection. The icpTOF records a complete mass spectrum every 12-50 μs making it the optimum detector for fast transient signals such as individual nanoparticles, fluid inclusions and laser ablation pixels.
- Maximum sensitivity. The icpTOF S2 has maximum sensitivity to increase image resolution and detect smaller particles with high SNR.



The moderate and high mass resolving power of the icpTOF R and icpTOF 2R separates interferences



QCell™ Collision/Reaction Technology suppresses interferences

icpTOF

Specifications

	Sensitivity in liquid ⁵⁹ Co (cps/ppb)	Sensitivity in liquid ¹¹⁵ In (cps/ppb)	Sensitivity in liquid ²³⁸ U (cps/ppb)	Maximum Time Resolution (ms)	Mass Res Power ²³⁸ U (Th/Th)
icpTOF S2 (He CCT)	25000	80000	300000	0.012	>900
icpTOF R	10000	20000	50000	0.030	>3000
icpTOF 2R	5000	15000	30000	0.046	>6000

All models

- 6 orders of magnitude linear dynamic signal range for reliable and accurate ratios and quantitative results
- MCP Detector for robust and reliable performance
- Notch filter for attenuation and removal of intense matrix and sample ions
- Built on reliable iCAP RQ platform (Thermo Scientific)
- Bench top design
- Simple access to interface cones and extraction lenses through drop down door
- Collision/Reaction Cell (CCT) for interference control and optimizing mass resolving power and sensitivity
- 2 MFC's to control CCT gases
- 3 MFC's to control plasma gases
- 2 MFC's to control additional gases

Software

TOFpilot software to control instrument and experiments. Integrated workflows support efficient experimental work on liquids, particles, cells and laser ablation imaging.

Quantistar (optional)

Microdroplet based hardware for simple, reliable, and matrix-independent quantification of all elements in single particles and cells.



Download complete icpTOF specifications table



TOFWERK

icp.info@tofwerk.com
tofwerk.com