icpTOF

All the time. All the elements.

Single Particle ICP-MS

Multi-Element
All-Element, High Resolution Detection

**icpTOF 2R vs. icpTOF**
- 2x Flight Distance
- 2x Mass Resolving Power (>6000)
- Same Sensitivity

**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 new 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 30 μs making it the optimum detector for fast transient signals such as individual nanoparticles, fluid inclusions and laser ablation pixels.
Multi-Element Single Particle ICP-MS

Distinguish engineered nanoparticles from natural particles based on their element composition.

Collaborators: A. Gondikas, F. von der Kammer, Department of Environmental Geosciences, University of Vienna
Fast, All-Element Detection

Detection of single micro droplets
- 500 ppb multi-element solution
- 40 μm droplets
- <1 ms signal per droplet

Collaborator: ETH Zürich

Collaborator: Laboratory of Inorganic Chemistry, ETH Zürich
The high mass resolving power of the icpTOF separates interferences.

QCell™ Collision/Reaction Technology suppresses interferences.

Iron signal, 10ppb Fe, 700 kcps

Iron solution: 1 ppb, Q-cell: NO gas

Iron solution: 1 ppb, Q-cell: H₂