



Process Gas Analyzer

Sensitive, real-time monitoring for end-point detection, plasma diagnostics, and process improvements



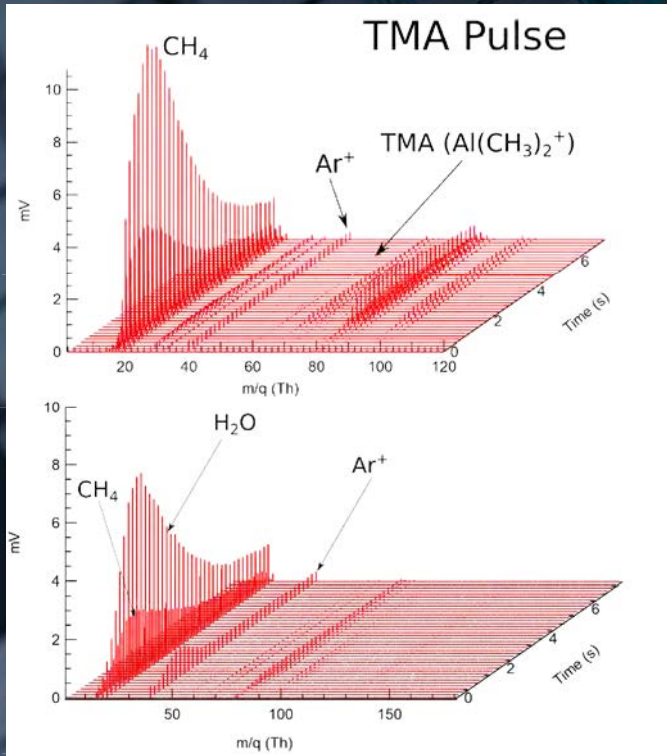
Features

- Fast and sensitive monitoring of species in semiconductor processes (e.g., etch, ALD)
- Resistant to harsh environments
- Custom configurations
- Compact architecture: easy to move and install
- Software API for integration into larger systems

Applications

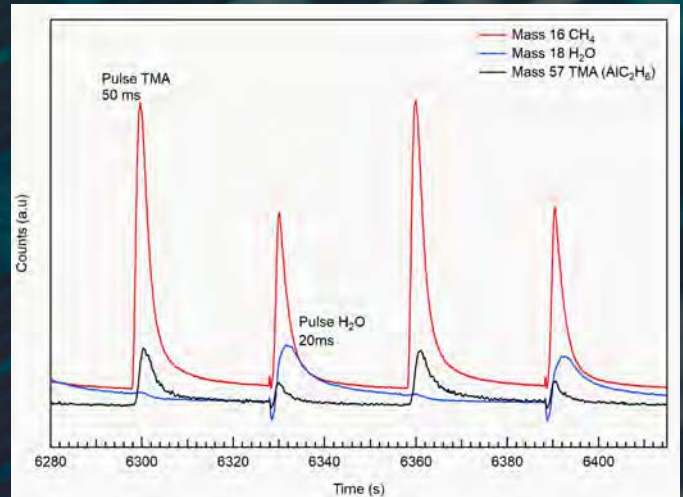
- Real-time monitoring and diagnostics of semiconductor manufacturing processes
- Screening of etching processes

Atomic Layer Deposition of Al₂O₃ with TMA and H₂O*



Evolution of MS spectra during TMA and H₂O pulses

*ALD equipment provided by EMPA / Swiss Cluster



Time evolution of relevant species

- Real-time, simultaneous detection of all relevant compounds
- Continuous monitoring of the evolution of by-products and precursors in every deposition cycle
- Ar²⁺ ions (carrier gas) are suppressed with the use of a notch filter

Specifications

	Corrosive Resistant	Operate in Any Position	Resolving Power (M/dM)	Size (cm)	Mass (kg)
pga TOF R	no*	yes	4000	90 x 40 x 53	85
pgaTOF 2R	yes	yes	8000	148 x 48 x 62	160
pga TOF S2	yes	yes	800	112 x 47 x 47	93

*corrosive resistant version readily available