



## AMD Technological History in Mass Spectrometry of Molecule Analysis

- > 1982 - 1989  
Development of add-on modules for mass spectrometric applications
- > 1990 - 2001  
Introduction of high resolution Magnetic Sectorfield Mass Spectrometers in open classical design
- > 2002  
A new, innovative und compact high performance Sectorfield MS System AMD QuAS<sup>3</sup>AR
- > 2006  
A new high resolution instrument for process control and specific isotope ratio analyses: AMD 202-D
- > 2012  
Miniaturized AMD QuAS<sup>3</sup>AR API-MS evaluation model

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## AMD Technologies and Methods

### **Ionization Techniques:**

- EI, CI, DCI, FD/FI, ESI/APCI, FAB

### **Hyphenated Techniques:**

- GC-MS
- LC-MS

### **Perspective Applications**

- Process Gas Analysis
- Ambient Air Analysis
- Elemental Analysis

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## High Resolution Mass Spectrometer in classical design

AMD 402/403S Series

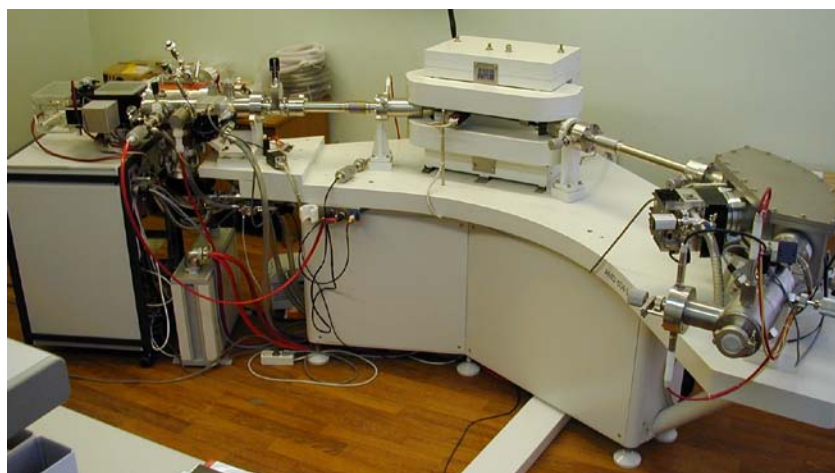


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## High Resolution Mass Spectrometer in classical design (high mass version)

AMD 604 S



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## System for Cluster Ion Deposition in Nano Technological Applications



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## System for fully automated DEI/DCI analyses



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## AMD M-40 GC-MS System

- **Floating** double-focusing analyzer system in bench top design

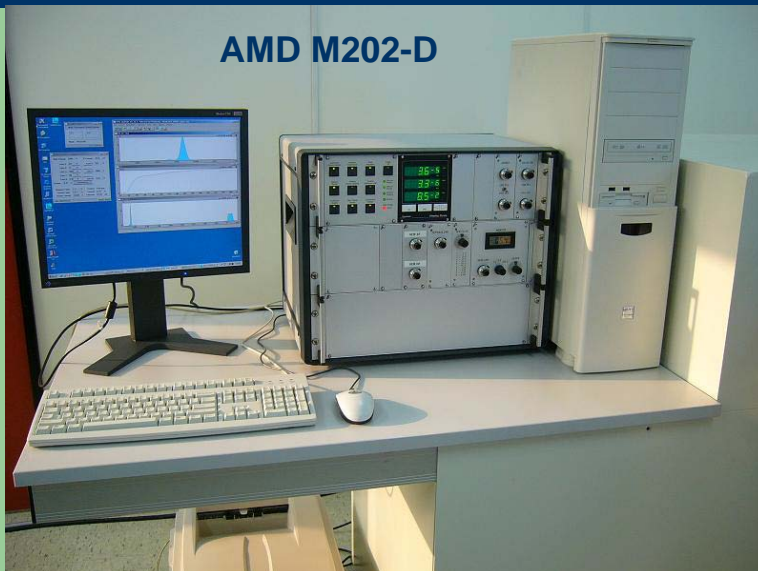


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## Compact High Resolution MS for demanding Process Analysis

### AMD M202-D



- Determination of heavy water in light water cooling system of nuclear power stations
- Precise Determination of Isotope Ratios of H<sub>2</sub> and HD
- General Process-gas analyses

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## The innovative High Performance and Multi Application Mass Spectrometer in compact design

AMD QuAS<sup>3</sup>AR

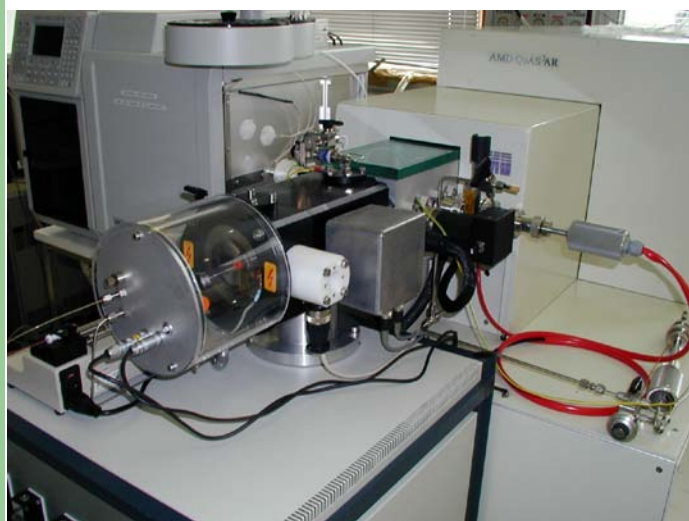


- Characterization,
  - Identification,
  - Quantification
- of substances at very low concentrations
- A wide range universal or specific analytical tool
- A unique system

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## AMD QuAS<sup>3</sup>AR with Combined Chromatography



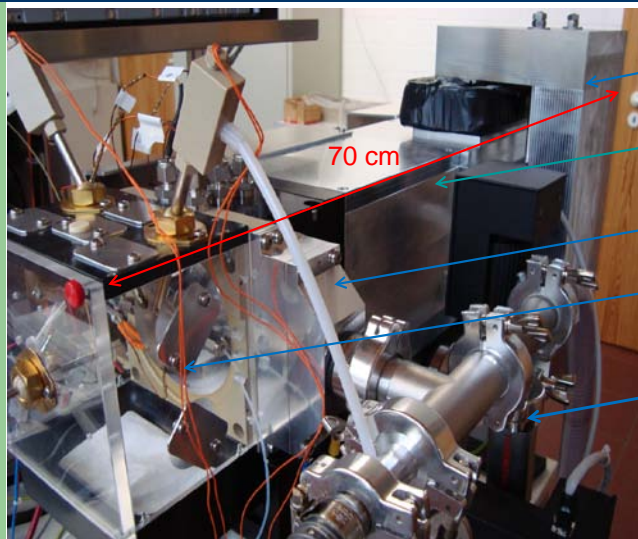
### GC/LC/MS

- Switch between GC/MS und LC/MS Analytics **without any system modification**
- Wide application range at high efficiency
- Cost saving due to only one MS required for two chromatographic methods

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## AMD Mini QuAS<sup>3</sup>AR API-MS (Evaluation Model)



Magnetic Analyzer

Electric Sector Analyzer

API Interface

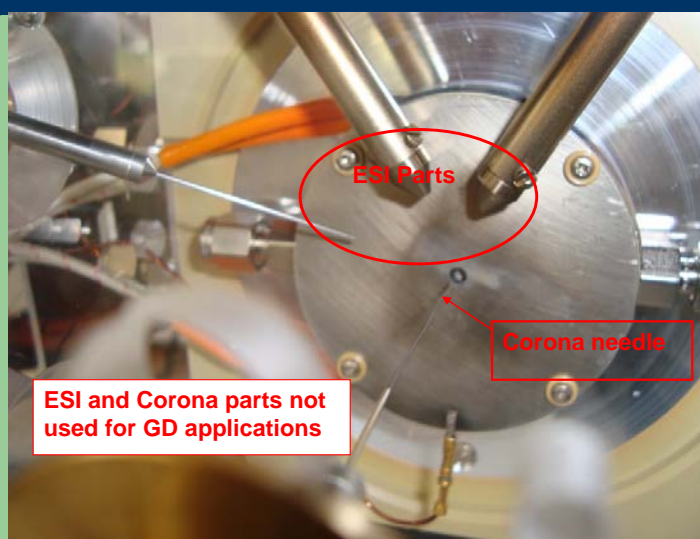
API Housing

Multi-Stage Turbo Pumping System

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## AMD Mini QuAS<sup>3</sup>AR API-MS



**ESI/APCI/GD**

**Interface for multiple or dedicated applications**

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