

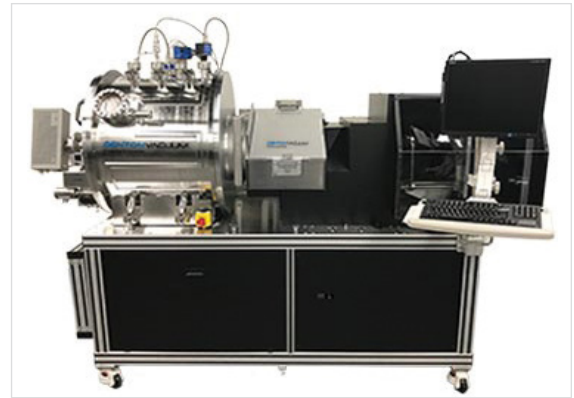







## INFINITY FA SYSTEM

Denton Vacuum Infinity FA System is a cost-effective solution for etching and profiling devices with high throughput, providing rapid results at a low cost of ownership. The fully integrated SIMS package provides the precision required to locate small defects for further analysis.

### BENEFITS INCLUDE:

- Large etch area
- Delayering capability for all typical semiconductor device materials
- Pristine sample surface for high resolution imaging
- Uniform layer removal regardless of chemical composition
- Precision endpoint control
- Able to accommodate multiple substrate sizes up to 6"



FEATURES	BENEFITS	
Broad-beam Ion Source	Uniform delayering over a large area	
Low Ion Energy	Minimal damage to the surface	
Variable Ion Incidence Angle	Etch rate normalization for different materials	
Secondary Ion Mass Spectrometer (SIMS)	High precision endpoint control	
Automation Software	Enhanced process control	

# SYSTEM OVERVIEW

The Infinity FA System is a high-performance etching tool designed for failure analysis sample preparation, critical thin film profiling and delayering in semiconductor manufacturing. Ion beam etch (IBE), reactive ion beam etch (RIBE), and chemically assisted ion beam etch (CAIBE) can be utilized to provide uniform etch rates for multi-material layers.

The system includes a robust secondary ion mass spectrometer (SIMS) package for analyzing thin film removal. It is ESD compliant and is fully computer controlled for high automation and repeatability. SIMS enables precision endpoint control to delayer semiconductor wafers and identify defects, in order to improve process yield.

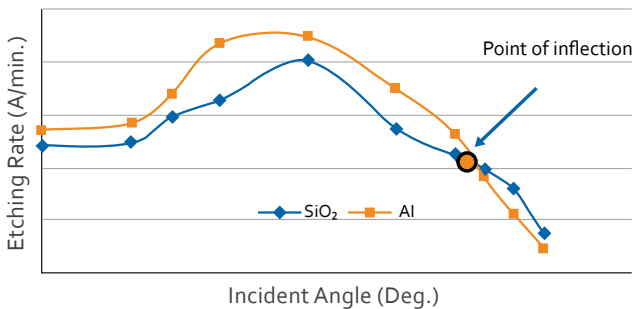
The system delivers excellent delayering uniformity and minimal damage over large areas. The robust SIMS package provides the precision required to locate small defects for further analysis. Utilizing multiple etch technologies, the etch rates of different components of a single layer can be matched.

Backed by Denton's commitment to both process and equipment support, the Infinity FA tool delivers quality performance and high system uptime. Our global service team will provide you with a trusted preventive maintenance schedule and responsive support to ensure the best productivity and production results.

## APPLICATIONS:

- Semiconductor failure analysis
- Delayering
- Yield improvement
- Reverse engineering
- Microdisplay failure analysis

### Incidence Angle vs Etch Selectivity



### SIMS Detection of Materials for Delayering and Endpoint

