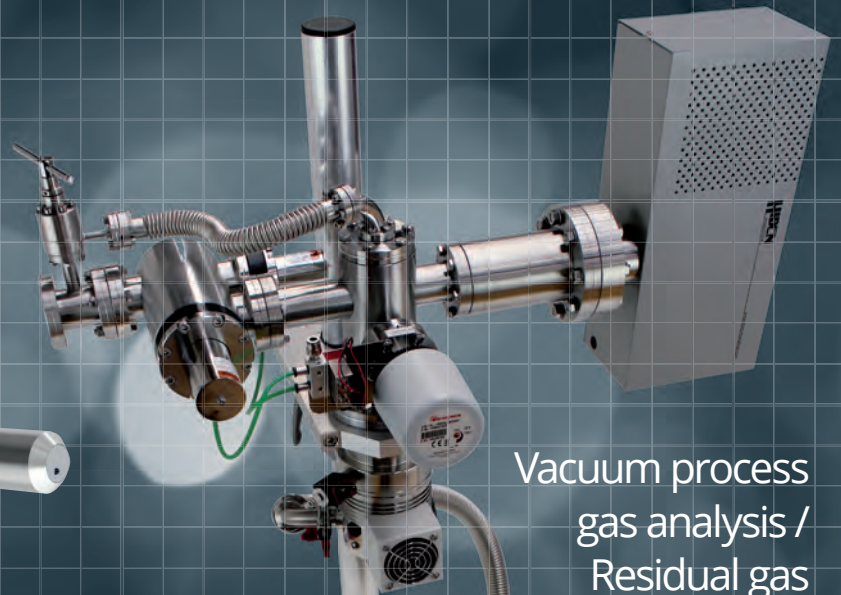
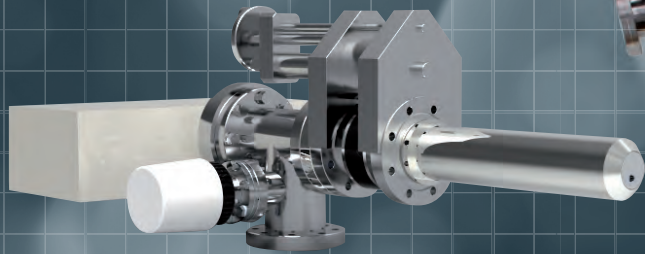


# Plasma Etch IN MICROTECHNOLOGY

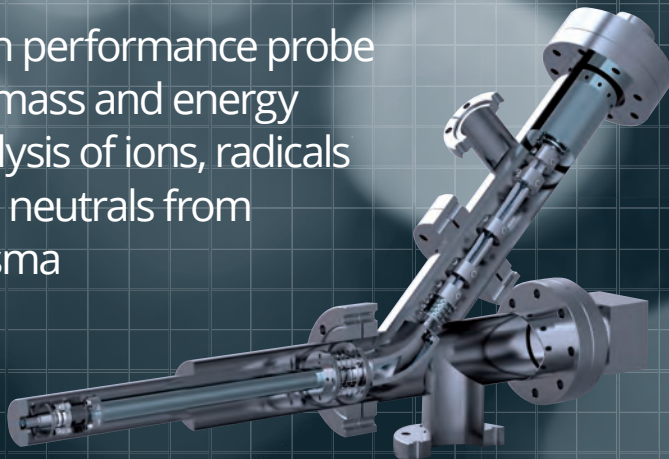
Advanced  
Langmuir probe  
for plasma  
diagnostics

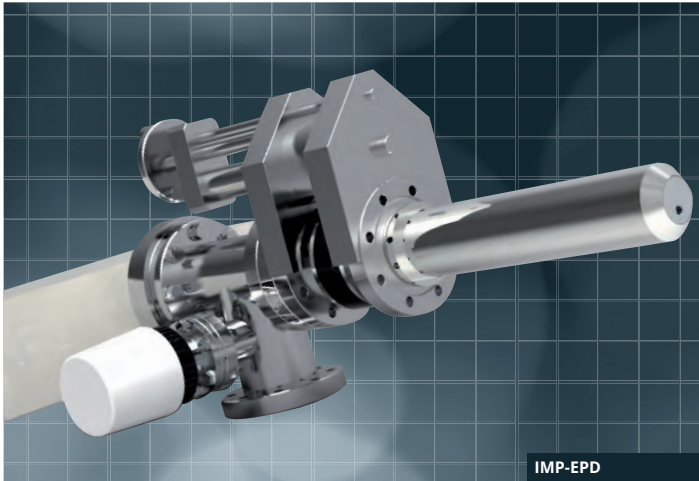
In-situ SIMS analysers  
for real-time etch  
monitoring at the  
nanoscale



Vacuum process  
gas analysis /  
Residual gas  
analysis

High performance probe  
for mass and energy  
analysis of ions, radicals  
and neutrals from  
plasma

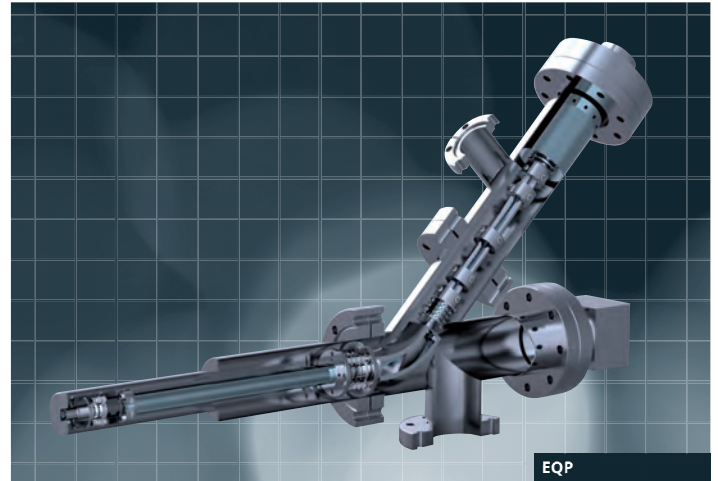




IMP-EPD

## In-situ SIMS analysers for real-time etch monitoring at the nanoscale

- ▶ Hiden SIMS plasma and ion beam etch analysers provide a window on the entire etch process
- ▶ End point control to within +/- 5 Angstroms
- ▶ Integrated 'production ready' end point control is available



EQP

## High performance probe for mass and energy analysis of ions, radicals and neutrals from plasma

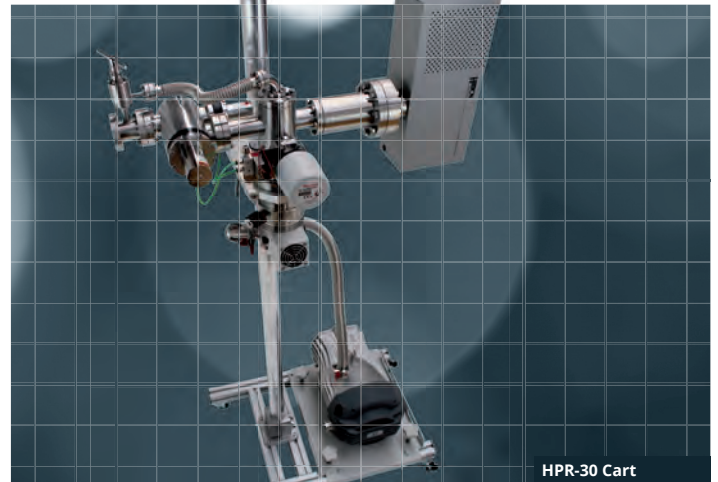
- ▶ +ve and -ve ion analysis
- ▶ Mass resolved ion energy analysis
- ▶ Neutrals and neutral radical analysis
- ▶ Energy resolved mass analysis
- ▶ Mass range options to 1000 amu
- ▶ Energy range options to 1000 eV



ESPion

## Advanced Langmuir probe for plasma diagnostics

- ▶ Floating Potential,  $V_f$
- ▶ Plasma Potential,  $V_p$
- ▶ Electron Energy Distribution Function, EEDF
- ▶ Debye length,  $\lambda_D$
- ▶ Ion Flux,  $\Gamma_i$
- ▶ Ion density,  $n_i$ , and electron density,  $n_e$ , over the range  $10^{14}$ - $10^{19} \text{ m}^{-3}$
- ▶ Electron Temperature,  $T_e$ , up to 10 eV
- ▶ Orbital Motion Limited (OML) and Allen Boyd Reynolds (ABR)



HPR-30 Cart

## Vacuum process gas analysis / Residual gas analysis

- ▶ Pump-down Profiles
- ▶ Vacuum Diagnostics
- ▶ Base Pressure
- ▶ Residuals
- ▶ Backfill
- ▶ Bakeout
- ▶ Leak Checking