

## MEO Engineering Company, Inc.

High Technology on a Small Scale since 2004

### Consumables & Service

FIB or SEM - any OEM



Reduce maintenance costs with **PBS&T™** components:

- Extractors
- Suppressors
- Apertures
- Precursor Refills
  - Etching (XeF<sub>2</sub>, Bromine, Iodine)
  - Deposition (C, Pt, W, Mo, Cu, SiO<sub>x</sub>)
  - Custom Chemistries



We can support you with:

- DIY maintenance training
- On-site service and repairs
- Installation and relocation
- High voltage power supplies
- Ion and electron optics
- Preventive maintenance
- Custom-made components
- Aftermarket upgrades
- Process development
- Remote support



[www.fibsemproducts.com](http://www.fibsemproducts.com)  
[info@partbeamsystech.com](mailto:info@partbeamsystech.com)

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### Deposition Gas Injector

FIB or SEM - any OEM

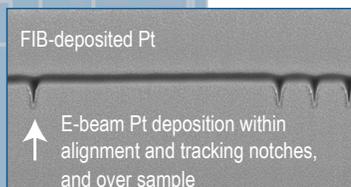


**GALEX Instruments® D-GIS**  
Precursor Gas Injection Solution

- Four materials on the same port
- Easy to install, align and operate
- User-exchangeable precursor cartridges
- Designed for safety and compliance
- Standard precursors: Pt, W, Mo, C, SiO<sub>x</sub>
- Custom chemistries available
- Gas assisted etching version is available
- UHV-compatible version upon request
- Application development support



*Carbon deposition on porous thin film substrate*



*Pt FIB and SEM deposition for 3D slice-and-view tomography. ZEISS Crossbeam 340 with FIBICS Atlas Software and GALEX Instruments® D-GIS*

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### High Voltage Power

FIB, SEM or TEM - any OEM



*50kV Field Emission Electron Source Testing*

Integrated Power Supplies:

- High Voltage 3kV to 200 kV
- Positive and Negative Polarity
- FIB, SEM, TEM, SIMS, Auger
- Ultra-low Noise for Source Testing and Electron/Ion Beam Lithography
  - Ripple and Noise in PPM range
  - Long-term Stability in PPB range
  - True Micro-arc and Ripple Monitors
- Compact Versions for X-Ray Sources
- Water-cooled High Power



*TEM 200kV: Ultra-stable, Ultra-quiet and Compact*

Bipolar High Voltage Modules:

- Voltage Output up to 30kV
- True Zero Crossing
- TOF-SIMS and Particle Accelerator



*Fast Module +/- 10kV 1mSec*

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### Ion and Electron Optics

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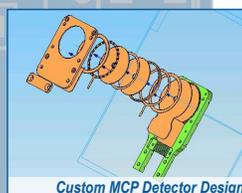
*Electrostatic Lens Alignment*



*FIB Column Rebuild*

The Only Non-OEM Shop Servicing and Building Particle Beam Optics

- FIB - Ion Beam Columns
- SEM - Electron Beam Columns
- Service and Rebuilding
- Design and Construction
- Lenses, Deflectors, Blankers
- OEM & Custom Instrumentation
- Particle Trajectory Modeling
- Static and Dynamic Simulation



*Custom MCP Detector Design*



*Custom MCP Detector*



*FIB Column*

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