MICROFABRICATION AND METROLOGY

Supporting national security with cutting-edge technology

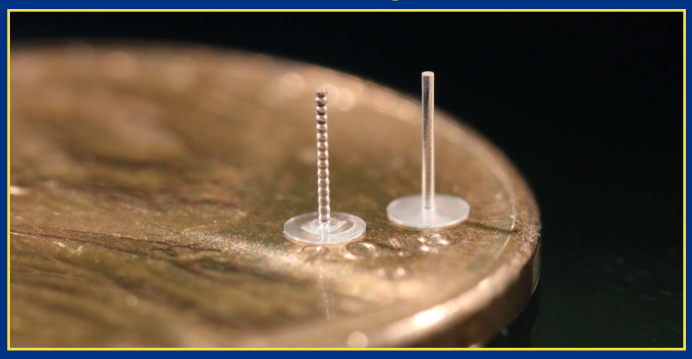
For more than 25 years, General Atomics (GA) has been a sole-source provider of precision microfabrication and metrology services for the nation's Inertial Confinement Fusion program. GA's decades of expertise are now available to other areas within NNSA-funded programs. GA has the capabilities, facilities, personnel, and research expertise necessary to support these critical missions.

GENERAL ATOMICS

CUTTING-EDGE APPROACH TO FABRICATION AND METROLOGY

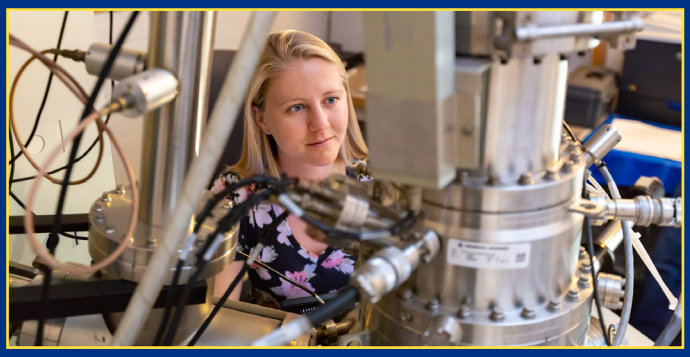
- Proven ability to manufacture unique components with precise, sub-micron tolerances.
- Combining fundamental research in the development of new materials and processes with state-of-the-art, secure facilities to customize solutions and meet customer needs.
- Innovative characterization and metrology capabilities.
- Techniques beyond optical means to measure every aspect of product fabrication.
- Products perform as designed from the moment they are delivered.

Precision Manufacturing and Fabrication



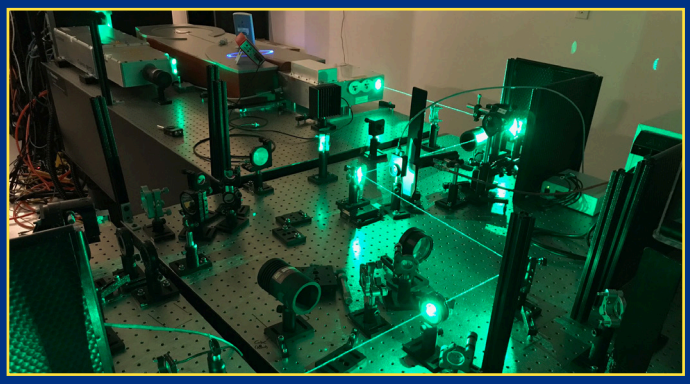
Creating extremely precise components with sub-micron tolerances

Precision Metrology and Characterization



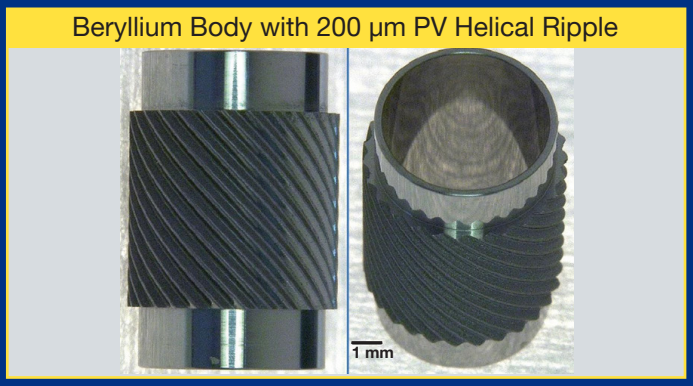
Extensive in-house metrology using the latest technology

Laser Drilling and Machining



Custom laser cutting, drilling, and machining operations using a variety of wavelengths

Unique Material Capabilities



Coating, plating, and machining capabilities to exacting tolerances in unique materials

Aerogels and Foams

Sub-millimeter mound of copper aerogel applied with a GA-developed nanoparticle deposition system

Classified Site and Personnel

Secure fabrication facilities, personnel, and communication channels

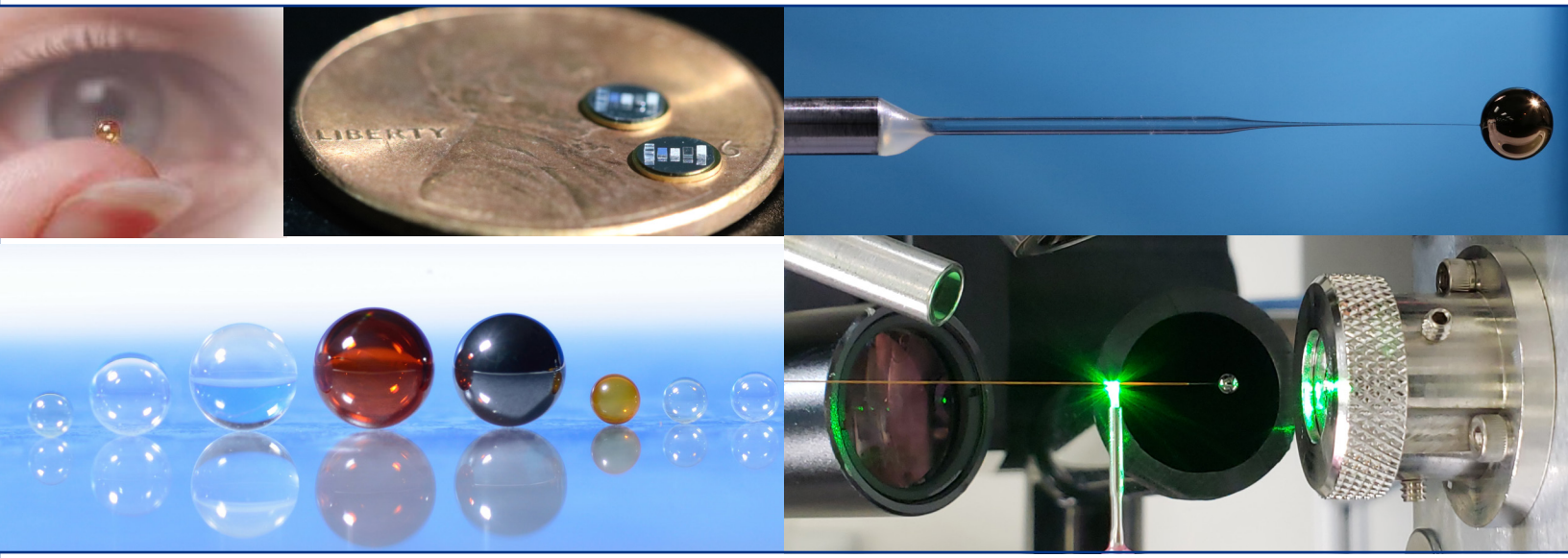
Secure facilities and cleared personnel to support national security programs.

- Beryllium
- Depleted uranium
- Other sensitive materials

Proven ability to use the latest technology to recreate, design, and fabricate detailed components and capabilities using precise modern techniques.

Additional areas of expertise:

- Micromachining (diamond turning, milling, plating)
- Metal and plastic coatings
- Foams, dopants
- Microassembly
- Polishing (Beryllium, depleted uranium)
- Additive manufacturing using two-photon polymerization (2PP)
- Gas-filled spherical shells
- Engineering design and automation
- CAD/CAM programming



GA's unique end-to-end capability has evolved over more than 25 years of developing and fabricating precision targets for the U.S. Inertial Confinement Fusion program. GA delivers innovative targets with associated metrology data to ensure performance requirements are met even in the highest-consequence environments.

If you have unique, precise fabrication and metrology needs for difficult-to-manufacture components, give us a call:

Kristel Gordon, Director of Strategic Development

kristel.gordon@ga.com | (858) 455-4004 | www.ga.com/inertial-fusion

1003_0425