The MiRC is an open research facility. We welcome researchers from academia, industry, and government research labs.

**Mission**
To provide expertise, facilities, infrastructure and teaming environments to enable and facilitate interdisciplinary research in microelectronics, integrated optoelectronics and microsensors & actuators.

**Applications**
- Nanostructures
- Nanoelectronics
- MEMS/BioMEMS
- Photonics
- Process Chemistry
- Device Packaging
- Bio/Chem Sensors

**Processes**
- CVD
- Etch Processing
- Metallization
- Metrology
- Nano Lithography
- Optical Lithography

**MiRC User Support**
- Extensive User Training
  - 24/7 availability
  - typically once a month/per tool
  - ~1 hr per session
  - 8 users per session
  - select video/text instructions available

- Process Development
- Equipment Maintenance
- Equipment Installation, Facilities Maintenance and Upgrades
- Web-based Research and Equipment Support, Message Boards, e-mail training and equipment alerts

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Brochures available online at: http://grover.mirc.gatech.edu/brochures/
Gasonics Asher
The Aura 1000 Asher is a microprocessor controlled downstream, or "afterglow", photoresist stripper that will strip the front and backside of a wafer, typically in less than one minute. It is also able to function as a descummer by removing approximately 200-500 Angstroms of photoresist. The Asher can remove a maximum of one micron of photoresist.
trainer(s) email: ashler-trainers@grover.mirc.gatech.edu

Plasma-Therm ICP
An ICP (Inductively Coupled Plasma) etcher can be used to etch a variety of materials. This ICP is equipped with two chambers – one dedicated to deep silicon trench etching and the other for silicon dioxide and polymer etching.
trainer(s) email: icp-trainers@grover.mirc.gatech.edu

STS ICP
The STS ICP is a CMOS-compatible tool used for integrated MEMS-CMOS processes, and is meant for narrow (<10 micron in width) high aspect-ratio trench etching in Silicon and SOI wafers. At the MiRC, this system is used only for etching high aspect-ratio trenches in Silicon and SOI wafers.
trainer(s) email: stasicp-trainers@grover.mirc.gatech.edu

Trion ICP
The Trion Phantom etcher has an Inductively Coupled Plasma (ICP) source. The ICP allows the user to create high-density plasma. The high-density plasma enables high etch rates and anisotropy. An electrostatic chuck provides increased sample cooling during the etching process.
trainer(s) email: icp_2-trainers@grover.mirc.gatech.edu

Vision RIE - Metal
The Vision 320 RIE is a manually loaded Reactive Ion Etcher plasma system. It is used to etch a variety of metals.
trainer(s) email: vision-metal-trainers@grover.mirc.gatech.edu

Vision RIE - Oxide
The Vision 320 RIE is a manually loaded Reactive Ion Etcher plasma system. It is used to etch a variety of materials.
trainer(s) email: vision-oxide-trainers@grover.mirc.gatech.edu

Plasma-Therm SLR-series RIE
RIEs (Reactive Ion Etchers) are used to etch various materials, such as silicon dioxide, silicon nitride, polymers, and various metals using reactive gases in a RF (radio frequency) reactive ion plasma.
trainer(s) email: rie2-trainers@grover.mirc.gatech.edu

Samco UV Ozone Dry Stripper
The Samco model UV-1 is a stripper/cleaner used for cleaning or stripping organic materials such as solvent residues, photoresist, ink, or polyimide from substrate materials. The system uses a combination of UV light, ozone, and heat to accomplish this.
trainer(s) email: uvstripper-trainers@grover.mirc.gatech.edu

Plasma-Therm RIE
RIEs (Reactive Ion Etcher) are used to etch various materials, such as silicon dioxide, silicon nitride, polymers, and various metals using reactive gases in a RF (radio frequency) reactive ion plasma. This RIE system operates at 13.56MHz and has two chambers that are used for etching of nonmetallic materials and metals like Al, respectively.
trainer(s) email: rie1-trainers@grover.mirc.gatech.edu

STS ASE
The Advanced Oxide Etch (AOE) source is a revolutionary design based on STS’ well-established Inductively Coupled Plasma (ICP) technology. The AOE source is originally conceived to overcome the limitations of conventional high density plasma sources for SiO2 deep etch applications. It’s also proven to be suitable for deep etching quartz, fused silica, LiNbO3, and SiC throughout the optoelectronics and MEMS applications.
trainer(s) email: stase-trainers@grover.mirc.gatech.edu

STS SOE
STS ICP system combines a high conductance, high vacuum compatible process chamber with a patented ICP source to produce a very high ion density at low pressures. With this technology, STS ICP Standard Oxide Etcher is suitable for shallow etching (less than 15 micron trenches) of SiO2 and III-V materials that require higher etch rates, higher aspect ratios, and better selectivity compared to using conventional RIE technology.
trainer(s) email: staso-trainers@grover.mirc.gatech.edu

Materials Etched

Metals
- Dry: Aluminum, Chrome
- Wet: Al, C, Cu, Ag, Co, Cr, Fe, Pb, Mg, Ni, Pt, Au, Zn,
  Photoresist (AZ), *(see website for complete list)

Semiconductors
- Dry: III-V, Silicone
- Wet: Al, C, Cu, Ag, Co, Cr, Fe, Pb, Mg, Ni, Pt, Au, Zn,
  Photoresist (AZ), *(see website for complete list)

Dielectrics
- Silicon Nitride, Silicon Oxide, Silicon Carbide, Gallium Nitride, Indium Phosphide, Zinc Sulfide

Polymers
- Polyimide (isotropic/anisotropic)
- Photoresist