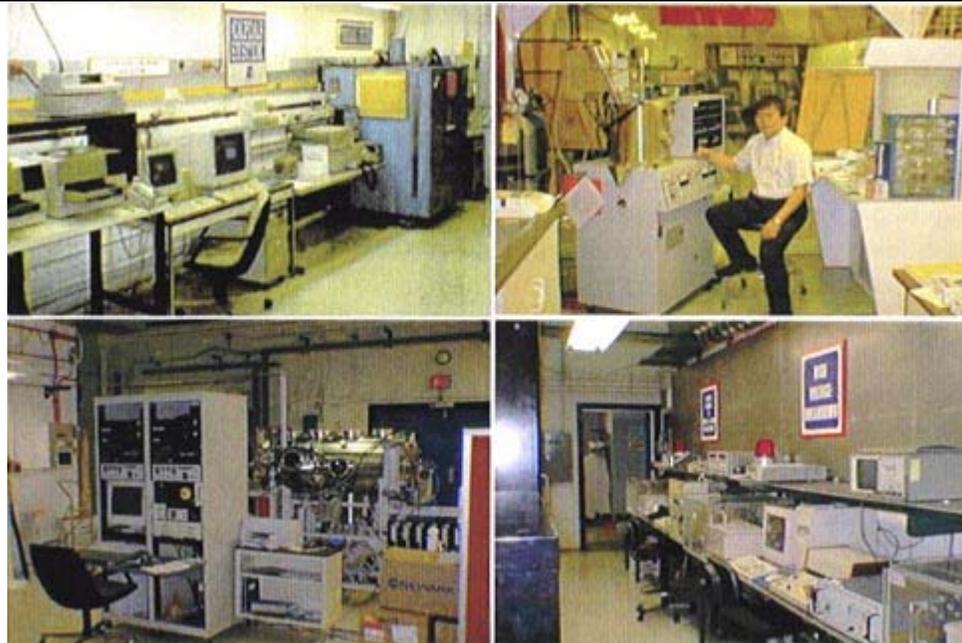


Power Devices, Components & Power Systems Facilities



Description:

These facilities are used for R&D on power electronic components and devices, as well as developing advanced power system, high speed electrical generators and static energy conversion devices. Efforts are focused on wide bandgap power semiconductors, plasma processing of wide bandgap semiconductors and high temp. MEMS, high temp, ceramic

and polycrystalline capacitors, high energy density diamond like carbon capacitors, power electronic converters for super capacitors, laser diodes, and electric propulsion. Additional efforts are focused on high-speed electric machinery for more electric aircraft and directed energy weapon (DEW) applications, and thermionic and thermal voltaic energy conversion for space and remote terrestrial applications. The facilities are equipped with 3 Class 100 clean rooms, rf sputtering systems, a 5KW plasma deposition system, a dual ion beam gun deposition system, a complete capacitor and dielectric evaluation area, a world class power electronics fabrication and test area, and four 350 horsepower drivestands with speed capabilities to 100K rpm.

Purpose:

Perform R&D on power systems/components for air and space vehicles and directed energy weapon systems in the areas of:

- Wide bandgap power semiconductor devices
- High energy capacitors
- Novel power electronic systems
- Cryogenic power electronic conversion systems

Products:

- Capacitors
- Power Semiconductors
- Power Converters
- MEMS

Availability:

Primarily in-house research, U.S. Government agency use, DoD contractors and dual use/defense conversion use-limited on an as available basis.