

# ADVANCED MATERIALS

## in Albany/New York's Capital Region

(Updated April 2024)



The Capital Region's Advanced Materials Cluster includes a vast array of advanced chemical and materials manufacturers that supply the aerospace, defense, automotive, electronics and medical, industries. Major employers include **Momentive Performance Materials**, **SI Group**, **SABIC** and **Ames Goldsmith**. The Albany metro area is one of fewer than 50 metros nationwide where the private sector spends more than \$1 billion on R&D, including research at corporate materials and chemical labs run by **GE Research**, **SI Group**, **SABIC**, and **Polyset**.



Blasch Precision Ceramics

### R&D ASSETS

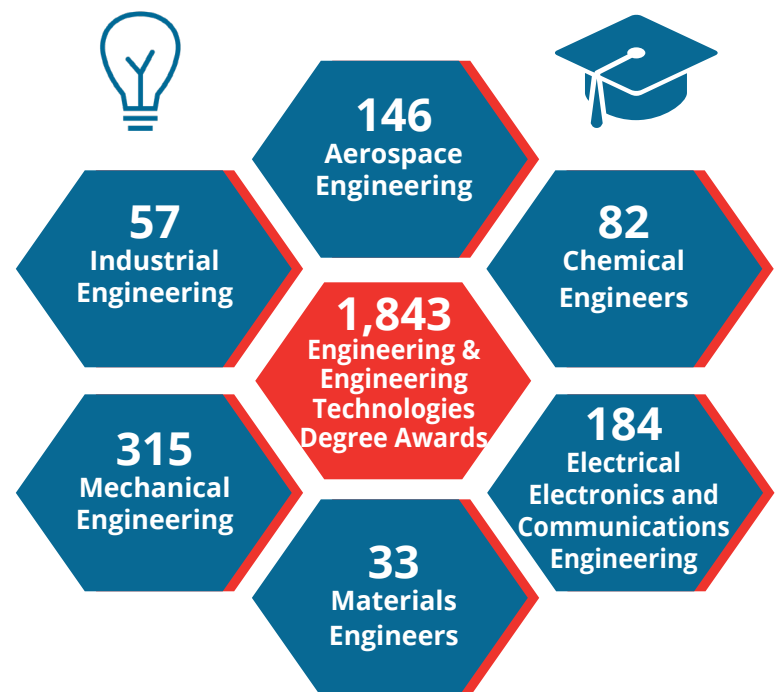
- ▶ **University R&D**
  - **\$24M** university R&D in physical sciences
  - **95,000** sf physical sciences university R&D spaces
- ▶ **Contract Research Labs**
  - **Greenfield Manufacturing** (chemical manufacturing)
  - **GE Research** (materials research)
- ▶ **Research Centers**
  - **Rensselaer Polytechnic Institute**
    - Rensselaer Exploratory Center for Cheminformatics Research
    - New York State Center for Polymer Synthesis
    - Baruch '60 Center for Biochemical Solar Energy Research
    - Center for Materials, Devices, and Integrated Systems
    - Center for Flow Physics and Control
  - **Albany Nanotech Complex**
    - Materials Engineering Technology Center (META Center)
    - New York State Center for Advanced Technology in Nanomaterials and Nanoelectronics (CATN2)
    - TEL Technology Center, America R&D Center (TEL TCA)
  - **University at Albany**
    - Center for Biochemistry and Biophysics
  - **Watervliet Arsenal**
    - Benet Laboratories
    - Advanced Composites Launcher Laboratory

### WORKFORCE (2022)

**9,093** JOBS

(excludes bio, pharma, semiconductor, R&D)

### TALENT PIPELINE (2022)



### MAJOR ADVANCED MATERIALS MANUFACTURERS

- **Momentive Performance Materials**, Waterford: silicones for electronics
- **SI Group**, Niskayuna/Rotterdam: intermediate chemicals for adhesives, rubber, fuel and lubricants
- **SABIC**, Selkirk: Ultem and Noryl resins

### ABRASIVES

- **Barton International**, Glens Falls: garnet abrasives, & mineral abrasives
- **Flex Trim**, Queensbury: abrasive foams, abrasive strips, belts, strips and discs
- **Raoid Tool Co.**, Mechanicville: producer of tooling equipment for friction materials manufacturing
- **Saint-Gobain Abrasives**, Watervliet: industrial-grade sandpaper

### ADHESIVES

- **YINCAE Advanced Materials**, Colonie: coatings, adhesives and encapsulants used in the microchip and optoelectronics
- **Adirondack Specialty Adhesives**, Albany: advanced synthetic grains, high tenacity multi-functional backings and complex bonding systems

### AEROSPACE

- **Cosmo Optics**, Albany: precision optical components
- **Ducommun Aerostructures**, Coxsackie: large complex contoured aerostructures and precision components
- **DK Machine**, Fort Edward: valve balls for the aerospace
- **Electro Fiber Products**, Schenectady: Specialized metal-coated carbon fiber products
- **Electronic Coating Technologies**, Clifton Park: contract manufacturing services for aerospace. Conformal coating, potting, encapsulation, low pressure molding, packing and bonding services
- **Mechanical Technology Inc.**, Albany: metrology equipment for aerospace
- **Crafttech Industries**, Hudson: precision-molded and machined standard and custom fasteners and components in more than 200 plastic materials
- **Gurley Precision Instruments**, Troy: high-performance optical encoders for aerospace
- **NSH USA**, Albany: CNC vertical machine centers and turning lathes
- **United Aircraft Technologies**, Troy: interconnecting Clamp (ICC) for aerospace wire harness management
- **P1 Industries**, Schenectady: supplier of specialized custom parts for the aerospace and defense industries
- **Pacamour Kubar Bearings**, Troy: DFARS-approved miniature and instrument ball bearings, and FAA TSO Aircraft Bearings
- **Plug Power**, Slingerlands: Hydrogen fuel cells for aerospace
- **Praxis Powder Technologies**, Queensbury: titanium components for doors, latches, seats, hinges, and connectors
- **Precision Valve and Automation**, Halfmoon: conformal coating systems, fluid dispensing solutions and precision valve technology for aerospace

- **Ross Precision Manufacturing**, Green Island: Large CNC machining, milling turning and copper welding specializing
- **United Aircraft Technologies**, Troy: thermoplastic interconnecting clamps for wire harness management
- **Vyv Tech**, East Greenbush: antimicrobial LEDS for airliners
- **Wright Electric**, Malta: electric aerospace for commercial jets

### CERAMICS

- **Blasch Precision Ceramics**, Menands: net shape ceramic products and refractory components
- **Norlite Lightweight Aggregate**, Cohoes: lightweight, porous ceramic material
- **Lithoz America**, Troy: additive manufacturing (3D-printing) of high-performance ceramics

### COMPOSITES

- **Trelleborg (Automated Dynamics)**, Niskayuna: carbon fiber and thermoplastic composite parts
- **Vistex Composites**, Schenectady: thermoset and thermoplastic composites
- **Technical Fibre Products**, Schenectady: multi-material nonwoven veils for electromagnetic interference (EMI) shielding
- **Composite Technology & Infrastructure**, Ravena: composite services, epoxy flooring and resurfacing, industrial coating, custom solutions, and more
- **InSitu Composites**, Troy: continuous fiber composites for 3D printing

### NEXT-GEN MATERIALS

- **Imitec**, Schenectady: polyimides and polyimides
- **Free Form Fibers**, Saratoga Springs: high value, inorganic, high purity ceramic fibers and materials via laser-driven chemical vapor deposition (LCVD)
- **Ecovative Designs**, Green Island: mycelium materials

### OTHER

- **Ames Goldsmith Corp**, Glens Falls: Silver refining
- **AgroChem**, Saratoga Springs: Agricultural chemicals

### RUBBER/RESINS

- **Tire Conversion Technologies**, Latham: compression-molded, recycled rubber products
- **Polyset**, Mechanicville: catalytic catalysts, epoxy siloxane resins and electrical/optical coatings

### SILICONES

- **Extreme Molding**, Watervliet: plastic injection and silicone molded products
- **Specialty Silicone Products**, Ballston Spa: custom silicone compounds, silicone lubricating greases, conductive silicone elastomers, and thin silicone membranes