

# ADVANCED MATERIALS

## *in New York's Capital Region*



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

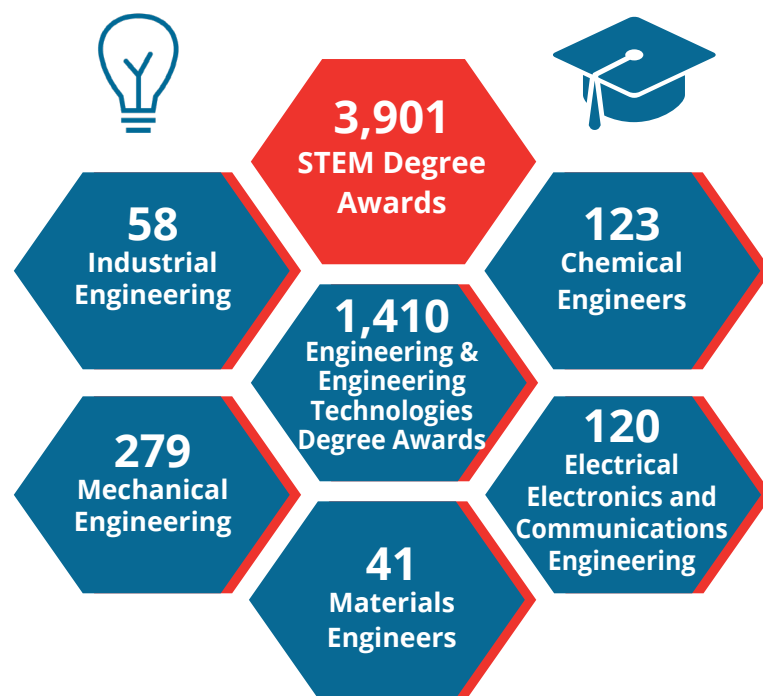
- ▶ **University R&D**
  - **\$20.5M** university R&D in physical sciences
  - **95,000** sf physical sciences university R&D spaces
- ▶ **Contract Research Labs**
  - **Greenfield Manufacturing** (*chemical manufacturing*)
  - **GE Global Research** (*materials research*)
- ▶ **Research Centers**
  - **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 (2020)

**9,673** JOBS

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

### TALENT PIPELINE (2020)



### MAJOR ADVANCED MATERIALS MANUFACTURERS

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

### ABRASIVES

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

### ADHESIVES

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

### AEROSPACE

10. **Cosmo Optics**, Albany: precision optical components
11. **Duxomun**, Coxsackie: large complex contoured aerostructures and precision components
12. **DK Machine**, Fort Edward: valve balls for the aerospace
13. **Electronic Coating Technologies**, Clifton Park: contract manufacturing services for aerospace. Conformal coating, potting, encapsulation, low pressure molding, packing and bonding services
14. **Mechanical Technology Inc.**, Albany: metrology equipment for aerospace
15. **Crafttech Industries**, Hudson: precision-molded and machined standard and custom fasteners and components in more than 200 plastic materials
16. **Gurley Precision Instruments**, Troy: high-performance optical encoders for aerospace
17. **United Aircraft Technologies**, Troy: interconnecting Clamp (ICC) for aerospace wire harness management
18. **P1 Industries**, Schenectady: supplier of specialized custom parts for the aerospace and defense industries
19. **Pacamour Kubar Bearings**, Troy: DFARS-approved miniature and instrument ball bearings, and FAA TSO Aircraft Bearings
20. **Precision Valve and Automation**, Halfmoon: conformal coating systems, fluid dispensing solutions and precision valve technology for aerospace
21. **Vyv Tech**, East Greenbush: antimicrobial LEDs for airliners
22. **Wright Electric**, Malta: electric aerospace for commercial jets

### CERAMICS

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

### COMPOSITES

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

### NEXT-GEN MATERIALS

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

### OTHER

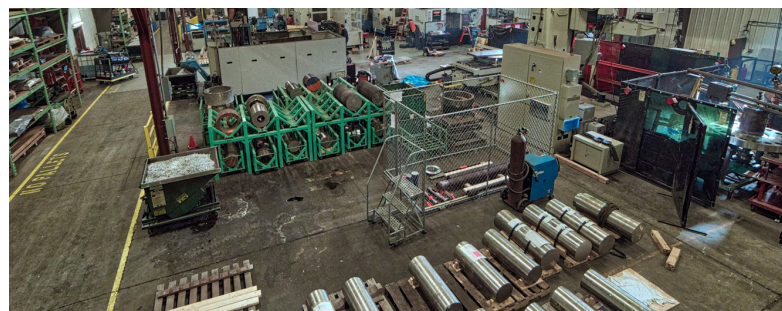
34. **Ames Goldsmith Corp**, Glens Falls: Silver refining
35. **AgroChem**, Saratoga Springs: Agricultural chemicals

### RUBBER/RESINS

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

### SILICONES

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



Greno Industries