The Capital Region’s Advanced Materials Cluster includes a vast array of chemical manufacturers that supply the semiconductor, biotechnology, automotive, aerospace, medical, pharmaceutical and defense industries. The Albany-Schenectady-Troy metro area ranks 22nd in the nation for the most chemical manufacturing jobs. Major employers include Regeneron Pharmaceuticals, Momentive Performance Materials, SI Group, SABIC and Ames Goldsmith. The region’s advanced Materials workforce is supported by a talent pipeline that includes Rensselaer Polytechnic Institute, SUNY Polytechnic Institute, the University at Albany, Union College, Skidmore College and Siena College. The Albany metro area is one of fewer than 50 metros nationwide where the private sector spends more than $1 billion on R&D. There are advanced materials research labs at GE Global Research, SABIC and Momentive Performance Materials. Several startups are also making next-generation materials, including Ecovative Design, Imitec and Free Form Fibers.

**R&D ASSETS**

- **Contract Research**
  - AMRI
  - GE Global Research
- **Research Centers**
  - RPI
    - 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
  - SUNY Poly
  - 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)
  - UAlbany
    - Center for Biochemistry and Biophysics

**WORKFORCE (2018)**

- 386 Chemical Technicians
- 236 Chemical Engineers
- 435 Chemists
- 187 Materials Engineers
- 152 Materials Scientists
- 5,871 Chemical Manufacturing Jobs

**TALENT PIPELINE (2018)**

- 333 Physical science degrees, including 38 chemical engineering/chemistry engineers
- $23.4M University physical sciences R&D
**MAJOR ADVANCED MATERIALS MANUFACTURERS**

1. Regeneron Pharmaceuticals, East Greenbush: biopharmaceuticals
2. Momentive Performance Materials, Waterford: silicone sealants and coatings
3. Si Group, Niskayuna/Rotterdam: intermediate chemicals for adhesives, rubber, fuel and lubricants
4. SABIC, Selkirk: Ultem and Noryl resins

**ABRASIVES**

5. Barton International, Glens Falls: garnet abrasives, & mineral abrasives
6. Flex Trim, Queensbury: abrasive foams, abrasive strips, belts, strips and discs
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 multifunctional backings and complex bonding systems

**CERAMICS**

10. Blasch Precision Ceramics, Menands: net shape ceramic products and refractory components
11. Norlite Lightweight Aggregate, Cohoes: light weight, porous ceramic material

**COMPOSITES**

12. Automated Dynamics, Niskayuna: carbon fiber and thermoplastic composite parts
13. Vistex Composites, Schenectady: thermoset and thermoplastic composites

**CONTRACT RESEARCH AND/OR MFG**

15. GE Global Research, Niskayuna: contract materials research
16. AMRI, Albany: contract drug research

**NEXT-GEN MATERIALS**

17. Imitec, Schenectady: polyimides and polyimides
18. Free Form Fibers, Saratoga Springs: ceramic matrix composites
19. Evocative Design, Green Island: mycelium materials

**OTHER**

20. Ames Goldsmith Corp, Glens Falls: silver refining

**PHARMACEUTICAL**

22. GlaxoSmithKline, East Durham: toothpaste
23. DSM Nutritional Products, Schenectady: essential nutrients such as vitamins, carotenoids, nutraceuticals and nutritional lipids
24. Clinical Encapsulation Service, Schenectady: encapsulated clinical supplies for pharmaceutical drug studies

**RUBBER/RESINS**

25. Tire Conversion Technologies, Latham: compression-molded, recycled rubber products
26. Polyset, Mechanicville: catatonic catalysts, epoxy siloxane resins and electrical/optical coatings

**SILICONES**

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

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