

NexTech Commercial Services: Custom Solutions at Production Volume



Our mission is to accelerate your product launch.

Every solid oxide fuel cell (SOFC) design faces its specific materials and fabrication challenges. To succeed in market entry, developers require materials and process solutions that are practical, reliable and scalable. Irrespective of your cell configuration, NexTech Commercial Services can assist your product design, materials and process development and long-term materials and component supply.

World-Class Development on Your Timetable: Our team is focused on your success, under your constraints. Our teams establish concrete timelines and deliverables in collaborative programs to meet your objectives. We perform timely progress reviews to provide feedback throughout the program. Workplans include process controls and technology gate reviews to hasten transition to our volume manufacturing facilities.

Expertise You Can Trust: NexTech understands the complexity of SOFC development. Our team brings a portfolio of research discoveries, intellectual property and know-how obtained over 15 years of industry experience. Your program will benefit from our experience in assisting military, government and commercial partners. Recognizing the diversity of SOFC applications, we remain design-neutral, and we seek to provide the best solutions for your specific needs, with innovations that enhance your design advantage.

NexTech promotes collaboration, integrity and technical excellence. Working with your team, Commercial Services will provide innovative solutions for your process conditions and performance requirements. Understanding the sensitive nature of intellectual property, your technical point of contact and the solutions team will abide by strict information handling policies. In keeping with our collaborative model, we provide a range of cooperative agreements and licensing options.



A Partner for the Future: NexTech is committed to the SOFC industry. NexTech continues to pursue a strategy of process scale-up for its products from sub-kilogram to twenty-five kilogram lot sizes. As your materials and process development partner, Commercial Services will provide forecasts of materials and process production costs as a function of manufacturing volume. Commercial Services customers also benefit from leveraging NexTech's production volume equipment adopted for serving the broader SOFC market.



NexTech Commercial Services: Opportunities for Innovative Solutions



Materials: NexTech has developed SOFC materials to achieve a range of process and performance goals. Leverage our process capability to have your tailored solutions scaled to production volumes.

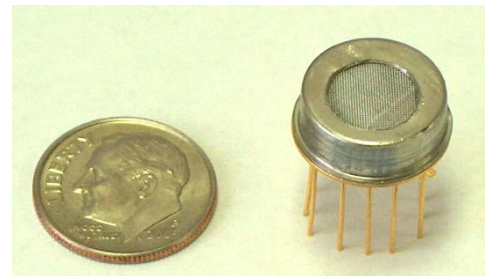
- electrolytes (zirconia and ceria based)
- anodes (cermet and ceramic)
- cathodes and contact pastes
- oxide protective coatings for interconnects
- seal materials
- value added materials (inks, suspensions and tapes)

Catalysts and Reforming: Our team has developed a reforming solutions for a variety of fuels and process conditions. Combined with our network of suppliers and partners, we can provide innovative catalyst package solutions for fuel clean-up, reformation, heat exchange and combined function inserts and reactors. Commercial Services is also seeking collaborators for sulfur sorbent evaluations.



Custom Sensors: NexTech's sensor development team can assist in the design and fabrication of electrochemical sensors. With our network of development partners we offer materials, process and device level solutions. Ongoing programs include:

- H₂S detection in reformed fuel streams
- H₂ safety sensors
- Custom Sensing Solutions



Manufacturing: NexTech's 56,000 ft² (~6500 m²) facility includes equipment to manufacture and evaluate the products listed above. Our state-of-the-art SOFC manufacturing and testing capacity encompasses both tubular and planar production. Production equipment includes:

- Class 10,000 clean room for tape casting and screen printing
- 40 ton extruder, with supporting process and characterization tools
- Automated spray coating and drying facility.
- Powder process capability for 25+ kg lot sizes