

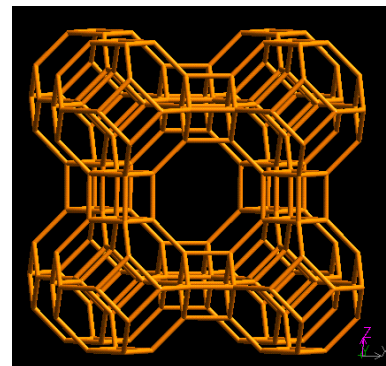
Eltron Research & Development

Contract Services

Catalyst Design, Synthesis, Scale-up, Evaluation

Design & Synthesis

Eltron Research & Development offers comprehensive catalyst research, development and evaluation services. We've developed hundreds of catalysts – heterogeneous and homogeneous, supported and unsupported – during our own research. Working with recipes designed to meet your requirements or with material that you provide, we can evaluate activity, structure and impurity. Using predictive models, we can direct research for more rapid catalyst characterization and optimization.

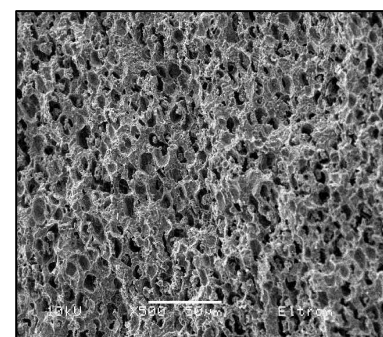


Scale-up

We have helped clients quickly scale-up their catalyst recipes from research level to multiple-ton quantities. Moving catalysts from initial development to commercial production requires close collaboration between the developer and the manufacturer. It also calls for understanding the challenges associated with optimizing materials for large-scale implementation. Having worked with the leading catalyst manufacturers, we know how to manage the relationship, refine the methodology for repeatable production in the lab and when scaled to commercial production volume, and ensure that your catalyst performs without sacrificing activity, selectivity or durability.

Evaluation

We're flexible, ready to get involved in research, development and commercialization at any level that you desire, including step-by-step monitoring and analysis during synthesis. Our services also include an array of catalyst testing capabilities. In-house equipment includes fixed bed, CSTRs and sputtering devices, enabling us to evaluate catalysts ranging from a few milligrams of material to full-scale monolithic catalysts. We also offer a full suite of Analytical and Materials Testing Services.



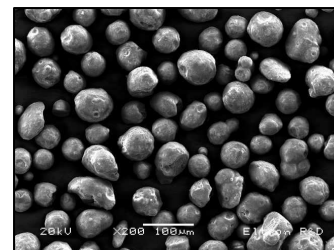
Intellectual Property

Eltron is committed to protecting your intellectual property. As an organization that conducts R&D with the goal of commercializing select technologies, we are highly aware of the value and competitive advantage that your IP represents.





Eltron Research & Development Catalyst Services can provide advanced catalysts based on a variety of materials and for a range of applications. If you don't see the specific type of catalyst material or application that fits your industry here, contact us. Together, we can determine the best solution to meet your needs.



Catalytic Materials

- Acids and bases
- Metal oxides
- Ceramics
- Molecular sieves and mesoporous materials
- Metals & supported metals
- Carbides, nitrides, sulfides
- Organometallics

Energy

- Ethanol synthesis
- Fischer-Tropsch synthesis
- Methanol synthesis
- Methanol conversion
- Mixed alcohol synthesis
- Coal chemistry
- Diesel fuel reforming
- Gasification
- Isomerization
- Alkylation

Environmental

- VOC destruction
- DeNO_x
- Adsorbents for CO, HCN, sulfides, etc.
- Soot combustion

Electrocatalysts

- Methane to methanol
- CO₂ to hydrocarbons
- H₂O₂/Peracetic acid (PAA)

Chemicals

- Chemical looping with various feedstocks: natural gas through coal; biomass
- Selective oxidation
- Aromatization & aromatic transformations

Propulsion

- Monopropellant decomposition catalysts
- Hybrid fuels and propellants
- Ignition catalysts

Polymers

- Polymerization
- Hydrosilylation
- Devulcanization



Eltron Research & Development Inc.

Eltron Research & Development commercializes novel technologies involving energy, chemicals, advanced materials and environmental systems.