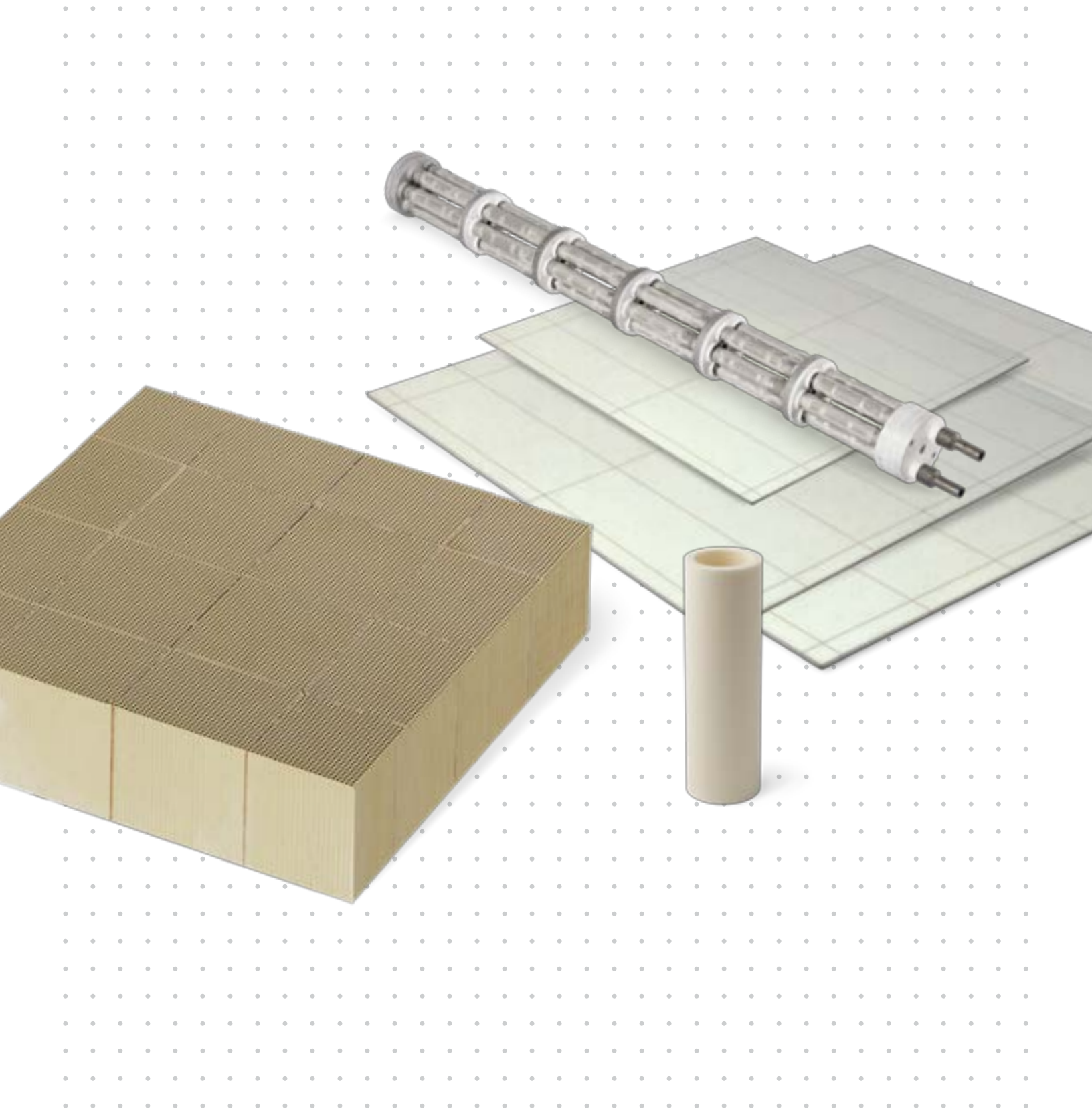




**Hydrogen Products**  
Premium Ceramics



# PREMIUM QUALITY HYDROGEN PRODUCTS

## Collaboration in Hydrogen Energy

Hydrogen offers several ideal attributes to help solve the variable energy storage requirements of solar and wind renewable resources, all while simultaneously providing opportunities for emissions reductions. CoorsTek supports cleaner energy and decarbonization efforts with innovative technologies for both green and blue Hydrogen.

We offer solid oxide ceramic components for electrolyzers, fuel cells, membrane solutions for blue hydrogen, and ceramic components that reduce the energy requirements for methane reforming. In addition, we are working to produce green fuels from CO<sub>2</sub> and Hydrogen to reduce aviation emissions. We also have a long history making ceramic components for manufacturing electrolyzer and fuel cell components.

# PREMIUM QUALITY SUBCOMPONENTS

## Cordierite and Alumina Honeycombs

Made for chemical processing and hydrogen production, our custom designed honeycombs are:

- Chemical corrosion resistant
- High thermal shock resistant
- High temperature resistant



## Ceramic Substrates

Thick-film and thin-film substrates offered in a wide range of standard and custom sizes and geometry. These substrates can be:

- Lapped and polished for surface finish
- Laser scribed to improve your process yields
- Laser machined for precise hole location



## Protonic Ceramic Membrane

Generates compressed hydrogen from natural gas and electricity in a one-step process with near zero energy loss.

- Small-scale to large-scale to meet demand
- Directly storable CO<sub>2</sub>



## Tubular Porous Substrates

Porous ceramic tubes provide the substrates for electrolyzers and other processes based on membranes. Custom manufactured to your preferred geometric shape, with designed pore sizes and porosity and lengths up to 1,000mm.



## We engineer advanced ceramics to solve your biggest challenges.

When you choose CoorsTek, you get a complete package to ensure superior performance for your custom engineered components:

### Design Consultation

Our materials experts work with your team to understand your application and create an optimal, best value solution. And if engineered ceramics aren't the best fit, we tell you.

### Performance Testing

Our engineered ceramics are designed for high performance, so we evaluate lab and field test data to make sure they're measurably better – delivering the results you require.

## Manufacturing Expertise

Our solutions could incorporate virtually every ceramic manufacturing technology known from powder to part – but we use what fits you best. We design for manufacturability, build with excellence, and deliver with speed.

## Proton Ceramic Membranes for Hydrogen Production

New research shows the way to extract hydrogen from natural gas, biogas, and ammonia with superior energy efficiency that will make hydrogen competitive with direct electrification.

## INTERESTED IN LEARNING MORE?

Contact a representative today: [coorstek.com/hydrogen](http://coorstek.com/hydrogen)

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