

This  
is more  
than a  
**chemical**

Hydrogen

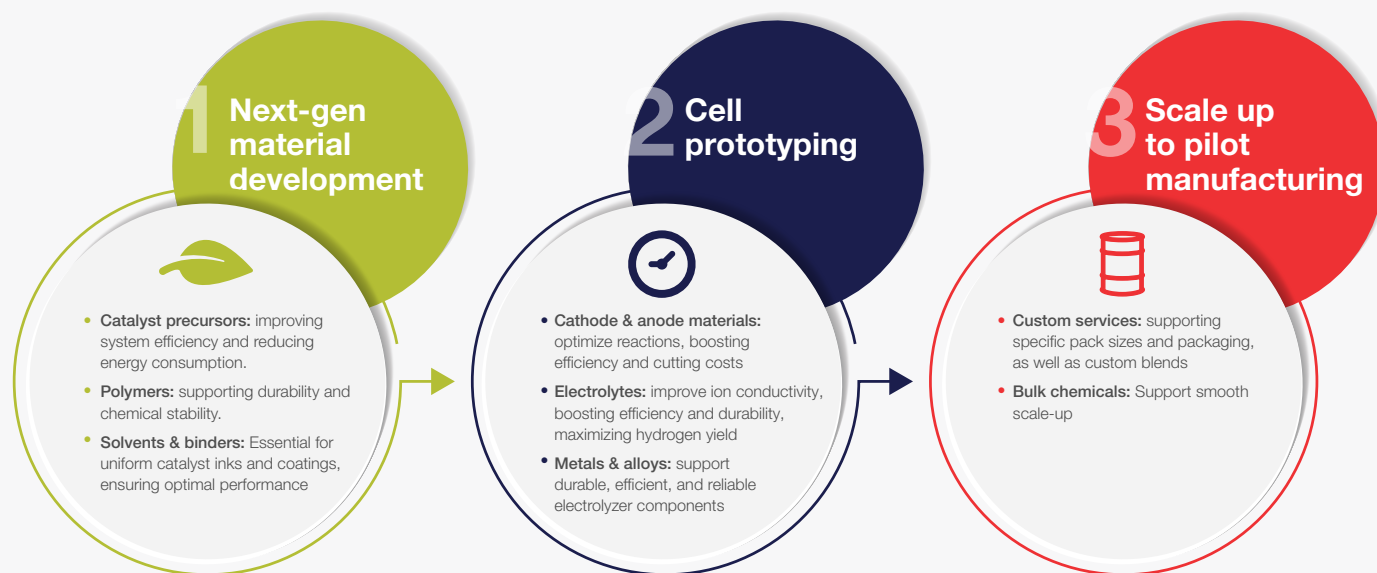
## It's fueling the future

Chemicals supporting hydrogen  
electrolyzer and fuel cell technologies,  
**beyond chemistry**

As leaders in scientific innovation, Thermo Fisher Scientific understands the importance of high-quality chemicals and materials in achieving efficient and reliable hydrogen production. Our extensive portfolio is designed to meet the specific needs of your research and development, to ensure

optimal performance and sustainability in electrolyzer and fuel cell technologies. Additionally, our comprehensive support extends from small-scale research to bulk supply for large-scale production, facilitating a smooth transition through scale-up phases and minimizing operational disruptions.

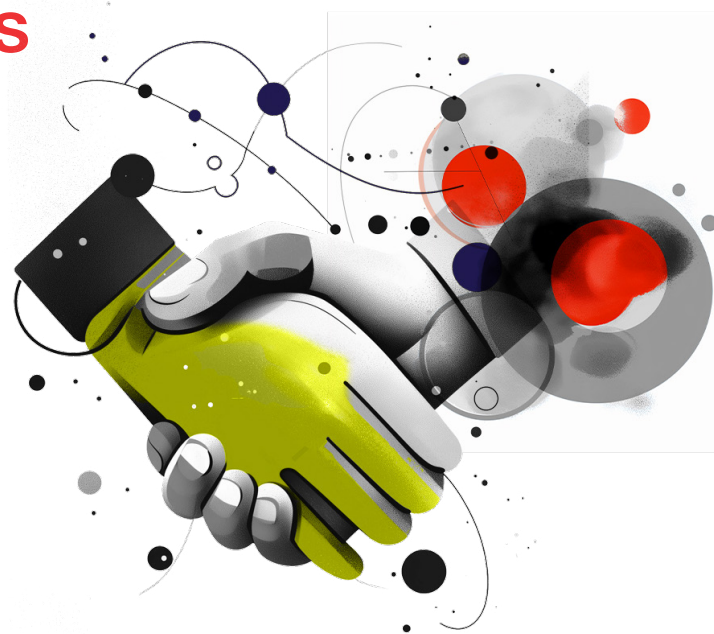
## Hydrogen electrolysis workflow

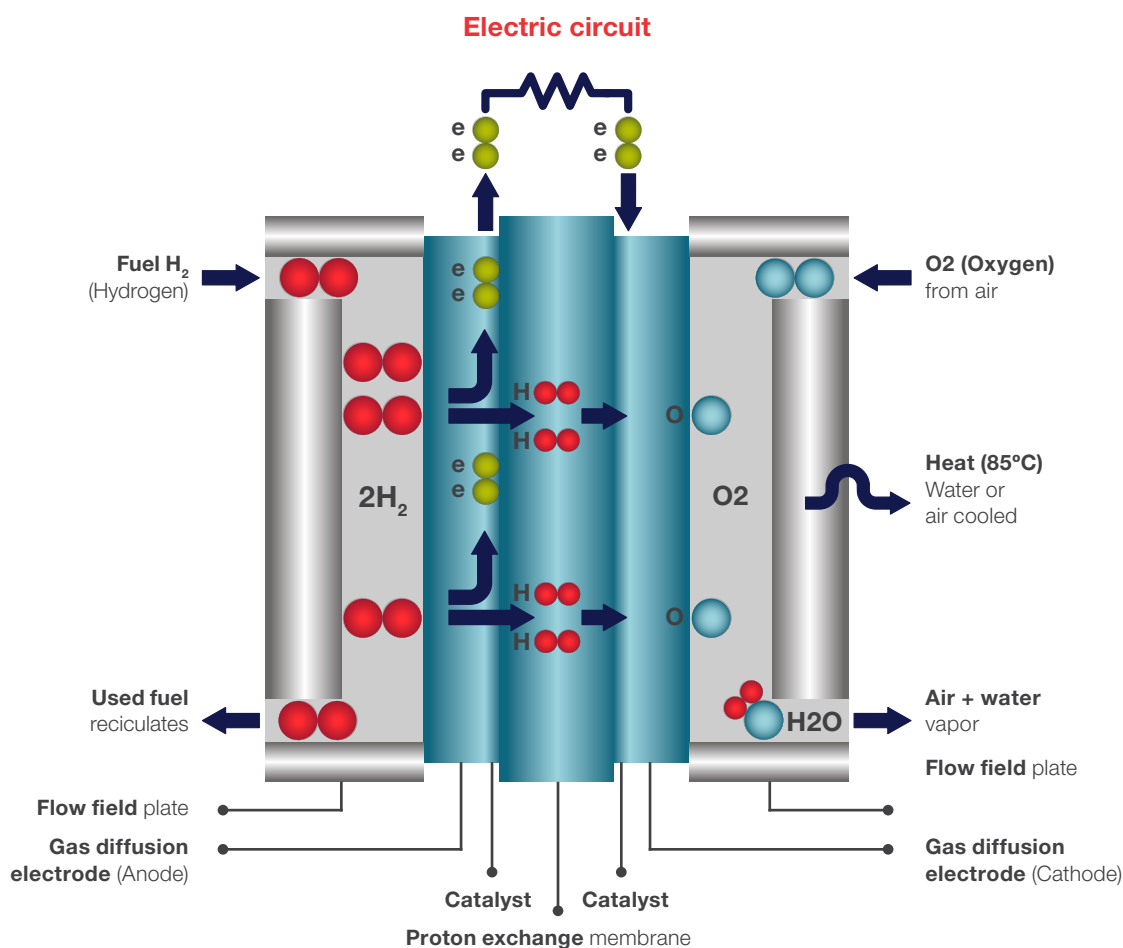


## Proton exchange membrane electrolyzers & fuel cells

Our premium chemicals guarantee exceptional ion exchange efficiency, durability, and chemical stability, which are essential for the seamless and dependable performance of both PEM electrolyzers and fuel cells.

By using our specialized catalysts, membranes, and electrolytes, you can achieve higher power densities and longer lifespans for your electrolyzers and fuel cells.





## Essential chemicals

Catalog number	Description	Sizes
011407.14	Silver(I) oxide, >99% (metals basis)	25g, 500g
043396.03	Iridium(IV) oxide, Premion™, 99.99% (metals basis), Ir 84.5% min	1g, 5g
044338.14	Ruthenium, 5% on activated carbon powder, reduced, nominally 50% water wet	5g, 25g, 100g
011051.03	Dihydrogen hexachloroplatinate(IV) hydrate, 99.9% (metals basis)	1g, 5g, 25g
036259.03	Dihydrogen hexachloroplatinate(IV) hexahydrate, ACS, Premion™, 99.95% (metals basis), Pt 37.5% min	1g, 5g, 25g
041832.09	Lithium oxide, 99.5% (metals basis)	10g, 50g, 250g
206300050	Boron oxide, 98%, -40 mesh	1kg, 5kg
045527.30	Carbon black, acetylene, 100% compressed	250g, 2x500g
044192.03	Fullerene, nanotube, multi-walled, 20-50 nm OD, 5-20 micron long	1g, 5g
012076.77	Platinum black	0.1g, 1g, 5g

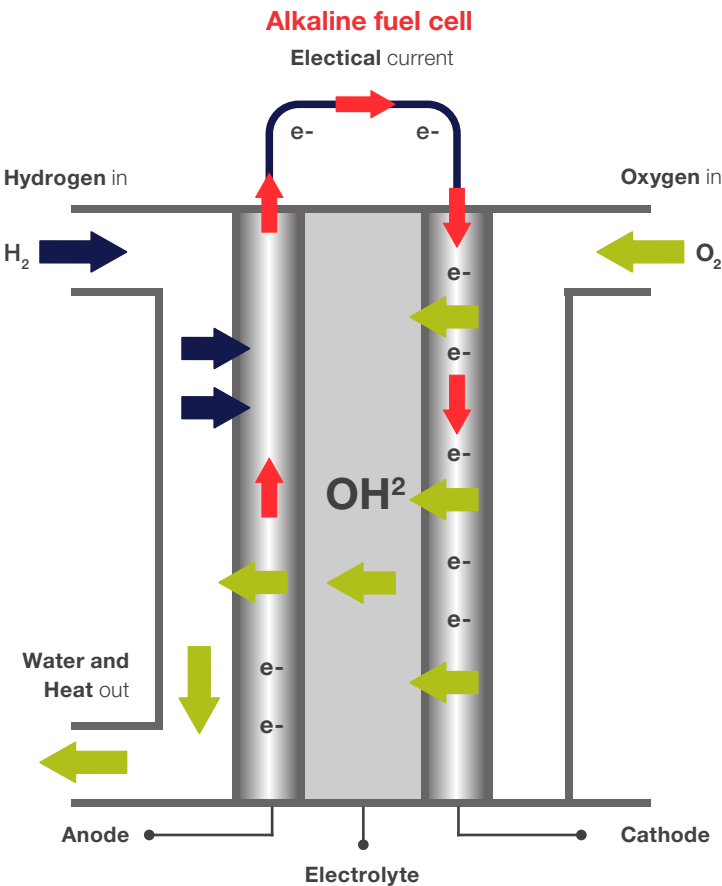


All products above are available in custom and bulk. Click the catalog number link above to request a quote.

# Alkaline electrolyzers & fuel cells

Our high-purity chemicals ensure excellent conductivity and chemical stability, which are essential for the efficient and reliable operation of both alkaline electrolyzers and fuel cells.

Our advanced materials contribute to performance and durability, reducing maintenance needs and operational costs.



## Essential chemicals

Catalog number	Description	Sizes
202025000	Sodium persulfate, +98%	500g, 1kg, 5kg
202465000	Hydrogen peroxide, for analysis, 35 wt.% solution in water, stabilized	25mL, 500mL, 1L, 2.5L
041977.30	Indium(III) chloride, anhydrous, 99.99% (metals basis)	10g, 50g, 250g
014344.30	Manganese(II) carbonate, 99.9% (metals basis excluding Na)	250g, 1kg
033337.A9	Magnesium sulfate, anhydrous, 99.5% min	500g, 2kg, 10kg
413485000	Magnesium sulfate, 97%, pure, anhydrous	5g, 500g, 2.5kg, 25kg
010515.A1	Lithium chloride, anhydrous, 99%	250g, 1kg, 5kg
202465000	Hydrogen peroxide, for analysis, 35 wt.% solution in water, stabilized	25mL, 500mL, 1L, 2.5L
198945000	Zinc chloride, 98.5%, for analysis	500g, 2.5kg
011601.36	Potassium iodide, ACS, 99.0% min	100g, 500g, 2kg



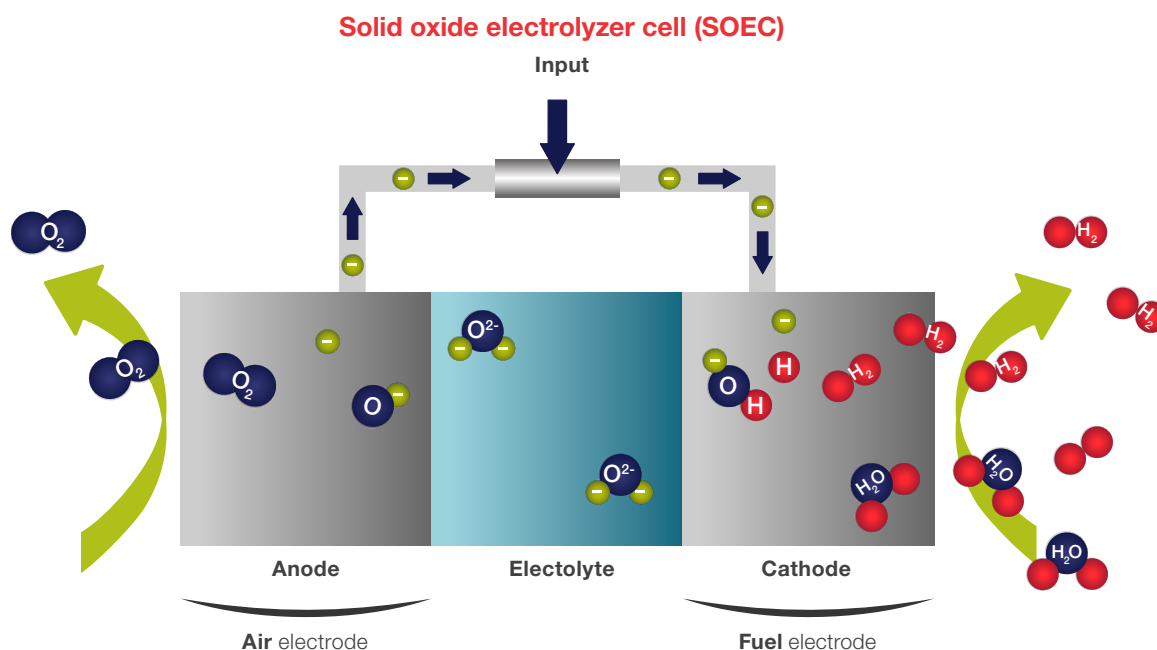
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# Solid oxide electrolyzers & fuel cells

Choosing Thermo Fisher Scientific chemicals for your solid oxide electrolyzers and fuel cells offers distinct advantages tailored to high-temperature hydrogen production and energy generation.

Our specialized chemicals provide exceptional ionic and electronic conductivity, thermal stability, and robustness, which are critical for the demanding conditions of solid oxide systems.



## Essential chemicals

Catalog Number	Description	Sizes
041832.30	Lithium oxide, 99.5% (metals basis)	10g, 50g, 250g
041786.04	Boron oxide, 99.999% (metals basis)	2g, 10g, 50g
A12342.36	Zirconium dichloride oxide octahydrate, 98%	100g, 500g, 2.5kg
010400.09	Tungsten powder, APS 1-5 micron, 99.9% (metals basis)	10g, 100g, 500g, 2kg
012348.18	Barium titanium oxide, 99%	50g, 500g, 2kg
012290.36	Boron oxide, 97.5% min, typically 98.5%	500g, 2kg, 10kg
206305000	Boron oxide, 98%, -40 mesh	1kg, 5kg
086108.18	Zirconium dichloride oxide hydrate, 99.9% (metals basis)	50g, 250g, 1kg



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For more information visit our website:  
[thermofisher.com/hydrogen-research](https://thermofisher.com/hydrogen-research)

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