DEVELOPING INDEPENDENT TECH, SERVING HYDROGEN SOCIETY

Corporate Website

WeCom

Ningbo Zhongke Cotrun New Energy Science Technology Co., Ltd.

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YHKC

Ningbo Zhongke Cotrun New Energy Science Technology Co., Ltd.

- Nano-catalyst Expert
- MEAs Expert
- Small PEM Electrolyzer Expert







10 years
10 - year industry experience

3500 m²
3,500 - square - meter intelligent production base

32 P
Distributed in 32 provincial - level administrative regions across the country

28 H
28-item High -tech products

YHKC

Ningbo Zhongke Cotrun New Energy Science Technology Co., Ltd.

Ningbo Zhongke Cotrun New Energy Science Technology Co., Ltd. is a national high-tech enterprise and a specialized-sophisticated enterprise in Ningbo, with the core technology and team originated from Shanghai Advanced Research Institute, Chinese Academy of Sciences. The company specializes in the research and development of nanostructured electrocatalysts, membrane electrode assemblies (MEAs) for PEM fuel cells and water electrolyzers, focusing on the industrialization, application, and the solution for the customers. The company has over 20 invention patents, and participated in numerous national-level research programs.

The company has meticulously developed supported and unsupported electrocatalysts, MEAs for PEM fuel cell & water electrolysis, and electrolyzer products. These products demonstrate outstanding performance and have been widely utilized in various fields including fuel cells, PEM electrolysis, gas sensors, metal-air batteries, biotechnology and pharmaceutical chemistry. The key technical parameters have reached the international advanced levels. The company has won the First Prize of Technology Invention from the Chinese Renewable Energy Society, the China International Industry Fair New Innovation Award, and other honors.

"Developing Independent Tech., Servicing Hydrogen Energy Society" is the company's consistent business philosophy. Against the backdrop of the "dual -carbon" strategy, the company aims to break through the bottlenecks for key materials and realizes the large-scale application of the core components in hydrogen energy industry chain. The company will continue to carry forward the pioneering spirit, and is committed to providing our customers with "professional, high-quality, reliable, and cost-effective" one-stop application solutions with profound professional knowledge and rich practical experience, contributing to the development of the industry.

DEVELOPING INDEPENDENT TECH, SERVING HYDROGEN SOCIETY

CORPORATEHONORS

- High-tech certified enterprise; Specialized and sophisticated new enterprise
- ISO-9001 quality management system certification
- IATF：16949 automotive quality management system certification
- The product won the Innovation Award at the China International Industry Fair
- China Hydrogen Energy Industry New Development Special Contribution Award



Innovation Award of China International Industry Fair



First Prize in S&T Award of China Renewable Energy Society

















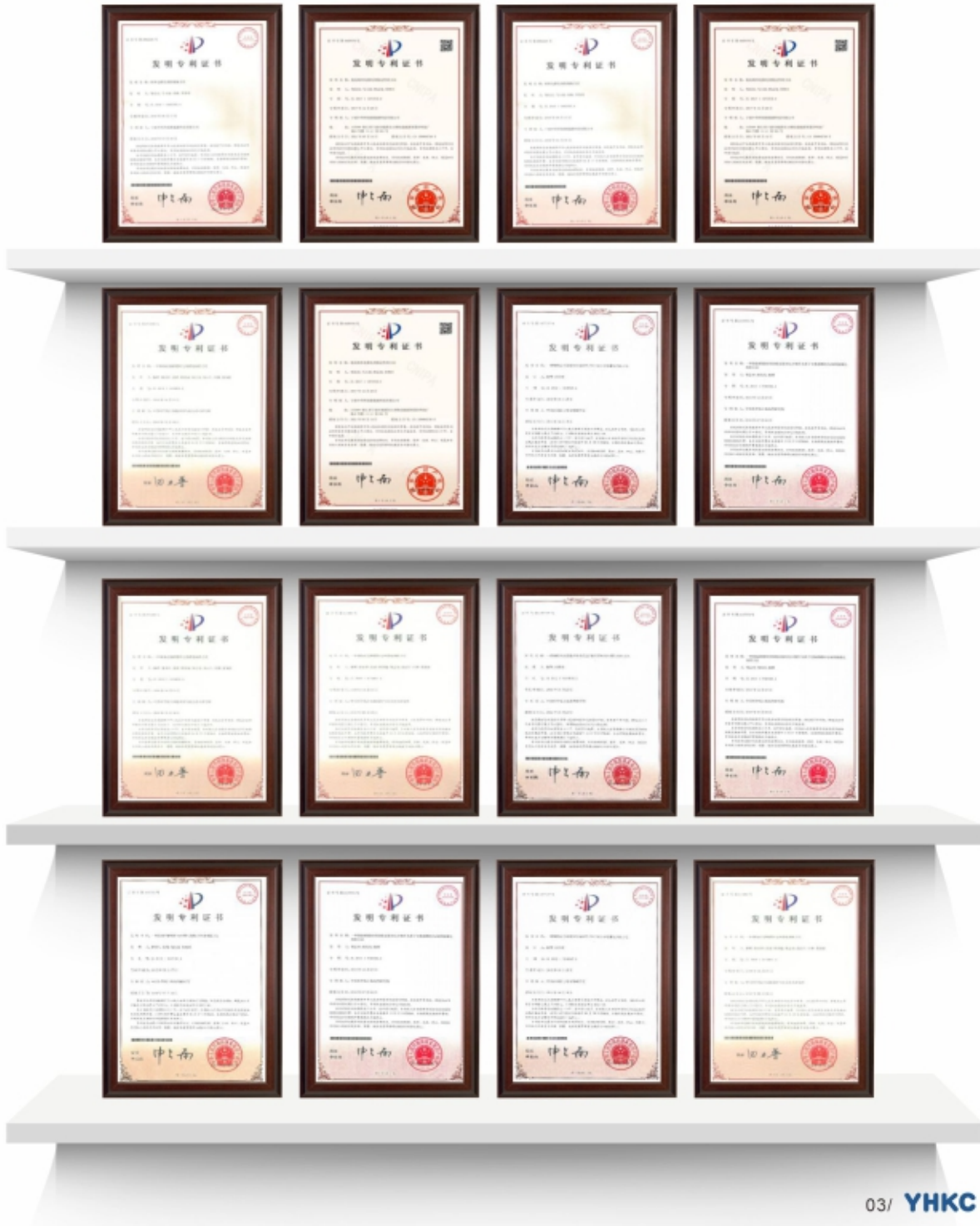






INVENTION PATENT

Over 20 invention patents with independent intellectual property rights





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Air-cooled fuel cell
Direct methanol fuel cell Membrane Electrode Assembly

05 Other nano noble metal catalysts

06 PEM water electrolyzer

07 PEM Water Electrolysis System

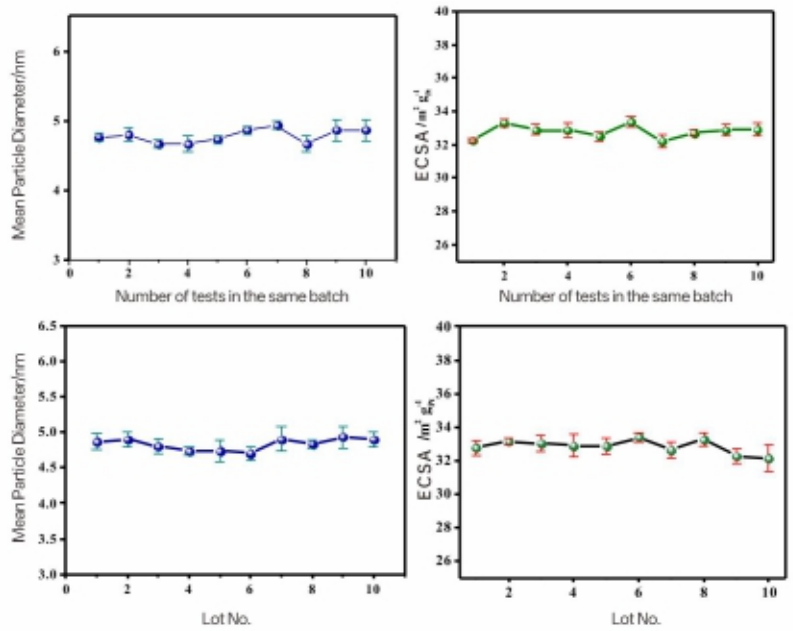
08 Cathode closed air -cooled fuel cell Stack

Nano Precious Metal Catalyst

Catalysts	Specifications	Compositions	Average Particle Size (nm)	Electrochemical Active Area (ECSA, m²/g)	Mass Activity (MA, mA/mg)	Specific Surface Area (m²/g)
Pt/C	HiCaP40	40wt.%Pt, 60wt.%C	2.8	95	130	140
	HiCaP50	50wt.%Pt, 50wt.%C	3.3	85	130	110
	HiCaP60	60wt.%Pt, 40wt.%C	3.3	90	135	296
	HiCaP70	70wt.%Pt, 30wt.%C	3.3	55	134	85
PtCo	HiCaPC55	51wt.%Pt, 3wt.%Co, 45wt.%Ct	5.2	65	350	110
Pt Black	HiCaP100	>95 wt.%Pt	5.0	≥32	80	35
Ir-Black	HiCaI100	>95 wt.%Ir	4.5	120	180	50
IrO2	HiCaIO100	~80 wt.%Ir	7.0	30	240	120
Ir/C	HiCaI20	20wt.%Ir,80wt.%C	2.5	180	600	500
	HiCaI85	85wt.%Ir,15wt.%C	4.5	85	190	145
PtRu Black	HiCaPR100	65wt.%Pt, 35wt.%Ru	4.5	30	190	30
PtRu/C	HiCaPR60	40wt.%Pt,20wt.%Ru,40wt.%C	3.5	85	/	110/290
Ru-Black	HiCaR100	>95wt.%Ru	7.0	40	200	80

Technical Features and Advancement

Breakthrough in key technologies for kilogram-scale single-batch preparation with consistent composition and structure. The metal loading capacity and particle size can be precisely controlled.

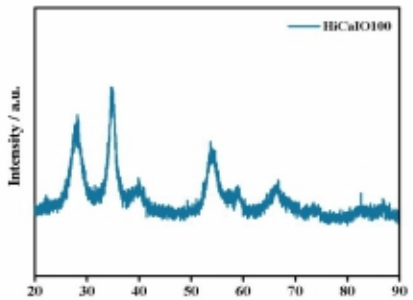


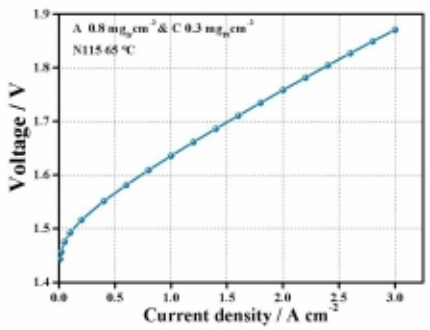
PEM Hydrogen Production – Anode Catalyst

Catalyst	Model	Composition	Average particle size (nm)	Specific surface area (m^2/g)	Application scenario
Unsupported Iridium Oxide	HiCalO100	~80wt.% Ir	7.0	120	PEM anode catalyst
Unsupported Iridium Black	HiCal100	> 95wt.% Ir	4.5	50	PEM anode Catalyst

HiCalO100

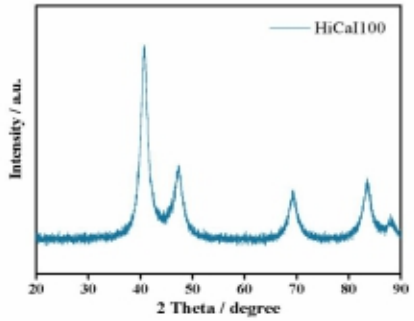


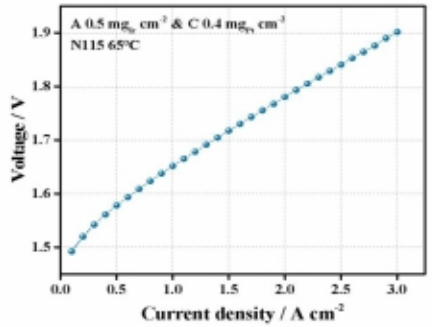




HiCal100





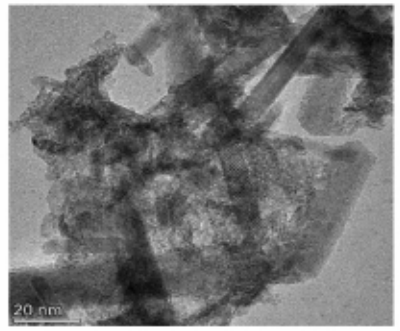


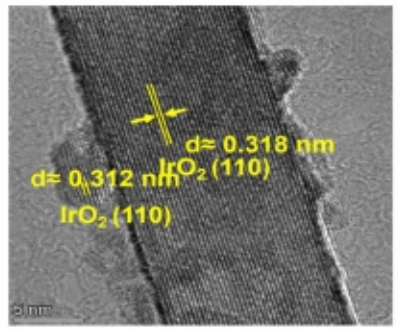
Unsupported Iridium Oxide HiCalO100

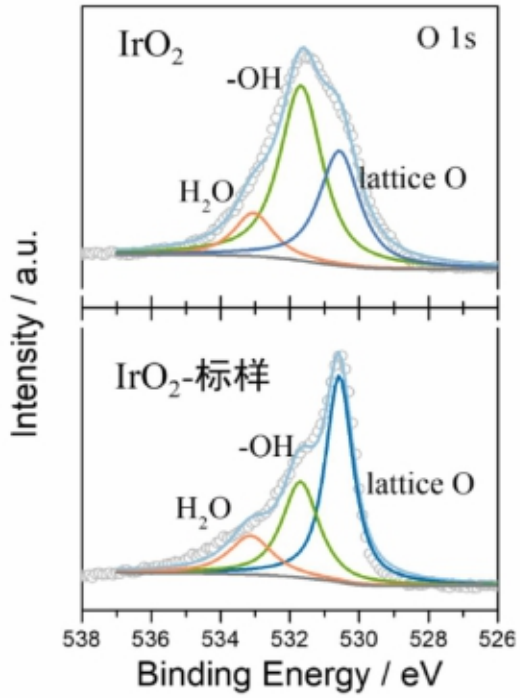
Model	D10/μm	D50/μm	D90/μm
HiCalO100	0.129	0.331	0.923

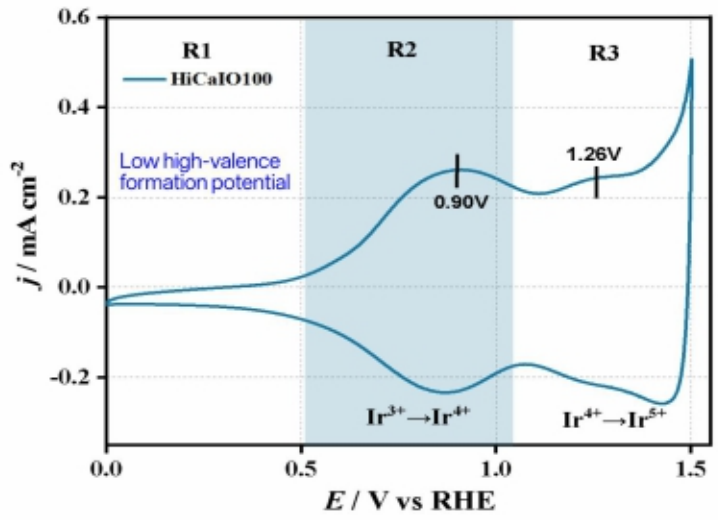
Technical Features:

High dispersibility, high OH content; composite structure ensures high activity and high stability.





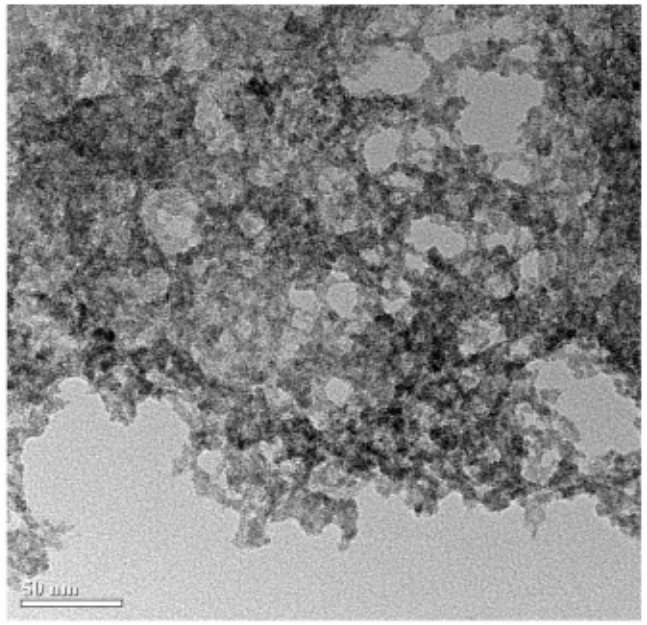


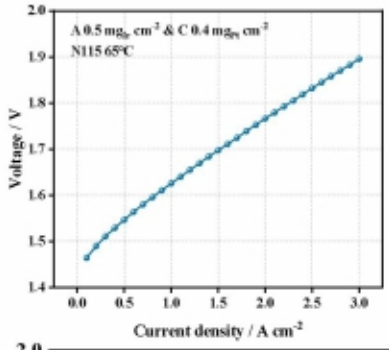


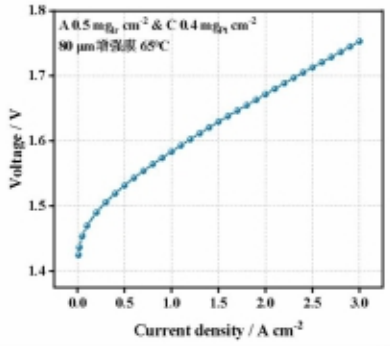
New Generation Iridium Oxide Catalyst HiCalO100

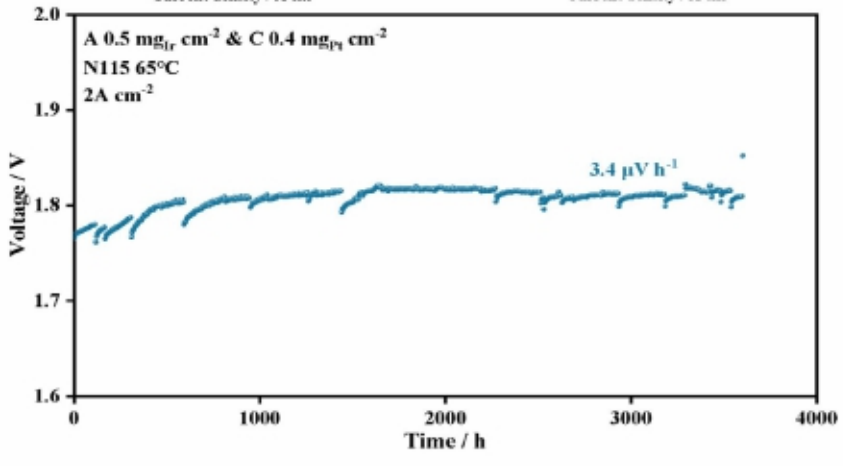
Technical Features:

Unique nanostructure, low iridium loading (≤0.5 mglr cm^{-2}), long-term stability.







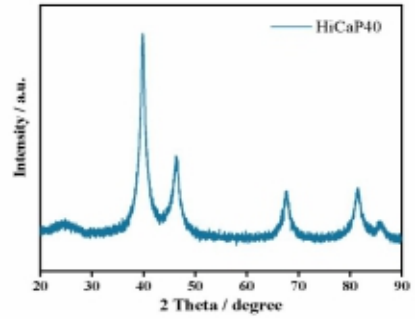


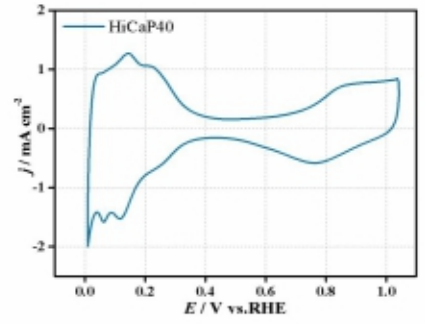
PEM Hydrogen Production — Cathode Catalyst

Catalyst	Model	Composition	Average particle size (nm)	Specific surface area (m^2/g)	Application scenario
Platinum-Carbon Catalyst	HiCaP40	40wt.% Pt, 60wt.%C	2.8	140	PEM anode catalyst
Platinum-Black Catalyst	HiCaP100	> 95wt.% Pt	5.0	35	PEM Hydrogen Production Anode Hydrogen Elimination / PEM Hydrogen Production Catalyst

HiCaP40

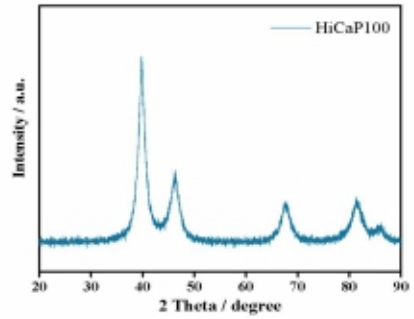


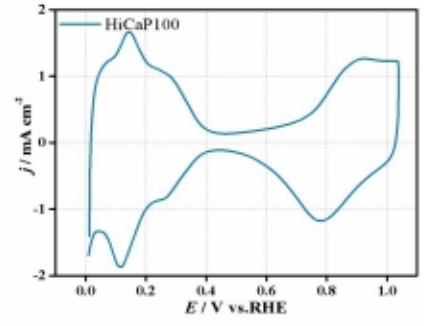




HiCaP100







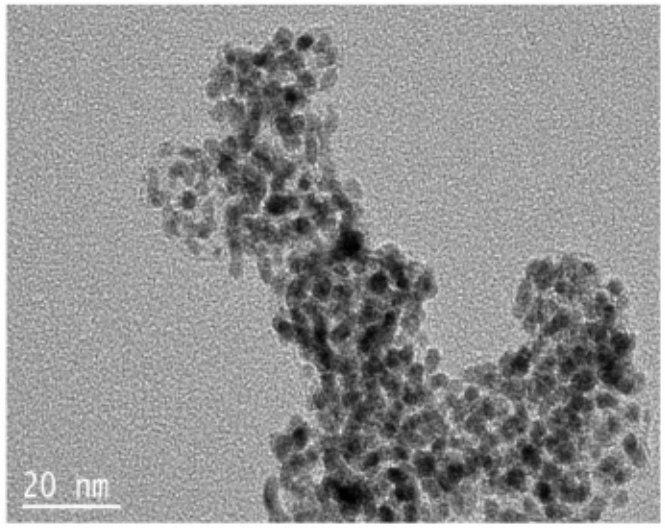
Platinum-Black Catalyst HiCaP100

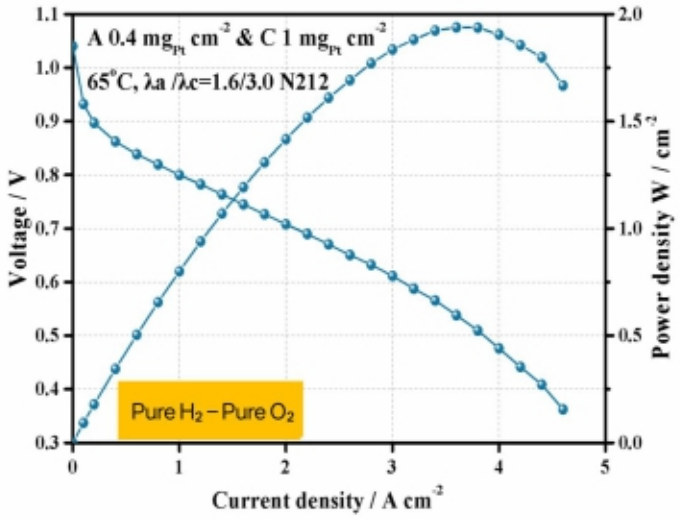
Catalyst	Model	Composition	Average particle size (nm)	Specific surface area (m^2/g)	Application scenario
Platinum-Black Catalyst	HiCaP100	> 95wt.% Pt	2.5	35	PEM Hydrogen Production Anode Hydrogen Elimination Catalyst / PEM Hydrogen Production Catalyst, Pure H_2-O_2 Fuel Cell, Electrochemical Sensor

Model	D10/μm	D50/μm	D90/μm
HiCaP100	0.178	0.425	1.253

Technical Features:

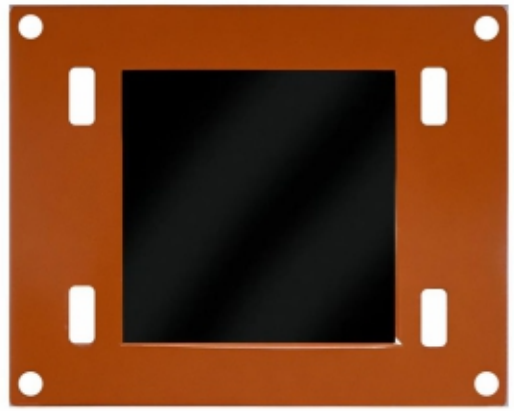
Surface hydroxylation treatment, high dispersibility, high specific surface area, high packing density.

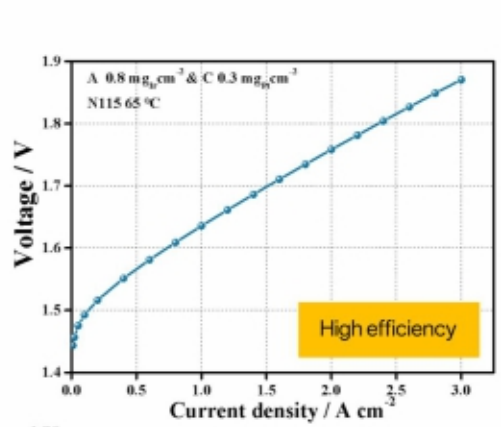


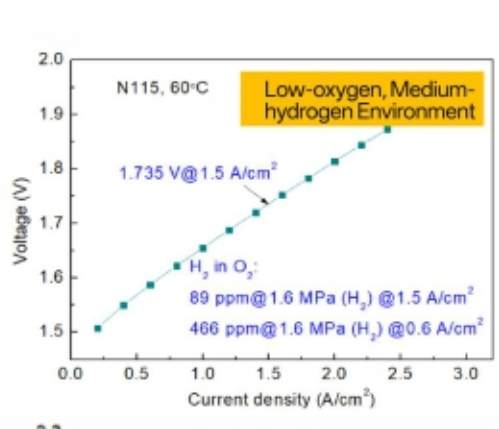


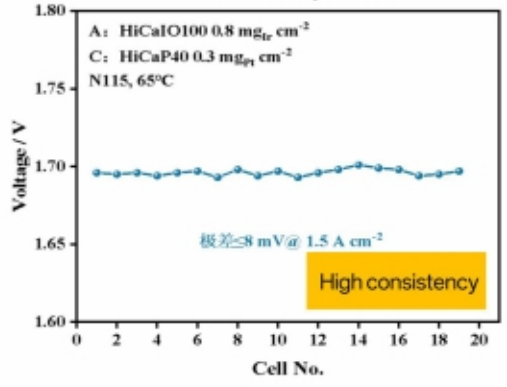
PEM Hydrogen Production — Membrane Electrode Assembly (N115)

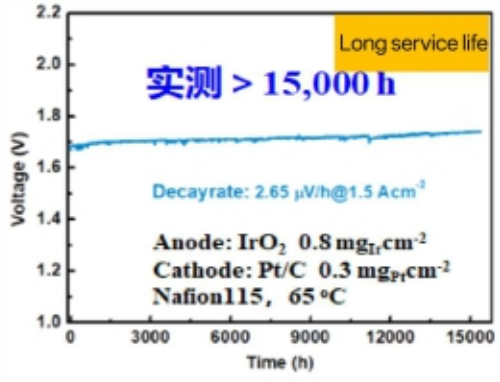
Model	Proton Exchange Membrane	Anode Catalyst	Cathode Catalyst	Performance Indicators
PEM Hydrogen Production Membrane Electrode Assembly	N115	HiCalO100	HiCaP40	1.80 V @ 2 A cm^{-2}





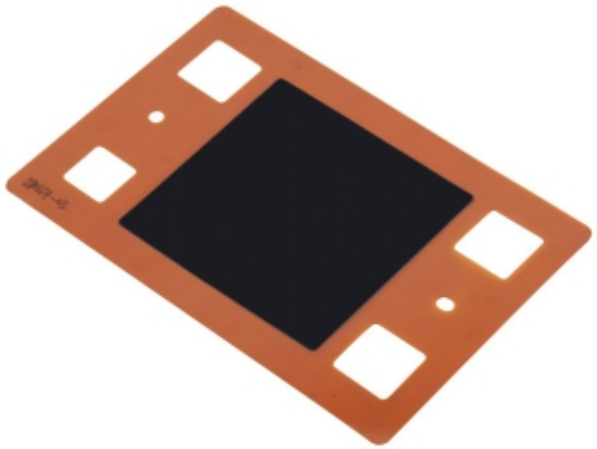


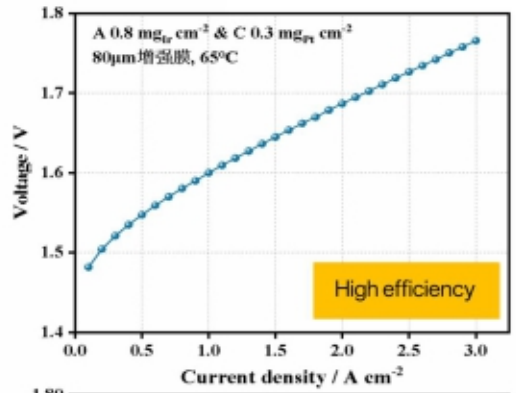


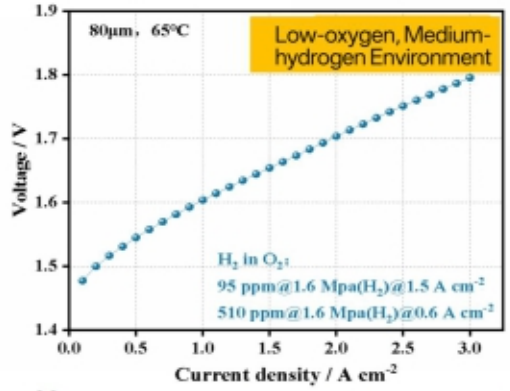


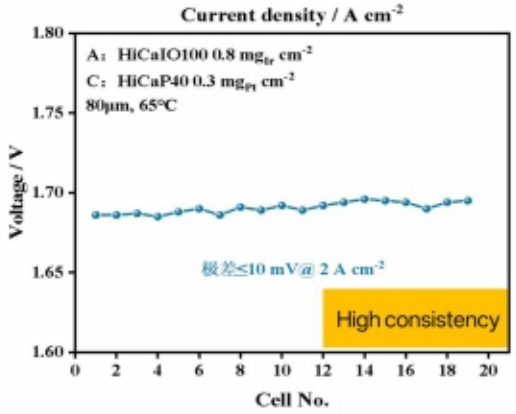
PEM Hydrogen Production – Membrane Electrode Assembly (80μm)

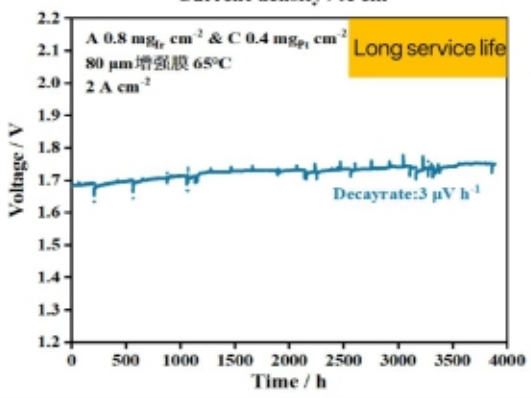
Model	Proton Exchange Membrane	Anode Catalyst	Cathode Catalyst	Performance Indicators
PEM Hydrogen Production Membrane Electrode Assembly	80μmReinforced membrane	HiCalO100	HiCaP40	1.72 V @ 2 A cm^{-2}











Standard test fixture





- Unique platinum-plated flow field and high-purity titanium diffusion layer;
- High-precision positioning and easy to maintain tight sealing;
- The test results are highly accurate and have good stability.



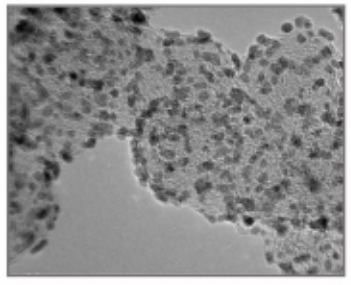
- Dedicated high-performance and long-durability membrane electrode;
- Easy to learn, practical, and with good comparability;
- Support customization of effective area and component characteristics.

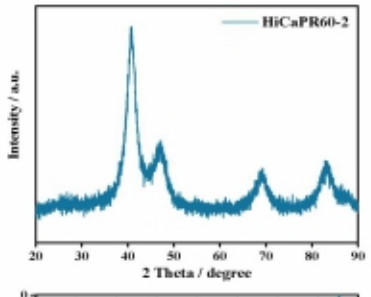
AEM Water Electrolysis — Catalysts

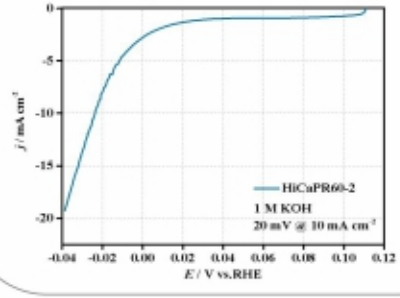
Catalyst	Model	Composition	Average particle size (nm)	Specific surface area (m^2/g)	Application scenario
PtRu Alloy Supported on Carbon	HiCaPR60-2	40wt.% Pt,20wt.% Ru, 40wt.%C	3.5	290	AEM Hydrogen Production Cathode Catalyst
Ni-Fe-Ce catalyst	HiCaNFC	60wt.% Ni,30wt.% Fe, 10wt.%CeO_2	25	35	AEM Hydrogen Production Anode Catalyst

HiCaPR60-2



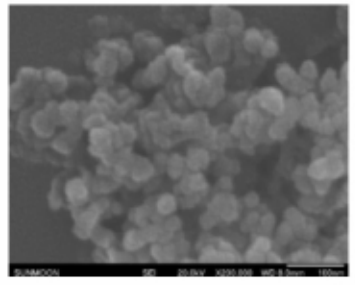


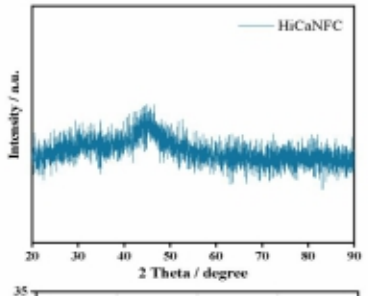


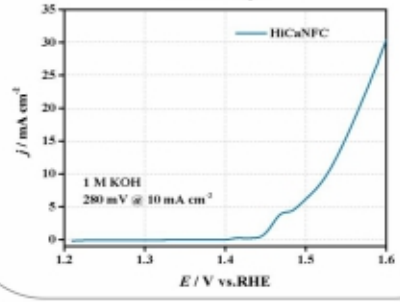


HiCaNFC



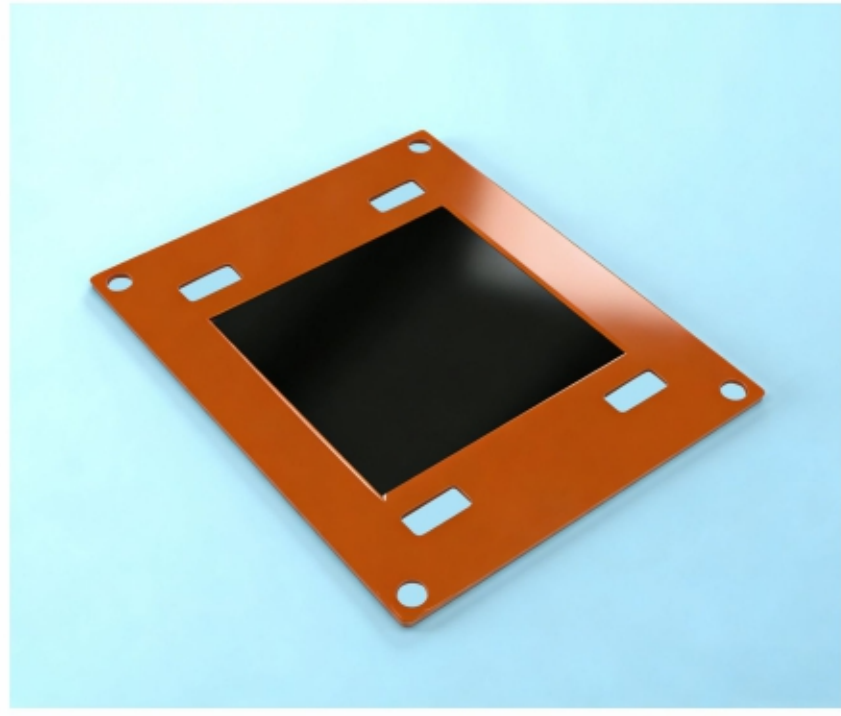


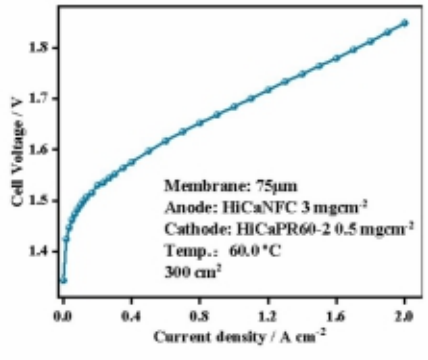


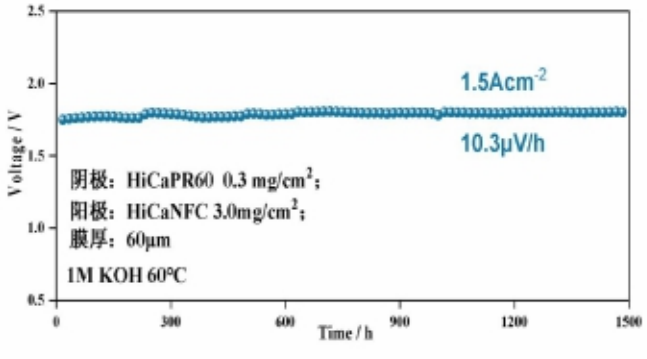


AEM Hydrogen Production — Membrane Electrode Assembly

Model	Proton Exchange Membrane	Anode Catalyst	Cathode Catalyst	Performance Indicators
AEM Hydrogen Production Membrane Electrode Assembly	75μm	HiCaNFC	HiCaP60-2	1 A cm-2@ > 0.6 V

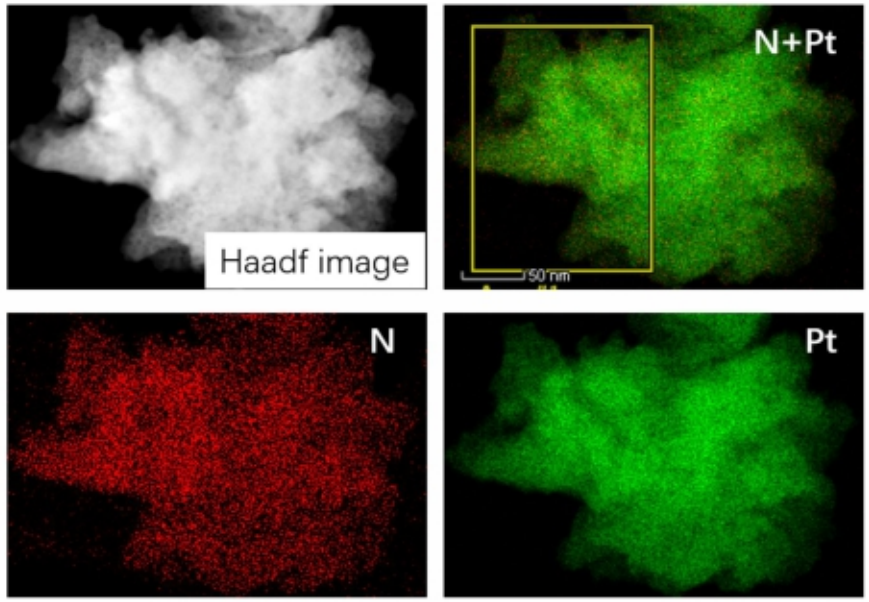


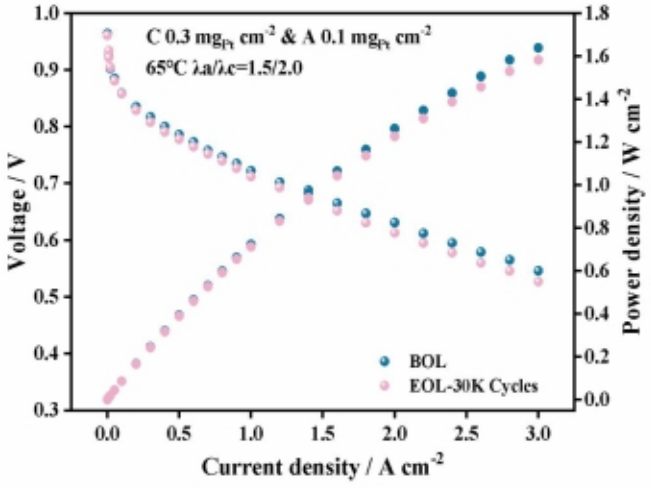




Fuel Cell
– Carbon-supported Platinum Catalyst

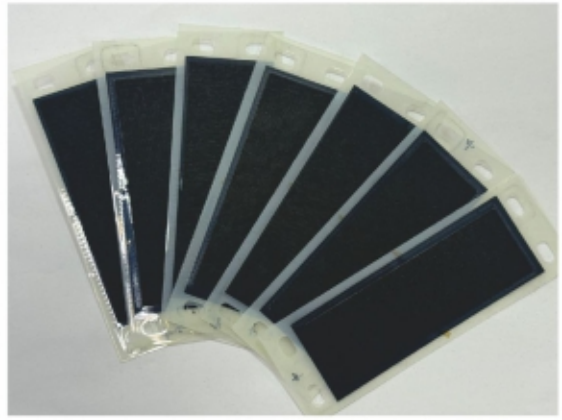
Catalyst	Model	Composition	Average particle size(nm)	Mass Specific Activity (mA/mg)	Specific surface area(m^2/g)	Application Scenarios
Platinum-Carbon Catalyst	HiCaP10	10wt.% Pt, 90wt.%C	2. 5	140	240	Fuel cells, PEM water electrolysis, electrochemical sensors, electrochemical deoxygenation and oxygen control
	HiCaP20	20wt.% Pt, 80wt.%C	2. 5	140	200	
	HiCaP40	40wt.% Pt, 60wt.%C	2. 8	130	140	
	HiCaP50	50wt.% Pt, 50wt.%C	3.0	130	110	
	HiCaP60	60wt.% Pt, 40wt.%C	3.0	135	290	
	HiCaP70	70wt.% Pt, 30wt.%C	3.2	135	85	

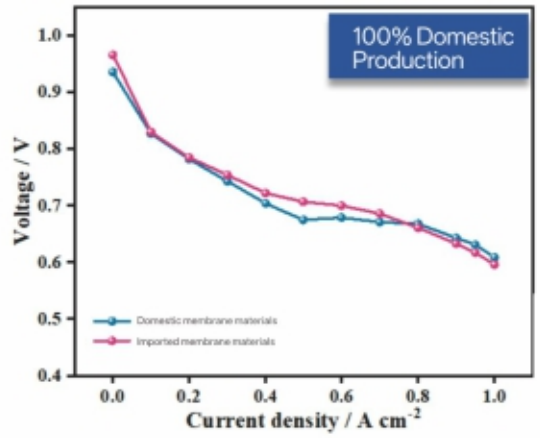


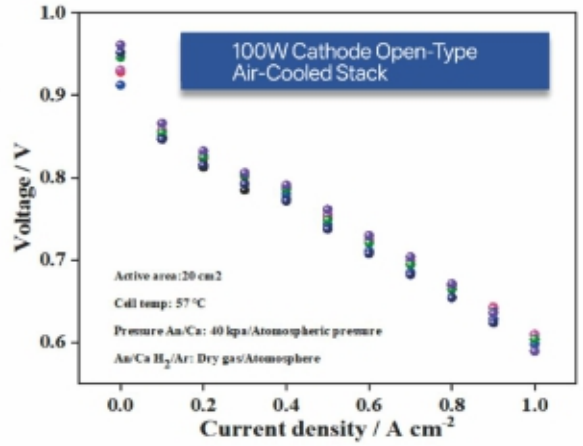


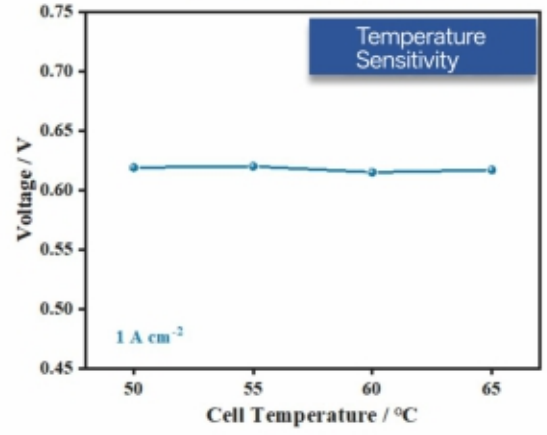
Air-cooled Fuel Cell
– Membrane Electrode Assembly

Model	Proton Exchange Membrane	Anode Catalyst	Cathode Catalyst	Performance Indicators
Air-cooled fuel cell membrane electrode assembly	Gore M765.08	HiCaP40	HiCaP60	1 A cm-2@ > 0.6 V
	China-made membrane materials			



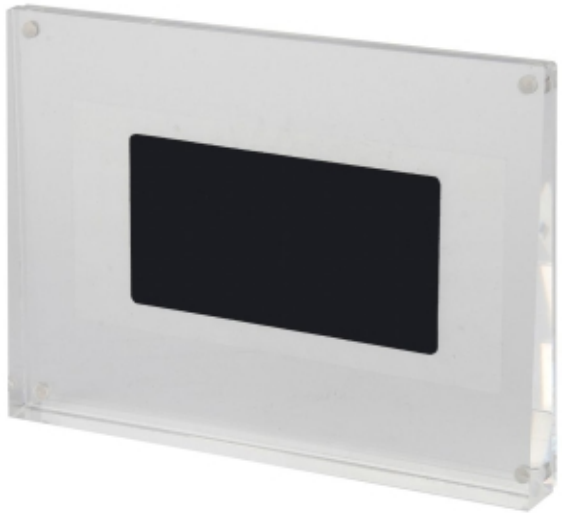


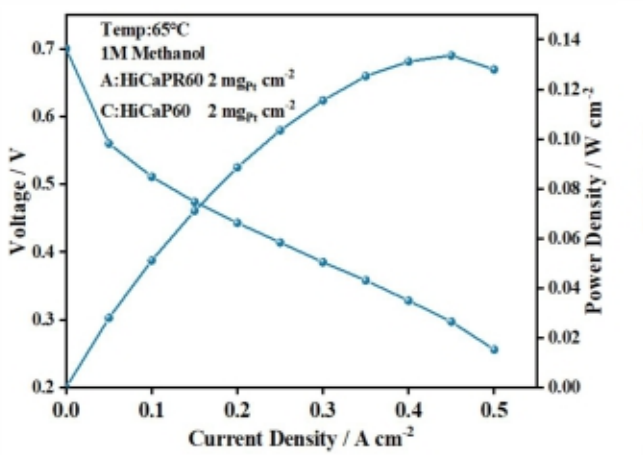


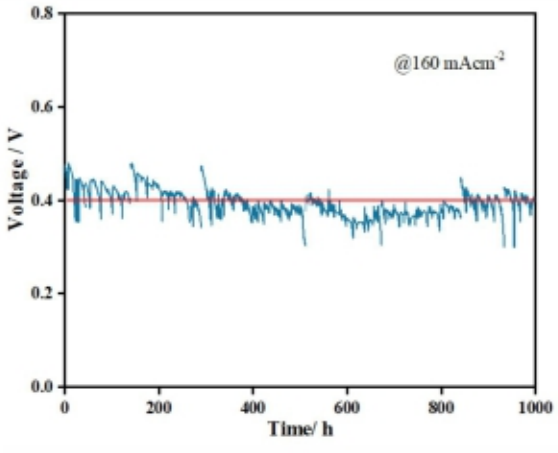


Direct Alcohol Fuel Cell – Membrane Electrode Assembly

Model	Proton Exchange Membrane	Anode Catalyst	Cathode Catalyst	Performance Indicators
Direct alcohol fuel cell membrane electrode assembly	N115	HiCaPR60	HiCaP60	0.43V @ 200 mA cm^{-2}







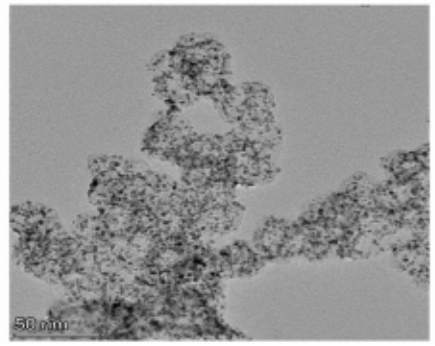
Other nano noble metal catalysts

Platinum-Ruthenium Alloy Catalyst

Catalyst	Model	Composition	Average particle size (nm)	Specific surface area (m^2/g)	Application scenario
Platinum-Ruthenium Alloy Black	HiCaPR100	65wt.% Pt, 35wt.%Ru	4.5	30	AEM hydrogen production cathode catalyst, direct alcohol fuel cell, CO poisoning resistance, electrochemical sensor
PtRu Alloy Supported on Carbon	HiCaPR60	40wt.% Pt, 20wt.%Ru, 40wt.% C	4.0	110/290	AEM hydrogen production cathode catalyst, direct alcohol fuel cell, CO poisoning resistance, electrochemical sensor

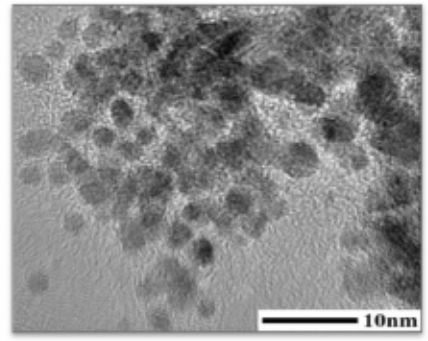
HiCaPR60





HiCaPR100





Other nano-precious metal Catalyst



Iridium-Carbon

Ruthenium Oxide



Ruthenium Black

Platinum-Nickel



Platinum-Cobalt



Palladium-Carbon



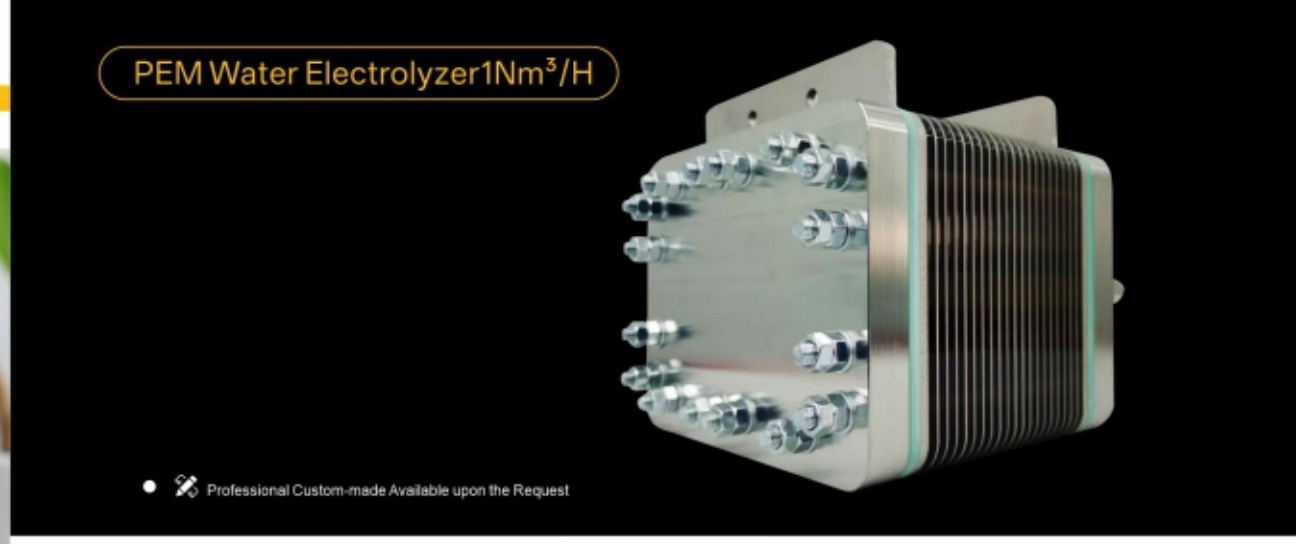
Iridium-Ruthenium Black





PEM Electrolyzer





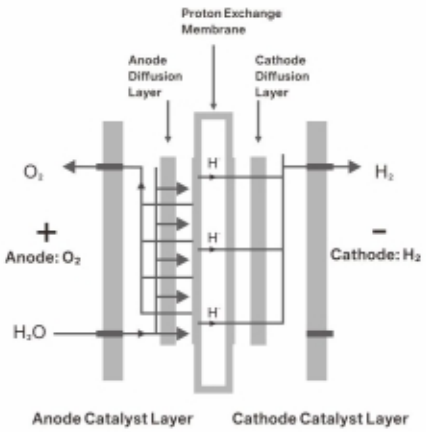
Long lifetime

High electrolysis efficiency

High hydrogen purity (99.999%)

High performance

High safety



Independently master the core technologies for PEM water electrolysis

PEM water-electrolysis technology can accommodate the intermittency of renewable energy sources such as photovoltaic and wind energy. It is a premier technology for coupling with renewable energy to produce green hydrogen and one of the crucial technologies for advancing clean energy landscape.

Compared with traditional alkaline water electrolysis and other technologies, PEM water-electrolysis features high efficiency, high-purity hydrogen, rapid start-up, and strong fluctuating adaptability (well -suited to couple renewable energy). Moreover, the compact structural design significantly saves the space and is highly adaptable for scenarios with limited space.

CASI New Energy Technology (Ningbo) Co., Ltd. meticulously selects the raw materials, fine-optimizes production processes, and rigorously controls every step of the workflow, striving for perfection at every juncture. Through continuous efforts, the company aims to become a global leading supplier of nanostructured electrocatalysts and PEM based MEAs, contributing to the development of the green hydrogen industry and facilitating the global energy structure's transition towards cleanliness and sustainability.

Model		KA1
Hydrogen Production Rate		1Nm³/H
Oxygen Production Rate		0.5Nm³/H
Constant Current (A)		120
Circulating Water Temperature (°C)		25-70
Circulating Water Flow		1.2 L/H
Circulation Mode		Water pump circulation
Hydrogen Purity (%)		99.99
Water Electrolysis Method		MEA
Maximum Pressure Resistance		1.6Mpa
TDS	Anode Water	≤1
	Cathode Water	/
Single - cell Voltage (v)		1. 75-2.5
Dimensions (excluding Lugs)		184*173*167
Effective Area of MEA		125.5*80.5(20)
Application Fields		Fuel cell system testing, Fuel cell backup power supply, Combined heat and power, Semiconductor, Multi-energy complementary independent micro - grids, etc.

Independent R & D and production: Superior materials, Exquisite processes

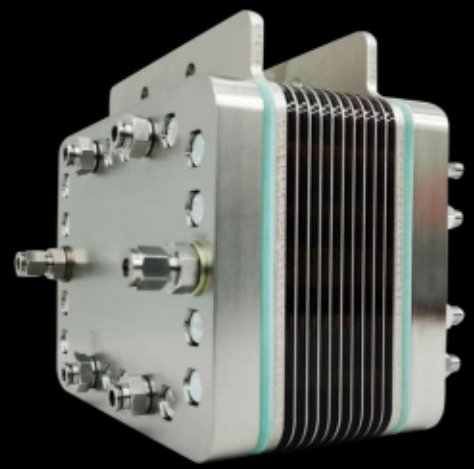
High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer0.6Nm³/H



- Professional Custom-made Available upon the Request

Model	KA0.60
Hydrogen Production Rate	0.6Nm³/H
Oxygen Production Rate	0.3Nm³/H
Constant Current (A)	120
Circulating Water Temperature (°C)	25-70
Circulating Water Flow	1L/H
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	1.6Mpa
TDS – Anode Water	≤1
TDS – Cathode Water	/
Single - cell Voltage (v)	1. 75-2.5
Dimensions (excluding Lugs)	184*173*126
Effective Area of MEA	125.5*80.5(12)
Application Fields	Fuel cell system testing, Fuel cell backup power supply, Combined heat and power, Semiconductor, Multi-energy complementary independent micro - grids, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer6000ml/Min



- Professional Custom-made Available upon the Request

Model	KB6000
Hydrogen Production Rate	6000ml/Min
Oxygen Production Rate	3000ml/Min
Constant Current (A)	80
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	3000ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	1Mpa
TDS – Anode Water	≤1
TDS – Cathode Water	/
Single - cell Voltage (v)	1. 75-2.5
Dimensions (excluding Lugs)	176*126*97
Effective Area of MEA	120*80 (10)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer4800ml/Min



Professional Custom-made Available upon the Request

Model	KB4800
Hydrogen Production Rate	4800ml/Min
Oxygen Production Rate	2400ml/Min
Constant Current (A)	80
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	2600ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	1Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1. 75-2.5
Dimensions (excluding Lugs)	176*126*84
Effective Area of MEA	120*80(8)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer3600ml/Min



Professional Custom-made Available upon the Request

Model	KB3600
Hydrogen Production Rate	3600ml/Min
Oxygen Production Rate	1800ml/Min
Constant Current (A)	80
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	2000ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	1Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1. 75-2.5
Dimensions (excluding Lugs)	176*126*71
Effective Area of MEA	120*80 (6)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer2400ml/Min



Professional Custom-made Available upon the Request

Model	KB2400
Hydrogen Production Rate	2400ml/Min
Oxygen Production Rate	1200ml/Min
Constant Current (A)	80
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	600ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	1Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	176*126*59
Effective Area of MEA	120*80(4)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R&D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer2000ml/Min



Professional Custom-made Available upon the Request

Model	KC2000
Hydrogen Production Rate	2000ml/Min
Oxygen Production Rate	1000ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	380ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*79
Effective Area of MEA	56*56 (10)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R&D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer1800ml/Min



- Professional Custom-made Available upon the Request

Model		KC1800
Hydrogen Production Rate		1800ml/Min
Oxygen Production Rate		900ml/Min
Constant Current (A)		30
Circulating Water Temperature (°C)		25-45
Circulating Water Flow		360ml/Min
Circulation Mode		Water pump circulation
Hydrogen Purity (%)		99.99
Water Electrolysis Method		MEA
Maximum Pressure Resistance		0.8Mpa
TDS	Anode Water	≤1
	Cathode Water	/
Single - cell Voltage (v)		1.75-2.5
Dimensions (excluding Lugs)		93*93*73
Effective Area of MEA		56*56(9)
Application Fields		The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer1600ml/Min



- Professional Custom-made Available upon the Request

Model		KC1600
Hydrogen Production Rate		1600ml/Min
Oxygen Production Rate		800ml/Min
Constant Current (A)		30
Circulating Water Temperature (°C)		25-45
Circulating Water Flow		360ml/Min
Circulation Mode		Water pump circulation
Hydrogen Purity (%)		99.99
Water Electrolysis Method		MEA
Maximum Pressure Resistance		0.8Mpa
TDS	Anode Water	≤1
	Cathode Water	/
Single - cell Voltage (v)		1.75-2.5
Dimensions (excluding Lugs)		93*93*67
Effective Area of MEA		56*56 (8)
Application Fields		The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer1400ml/Min



- Professional Custom-made Available upon the Request

Model	KC1400
Hydrogen Production Rate	1400ml/Min
Oxygen Production Rate	700ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	360ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS – Anode Water	≤1
TDS – Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*61
Effective Area of MEA	56*56(7)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

- Independent R&D and production: Superior materials, Exquisite processes
- High purity hydrogen, Long service life
- High pressure resistance: Capable of producing high-pressure hydrogen
- High current density, Low power consumption, stable voltage
- Safe and reliable, Stable performance

PEM Water Electrolyzer1200ml/Min



- Professional Custom-made Available upon the Request

Model	KC1200
Hydrogen Production Rate	1200ml/Min
Oxygen Production Rate	600ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	360ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS – Anode Water	≤1
TDS – Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*55
Effective Area of MEA	56*56 (6)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

- Independent R&D and production: Superior materials, Exquisite processes
- High purity hydrogen, Long service life
- High pressure resistance: Capable of producing high-pressure hydrogen
- High current density, Low power consumption, stable voltage
- Safe and reliable, Stable performance

PEM Water Electrolyzer1000ml/Min



- Professional Custom-made Available upon the Request

Model	KC1000
Hydrogen Production Rate	1000ml/Min
Oxygen Production Rate	500ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	240ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*49
Effective Area of MEA	56*56(5)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer800ml/Min



- Professional Custom-made Available upon the Request

Model	KC800
Hydrogen Production Rate	800ml/Min
Oxygen Production Rate	400ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	200ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*43
Effective Area of MEA	56*56 (4)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R & D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer600ml/Min



- Professional Custom-made Available upon the Request

Model	KC600
Hydrogen Production Rate	600ml/Min
Oxygen Production Rate	300ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	150ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*37
Effective Area of MEA	56*56(3)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

- Independent R&D and production: Superior materials, Exquisite processes
- High purity hydrogen, Long service life
- High pressure resistance: Capable of producing high-pressure hydrogen
- High current density, Low power consumption, stable voltage
- Safe and reliable, Stable performance

PEM Water Electrolyzer400ml/Min



- Professional Custom-made Available upon the Request

Model	KC400
Hydrogen Production Rate	400ml/Min
Oxygen Production Rate	200ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	80ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*31
Effective Area of MEA	56*56 (2)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

- Independent R&D and production: Superior materials, Exquisite processes
- High purity hydrogen, Long service life
- High pressure resistance: Capable of producing high-pressure hydrogen
- High current density, Low power consumption, stable voltage
- Safe and reliable, Stable performance

PEM Water Electrolyzer200ml/Min



Professional Custom-made Available upon the Request

Model	KC200
Hydrogen Production Rate	200ml/Min
Oxygen Production Rate	100ml/Min
Constant Current (A)	30
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	70ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	93*93*23
Effective Area of MEA	56*56 (1)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R&D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer300ml/Min



Professional Custom-made Available upon the Request

Model	CA300
Hydrogen Production Rate	300ml/Min
Oxygen Production Rate	150ml/Min
Constant Current (A)	20
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	80ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	74*74*39
Effective Area of MEA	53.5*53.5(2)
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R&D and production: Superior materials, Exquisite processes

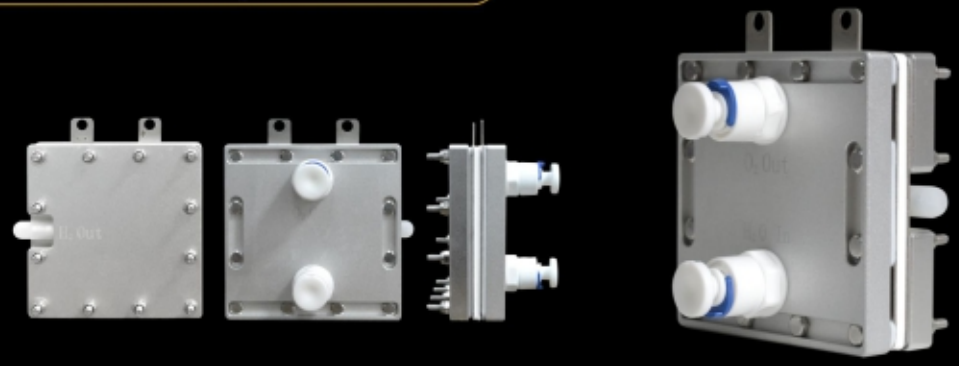
High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer150ml/Min



- Professional Custom-made Available upon the Request

Model	CA150
Hydrogen Production Rate	150ml/Min
Oxygen Production Rate	75ml/Min
Constant Current (A)	20
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	70ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	74*74*23
Effective Area of MEA	53.5*53.5
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R&D and production: Superior materials, Exquisite processes

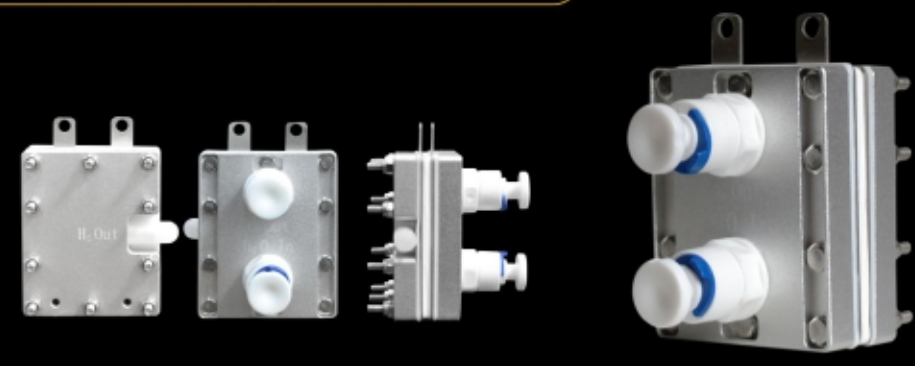
High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolyzer50-100ml/Min



- Professional Custom-made Available upon the Request

Model	CA050
Hydrogen Production Rate	50-100ml/Min
Oxygen Production Rate	25ml/Min
Constant Current (A)	7
Circulating Water Temperature (°C)	25-45
Circulating Water Flow	60ml/Min
Circulation Mode	Water pump circulation
Hydrogen Purity (%)	99.99
Water Electrolysis Method	MEA
Maximum Pressure Resistance	0.8Mpa
TDS — Anode Water	≤1
TDS — Cathode Water	/
Single - cell Voltage (v)	1.75-2.5
Dimensions (excluding Lugs)	58*48*23
Effective Area of MEA	43*33
Application Fields	The fuel and carrier gas for gas chromatography (GC), reaction gas for electrolytic conductivity detector (ELCD) and atomic emission spectrometry detector (ED), hydrogen-rich water generator; hydrogen-oxygen generator, etc.

Independent R&D and production: Superior materials, Exquisite processes

High purity hydrogen, Long service life

High pressure resistance: Capable of producing high-pressure hydrogen

High current density, Low power consumption, stable voltage

Safe and reliable, Stable performance

PEM Water Electrolysis System



High-pressure & high-purity H_2

Hydrogen leakage detection and safety protection function

High-effeciency & wide-load adaptability

Single-cell voltage measurement Precise hydrogen production monitoring

Cold/warm start High-efficiency & Low-energy consumption

Model	YHKC-HST-0.6-1.6M	YHKC-HST-1-1.6M	YHKC-HST-0.6-1.6M
Hydrogen production rate	0.6Nm³/H（10L/Min）	1Nm³/H（16.67NL/Min）	2Nm³/H（33.33NL/Min）
Oxygen production rate	0.3Nm³/H	0.5Nm³/H	1Nm³/H
Input power	3.9KW	5KW	13KW
Operating temperature	5-45℃		
Input voltage	380V AC3PH 50Hz		
Feed water quality	≥10MΩ.cm		
Hydrogen side operating pressure	1.6Mpa		
Oxygen side operating pressure	1atm		
Nominal hydrogen purity	≥99.99% (GB/T 4554, dry basis)		
Nominal hydrogen dew point	<-18℃		
Hydrogen content in oxygen	<60ppm		
Equipment dimension (LDH)	~0.8*0.7*1.3m		
Weight (Kg)	~160KG	~166KG	~180KG
Application field	Fuel cell system test, fuel cell backup power supply, combined heat and power (CHP), semiconductor, high-purity antimony, diamond, iron smelting, glass, multi-energy complementary independent microgrid, etc.		

Cathode closed air-cooled fuel cell Stack



	Stack Model		YHKC-CA-350	YHKC-CA-2100	YHKC-CA-3000	YHKC-CA-5000
Basic Information	Product Type|		Closed-cathode air-cooled fuel cell stack			
	Bipolar Plate Type		Graphite bipolar plate			
	Number of Single Cells	PCS	29	60	80	83
	Voltage Range	V	14.5-27.3	33.6-58.8	44.8-78.4	46.8-81.4
	Rated Power	W	350	2100	3000	5000
	Rated Current	A	20	55.8	60.3	97.2
	Rated Voltage	V	20.2	37.80	50.40	51.00
	Rated Operating Temperature of Stack	℃	62±1	52±3	52±3	52±3
	Exhaust Interval at Rated Point	S	9	8	8	8
	Solenoid Valve Orifice Diameter	MS	300	400	600	600
Fuel	Hydrogen Purity	%	≥99.99%	≥99.99%	≥99.99%	≥99.99%
	Operating Pressure	KPA	45-65	45-65	45-65	45-65
	Hydrogen Consumption	L/min	5.1	35	50.4	50.8
Oxidant / Coolant	Coolant Air					
	Air Inlet Pressure	KPA	8-10	20±3	18±3	20±3
	Mass	kg	1.40±0.1	/	/	/
	Dimension	mm	113.5*99.4*154.8	189*127*268	189*127*325	1310*132*460
	Hydrogen Inlet & Outlet Port Specification	--	Pneumatic Quick Connector	PC10-02 Pneumatic Quick-Connect Fitting	PC10-02 Pneumatic Quick-Connect Fitting	PC10-02 Pneumatic Quick-Connect Fitting
	Air Inlet & Outlet Port Specification	--	Pneumatic Quick Connector	PC14-04 Pneumatic Quick-Connect Fitting	PC14-04 Pneumatic Quick-Connect Fitting	PC14-04 Pneumatic Quick-Connect Fitting
	Aambient Operating Temperature	℃	-5℃—40℃	-5℃-40℃	-5℃-40℃	-5℃-40℃
	Ambient Humidity RH	%	20% - 95%	20%-95%	20%-95%	20%-95%