

News Release

April 18, 2024
Proterial, Ltd.

Proterial to Exhibit its Products at Hannover Messe 2024, One of the World’s Largest Trade Fairs for the Manufacturing Industry

Proterial, Ltd. (Koto-ku, Tokyo; hereinafter, “Proterial”) will take part in Hannover Messe 2024 to showcase its hydrogen-related products, which are attracting growing attention in recent years, with a view to helping achieve a decarbonized society. One of the world’s leading industrial trade fairs, Hannover Messe 2024 will take place from April 22 to April 26, 2024 in Hannover, Germany.

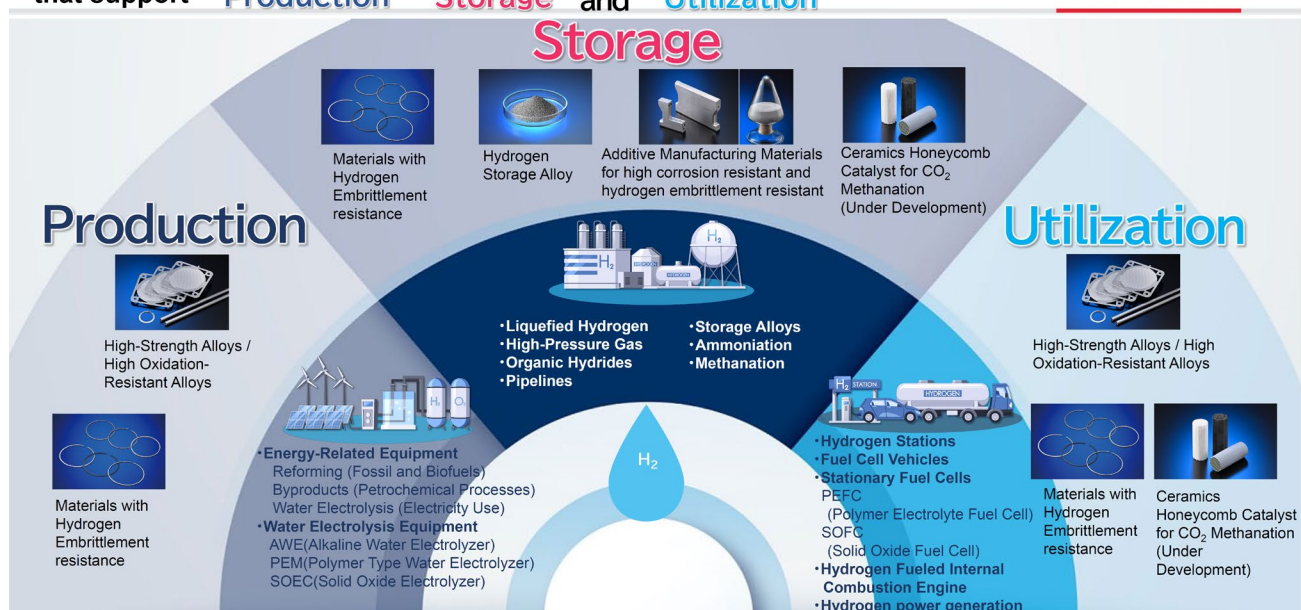
1. Concept

As a “green enabler,” Proterial aims to help our customers solve environmental challenges through the provision of our products, thereby promoting a sustainable transformation of the global environment and society. Recognizing the overriding importance of reducing carbon dioxide (CO₂) emissions, we are focusing on the achievement of a hydrogen society as a way to address this issue.

In line with this approach, Proterial will exhibit its lineup of products that support “Production,” “Storage” and “Utilization” of hydrogen at Hydrogen + Fuel Cells Europe, the trade fair’s special exhibition area for hydrogen and fuel cell technologies. By presenting products that help our customers in Europe and around the world solve problems in achieving a hydrogen society, we contribute to the move toward a decarbonized society.

Proterial's lineup of hydrogen-related products that support “Production” “Storage” and “Utilization”

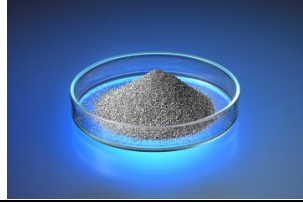
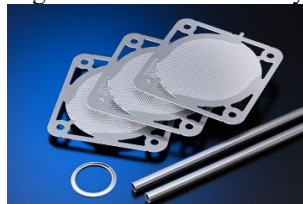


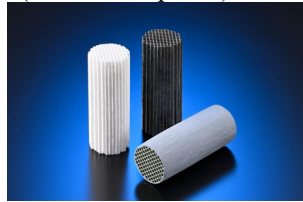
PROTERIAL



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Toyosu Prime Square, 5-6-36 Toyosu, Koto-ku, Tokyo 135-0061, Japan
www.proterial.com/e

2. Products to be displayed

	Product	Applications	Features
(1)	Hydrogen storage alloy 	Hydrogen storage tank Hydrogen storage canister	<ul style="list-style-type: none"> No expensive nickel or cobalt are used. Uses an alloy of titanium and iron, which has been difficult to process in the past. The volume can be compressed to less than 1/1000 of that of gas for low-pressure storage, and the risk of hydrogen leakage is low.
(2)	High-strength alloys High oxidation-resistant alloys 	SOFC (Solid oxide fuel cells) SOEC (Solid oxide electrolysis cells)	<ul style="list-style-type: none"> Our original ferritic stainless steel developed as a material for interconnectors in SOFC (solid oxide fuel cells) and SOEC (solid oxide electrolysis cells).
(3)	Materials with hydrogen embrittlement resistance 	Hydrogen compressors Hydrogen engines	<ul style="list-style-type: none"> The products are backed by our long track record as materials for ICE (internal combustion engine vehicles). In addition to hydrogen embrittlement resistance, the materials have high hardness and excellent corrosion resistance.
(4)	Additive manufacturing materials with high corrosion resistance and hydrogen embrittlement resistance 	High-pressure hydrogen gas facilities Parts for heat exchangers, etc.	<ul style="list-style-type: none"> Have mechanical properties and high corrosion resistance equivalent to Ni-based superalloys (Alloy 718), and reduce the strength loss in hydrogen environment. High corrosion resistance in oxidizing and non-oxidizing environments. In fields where high corrosion resistance is required, the products contribute to reduced risk of shutdowns due to improved reliability, reduced frequency of parts replacement, shortened lead times in parts manufacturing, and reduced CO₂.
(5)	Ceramics Honeycomb Catalyst for CO ₂ Methanation* (under development) 	Methanation Plant	<ul style="list-style-type: none"> Ceramics Honeycomb Catalyst for CO₂ methanation plant, designed for use in heat exchanger reactors and adiabatic reactors. This new honeycomb catalyst achieves high CO₂ conversion to methane while significantly reducing the amount of rare and expensive Ni metals.

*CO₂ methanation: Refers to synthesizing methane from hydrogen and carbon dioxide. The carbon dioxide produced by burning the synthetic methane as fuel is equal to the carbon dioxide used to synthesize the methane, causing no additional carbon dioxide. Therefore, this technology is attracting attention as a way to promote carbon neutrality.

3. Presentation of products at the technical seminar

Proterial will provide product explanations at a technical seminar during Hannover Messe 2024.

(1) Time and date: 10:15 a.m. to 10:30 a.m. (CET), April 24, 2024

(2) Theme: Introduction of metallic materials in the hydrogen field

(3) For more information:

<https://www.hannovermesse.de/event/introduction-of-high-performance-materials-in-the-hydrogen-field/vor/108039>

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4. Overview of Hannover Messe 2024

- (1) Period: April 22, 2024 to April 26, 2024
- (2) Venue: Hannover Exhibition Grounds (Hannover, Germany); Held in physical space and online (Proterial's booth will be set up within the Hydrogen + Fuel Cells Europe special exhibition area.)
- (3) Organizer: Deutsche Messe AG
- (4) Description: One of the world's largest international exhibitions for the manufacturing industry. It is also an exhibition platform for the German government to promote decarbonization and Industry 4.0. It covers automation, motion and digital technologies, energy-related technologies including hydrogen and fuel cells, industrial components and materials, vacuum technology, compressors, intralogistics, and basic technologies at the research stage.
- (5) Official website: <https://www.hannovermesse.de/en/>
- (6) Proterial's booth: Hall 13, Stand B21
<https://www.hannovermesse.de/exhibitor/proterial-ltd-/N1537852>

Media Inquiries: Corporate Communications Dept.

https://www.cntct.proterial.com/contact/publish/inquiry_eng?g=01&c=001-01

Customer Inquiries: <https://www.proterial.com/e/contact/>

■ About PROTERIAL

PROTERIAL

“Proterial” reflects the essence of our corporate philosophy, which consists of three elements: Mission: “Make the best quality available to everyone;” Vision: “Leading sustainability by high performance;” and Values: “Unflinching integrity” and “United by respect.” It combines “**pro-**” with the word “**material.**”

“Pro-” represents our “three pros”:

- **Professional — work that exceeds expectations**
- **Progressive — a spirit that keeps challenging**
- **Proactive — an enterprising attitude**

“Material” refers to the high-performance materials that our original technologies produce and underpinned by the three pros. With our focus on solving customer issues and bringing new levels of value, we promise to contribute to the realization of a sustainable society through the products and services that embody our philosophy.

■ Proterial, Ltd. — Company Overview

Established: April 1956

Head office: Toyosu Prime Square, 5-6-36 Toyosu, Koto-ku, Tokyo 135-0061, Japan

Capital: 310 million yen (as of March 31, 2023)

Representative: Sean M. Stack

Representative Director, Chairman, President and Chief Executive Officer (CEO)

Sales revenue: 1,118.9 billion yen (Term ended March 2023)

History: 1910: Founded as Tobata Foundry Co.

1937: Merged with Hitachi, Ltd.

1956: Established separately as Hitachi Metals Industries, Ltd.

2023: Company separated from the Hitachi Group, and renamed from Hitachi Metals, Ltd. to Proterial, Ltd.

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