

## TANAKA Memorial Foundation Announces Recipients of Precious Metals Research Grants

Professor Haruichi Kanaya of Kyushu University presented the Umekichi Tanaka Award for research on bonding wire with electromagnetic wave shielding function, and Professor Seiji Ogo of Kyushu University presented the Gold Award for the development of precious metal hydrogen energy electron carriers

The development of bonding wires that contribute to highly reliable high-frequency wireless communication circuits and the creation of a hydrogen-derived electron carrier that enables direct use of electrons when needed received awards

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The TANAKA Memorial Foundation's Representative Director, Hideya Okamoto, announced the recipients of the FY2023 Precious Metals Research Grants.

Following a rigorous screening process, the Umekichi Tanaka Award, for 10 million yen, was presented to Professor Haruichi Kanaya of Kyushu University, and the Gold Award, for 2 million yen, was presented to Professor Seiji Ogo of Kyushu University. In addition, one research project received the Silver Award, and three Young Researcher Awards were presented.

The TANAKA Memorial Foundation undertakes programs designed to foster developments in new precious metal fields while contributing to the advancement of science, technology, and socio-economics for the overall enrichment of society. The research grant program was launched in FY1999 and has continued each year since with the goal of supporting the various challenges of the "new world opened up by precious metals." This year, the program's 25th year, the Umekichi Tanaka Award was established in honor of the founder, Umekichi Tanaka, who was instrumental in expanding the industrial use of precious metals, and researchers were invited to apply for the program in a wide range of fields where precious metals can make contributions to the research and development of new technologies, and research and development can be applied to precious metals. As a result, a total of 210 applications were received, and a total of 19 research grants of 19.9 million yen was awarded.

The names of the recipients of the Umekichi Tanaka Award and Gold Award, their research, and the reasons for their selection are below.

### ■Umekichi Tanaka Award

#### **Professor Haruichi Kanaya of Kyushu University**

#### **Research on bonding wire with electromagnetic wave shielding function**

This research engages in development to make it possible to use bonding wire in the high-frequency band, which was not previous possible, by coating the surface of bonding wire with a magnetic thin film containing precious metals. It is an extremely groundbreaking advancement that further applies the unprecedented phenomenon of magnetic thin films under study. It is expected to be applied to general electric wires, and the great potential for the expansion of precious metals into new material fields was also highly rated.

## ■Gold Award

### Professor Seiji Ogo of Kyushu University

#### Development of precious metal hydrogen energy electron carriers

This research seeks to create a single hydrogen-derived electron (precious metal complex) that can extract electrons from hydrogen under mild conditions and directly use the electrons when needed, as an unprecedented concept. It was highly rated not only as innovative energy carriers for the realization of carbon neutrality, but also as a potential for direct use in various catalytic reactions.

One Silver Award, three Young Researcher Awards, and 13 TANAKA Special Awards were also granted. The recipients and an overview of the Precious Metals Research Grants are indicated below. Applications for the FY2024 research grants are scheduled to open in the fall.

### List of FY2022 Precious Metals Research Grants Recipients

<b>Umekichi Tanaka Award (1 award: 10 million yen)</b>	
Haruichi Kanaya, Professor Kyushu University	Research on bonding wire with electromagnetic wave shielding function
<b>Gold Award (1 award: 2 million yen)</b>	
Seiji Ogo, Professor Kyushu University	Development of precious metal hydrogen energy electron carriers
<b>Silver Award (1 award: 1 million yen)</b>	
Hitoshi Ogihara, Professor Saitama University	Pioneering of green electrolysis processes based on precious metal catalysts
<b>Young Researcher Awards (3 awards: 1 million yen each)</b>	
Aki Kitaori, Research Associate The University of Tokyo	Realization of next-generation computational magnetic materials using platinum compounds
Naoki Inomata, Associate professor Tohoku University	Creation of unlabeled sensing technology for biogas using terahertz metamaterials
Shohei Tada, Assistant Professor Hokkaido University	Elucidation of the inhibition mechanism of side reactions in the synthesis of methanol from CO <sub>2</sub> using precious metal catalysts
<b>TANAKA Special Awards (13 awards: 300,000 yen each)</b>	
Tatsuya Joutsuka, Lecturer Ibaraki University	Rie Umetsu, Professor Tohoku University
Shinji Koyama, Associate professor Gunma University	Kowa Koida, Associate professor Toyohashi University of Technology
Makoto Hasegawa, Professor Chitose Institute of Science and Technology	Tsukasa Torimoto, Professor Nagoya University
Shogo Nakasumi, Team Leader National Institute of Advanced Industrial Science and Technology	Kazuya Suzuki, Assistant Principal Researcher Japan Atomic Energy Agency
Koji Yamamoto, Lecturer Shujitsu University	Takamasa Mori, Professor Hosei University
Yukihiro Shimogaki, Professor The University of Tokyo	Akira Nagaoka, Associate Professor University of Miyazaki
Toshinori Fujie, Associate Professor Tokyo Institute of Technology	

(Affiliated organizations and job titles correct as of time of presentation)

## Overview of the 2023 Precious Metals Research Grants

### [Conditions]

Research content that falls under any of the following

- New technology related to precious metals (new materials, processing methods, process development, etc.)
- Research that brings about innovative evolution in product development (new functions, process development, computational science, etc.)
- Research and development of new products using precious metals
- Effective technologies for creating a well-balanced and prosperous society
- \* Precious metal refers to eight elements of platinum, gold, silver, palladium, rhodium, iridium, ruthenium and osmium.
- \* If development is conducted jointly (or planned to be) with other material manufacturers, please indicate so.
- \* Products that have already been commercialized, put to practical use, or that are planned are not eligible.

**[Grant Amounts]** (Maximum amounts from a grant pool of 20 million yen)

-Umekichi Tanaka Award (New)	10 million yen
-Gold Award	2 million yen
-Silver Award	1 million yen
-Young Researcher Award	1 million yen
-TANAKA Special Award (Previously Encouragement Award)	300,000 yen

- \* The grant amount is treated as a scholarship donation.
- \* Awards may not be granted in some cases.
- \* The Platinum Award was discontinued from this year.

### [Eligible Candidates]

- Personnel who belong to (or work for) educational institutions in Japan (universities, graduate schools, or technical colleges) or public and related research institutions may participate.
- \* As long as the applicant is affiliated with a research institution in Japan, the base of activity can be in Japan or overseas.
- \* The Young Researcher Awards are for researchers under the age of 37 as of April 1, 2023.

### [Application Period]

- 9am, September 4, 2023 (Mon) - 5pm, November 30, 2023 (Thu)

### [Inquiries Concerning the Research Grant Program]

Precious Metals Research Grants Office

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TANAKA Memorial Foundation website: <https://tanaka-foundation.or.jp>

### ■TANAKA Memorial Foundation

Organization Name: TANAKA Kikinzoku Memorial Foundation

Address: 22F Tokyo Building, 2-7-3 Marunouchi, Chiyoda-ku, Tokyo

Representative: Hideya Okamoto (Special Advisor, TANAKA Holdings Co., Ltd.)

Incorporated: 2015

Purpose of Business: To provide grants for research related to precious metals to contribute to the development and cultivation of new fields for precious metals, and to the development of science, technology, and the social economy.

Areas of Business: Provision of grants for scientific and technological research related to precious metals. Recognition of excellent analysis of precious metals and holding of seminars and other events.

### ■TANAKA Holdings Co., Ltd.

Headquarters: 22F, Tokyo Building, 2-7-3 Marunouchi, Chiyoda-ku, Tokyo

Founded: 1885

Incorporated: 1918\*

Representative: Koichiro Tanaka, Group CEO

Capital: 500 million yen

Net sales of consolidated group: 611,100 million yen (as of the fiscal year ended December 2023)

Employees in consolidated group: 5,355 employees (as of the fiscal year ended December 2023)

Main businesses of the group: The holding company at the center of TANAKA PRECIOUS METALS is responsible for strategic and efficient group management and management guidance to group companies.

Website: <https://www.tanaka.co.jp/english> (TANAKA PRECIOUS METALS)

<https://tanaka-preciousmetals.com/en> (Industrial products)

\* Tanaka Holdings adopted a holding company structure on April 1, 2010.

<Press Inquiries>

TANAKA Holdings Co., Ltd.

<https://tanaka-preciousmetals.com/en/inquiries-for-media/>