March 29, 2012

Tanaka Precious Metals
Tanaka Holdings Co., Ltd.

Tanaka Precious Metals Group Announces Recipients of "Precious Metals Research Grants"

Professor Masato Kurihara of Yamagata University granted "Platinum Award" providing the maximum amount of 5 million yen - High recognition given to the development of innovative silver particles aimed at mass production of printed electronics

Tanaka Holdings Co., Ltd. (a company of Tanaka Precious Metals, Head office: Chiyoda-ku, Tokyo; President & CEO: Hideya Okamoto) today announced the recipients of the Tanaka Precious Metals' 2011 "Precious Metals Research Grants." 14.8 million yen in grants were awarded to 29 research projects, including the Platinum Award providing the maximum grant of 5 million yen awarded to Professor Masato Kurihara of Yamagata University, and the Gold Award providing a grant of 2 million yen awarded to Assistant Professor Kunihiro Kaihatsu of Osaka University.

This research grant program has been implemented every year since 1999 to support the various challenges faced in the "new world opened up by precious metals" by providing grants to Japanese institutions conducting research and development using precious metals. In the 13th year of the program, there were 118 applications to a call for research in the automotive, energy, environmental, electric/electronic, medical, bio and nano fields based on the theme of "research and development aimed at the practical application of new technologies and products to which precious metals can make a contribution."

As a result of an impartial examination of the applications, the Platinum Award granting the maximum amount of 5 million yen was awarded to Professor Masato Kurihara of Yamagata University for "2nd generation silver nanoparticles and innovative manufacturing technology aimed at the printed electronics era." The grant was awarded in high recognition of the significantly improved low-temperature sintering performance of precious metal nanoparticle paste used in conductive ink in the field of printed electronics for manufacturing electronic components with printing technology, and the innovative manufacturing technology able to mass-produce silver particles at low cost on a practical level. It is expected to make great contributions to next-generation electronics technology and Japanese manufacturing.

The Gold Award granting 2 million yen was awarded to Assistant Professor Kunihiro Kaihatsu of Osaka University for "Development of rapid diagnosis kit for Tamiflu-resistant virus using hairpin peptide nuclear acids." Quick and easy detection of genetic mutation sites will become more and more important in the diagnosis of drug-resistant bacteria and viruses in the future. Recognition was given to the creative application of peptide nucleic acid and precious metal nanoparticles in the development of a diagnostic device for detecting these mutation sites.

In addition, eight Silver Awards and 19 MMS Awards were given, as shown along with the overview of the research grants shown below. Applications for the 2012 research grants are scheduled to open in autumn.

List of Recipients of the 2011 Precious Metals Research Grants

Platinum Award (1 award, 5 million yen)	
Masato Kurihara, Professor, Yamagata University	2nd generation silver nanoparticles and innovative manufacturing technology aimed at the printed electronics era
Gold Award (1 award, 2 million yen)	
Kunihiro Kaihatsu, Assistant Professor, Osaka University	Development of rapid diagnosis kit for Tamiflu-resistant virus using hairpin peptide nuclear acids
Silver Awards (8 awards, 500,000 yen each)	
Naotsugu Ito, Professor, Utsunomiya University	Manufacture of highly durable palladium thin film and purification of hydrogen using metal paste
Taro Kinumoto, Assistant Professor, Oita University	Creation of next-generation carbon carriers for improving the performance of precious metal catalysts for use in polymer electrolyte membrane fuel cells
Takeyasu Saito, Associate Professor, Osaka Prefecture University	Improvement of properties of heat conductive plastic through the implementation of Ag-carbon nanotube high-density compound filler
Yuko Yamamoto, Special Researcher, National Institute of Advanced Industrial Science and Technology	Practical implementation of precious metal particle crystals: Development of SERS biochip for bioactive molecules able to detect 1 in $300x10^{20}$
Makoto Hasegawa, Professor, Chitose Institute of Science and Technology	Review of operating characteristics of Ag and Ag materials as an electrical contact material
Shigeki Nakagawa, Professor, Tokyo Institute of Technology	Thin film technology for improving the performance of Ru (ruthenium) intermediate layers in the development of ultra-high capacity granular magnetic tape
Atsushi Iizuka, Assistant Professor, Tohoku University	Separation of precious metal compound colloids using ultrasonic microbubble flotation
Yamato Hayashi, Associate Professor, Tohoku University	Improved performance and increased added value of metallic nanoparticles for electronic mounting using solid-liquid reaction fields and precious metals

MMS Awards (19 awards, 200,000 yen each)	
Toshihito Otake, Associate Professor, Aichi University of Technology	Takehiro Tokuno, Doctorate Program, Osaka University
Shunichi Fukuzumi, Professor, Osaka University	Takao Yamamoto, Professor, Osaka University
Shuji Fujii, Lecturer,, Osaka Institute of Technology	Yuta Nishina, Assistant Professor, Okayama University
Yukina Takahashi, Assistant Professor, Kyushu University	Takuma Yasuda, Associate Professor, Kyushu University
Yasuo Koizumi, Professor, Shinshu University	Takahiro Kondo, Assistant Professor, Tsukuba University
Tsuyoshi Michinobu, Assistant Professor, Tokyo Institute of Technology	Hironobu Ozawa, Assistant Professor, Tokyo University of Science
Yuichi Negishi, Lecturer, Tokyo University of Science	Mika Gamonishitani, Professor, Toyo University
Nobuyuki Zettsu, Associate Professor, Nagoya University	Norio Inui, Associate Professor, University of Hyogo
Shinya Maenosono, Associate Professor, Japan Advanced Institute of Science and Technology	Yukatsu Shichibu, Assistant Professor, Hokkaido University
Yasutaka Matsuo, Associate Professor, Hokkaido University	

Overview of the 2011 Precious Metals Research Grants

[Fields]

Automotive, energy, environmental, electric/electronic, medical, bio, nano-tech, etc.

* Precious metals must play an important role in commercialization and/or practical application of the research.
* Development related to precious metals must provide a breakthrough in the progress of the commercialization and/or practical application.

[Subject]

Research and development aimed at the practical application of new technologies and products to which precious metals can make a contribution

[Grant amounts]

- Platinum Award: 5 million yen (1 award)
- Gold Award: 2 million yen (1 award)
- Silver Awards: 500,000 yen (several awards)
  * In principle, the grant covers one year of research.
  * The grant is treated as a scholarship donation.
  * Each award is given to research deemed to make a particularly large contribution to practical implementation, and awards may not be granted in some cases.

[Eligible candidates]

Personnel who belong to educational research institutions or public research institutes in Japan

[Application period]

September 1, 2011 (Thu) - 5pm, November 30, 2011 (Wed)

[Applications]

118

[Conditions]

- Applicants may be required to exchange information with Tanaka Precious Metals about product development, technology development and guidance through the research.
- Clearly state if any joint research is being performed with other precious metal producers (including planned).
  * Excludes research that has already been commercialized or for which there are such plans.
  * Excludes fundamental research such as analysis, evaluation and production technology.
  * Students must obtain approval from the person responsible for their laboratory in order to submit an application.

[Inquiries concerning the research grant program]

Precious Metals Research Grants Office
MMS Section, Tanaka Kikinzoku Hanbai K.K.
22F TOKYO BUILDING, 2-7-3 Marunouchi, Chiyoda-ku, Tokyo 100-6422
E-mail: tki-contact (at) ml.tanaka.co.jp
Official website: http://prexnet.jp/

■**Tanaka Holdings Co., Ltd. (Holding company of Tanaka Precious Metals**)

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

Representative: Hideya Okamoto, President & CEO

Founded: 1885 Incorporated: 1918 Capital: 500 million yen

Employees in consolidated group: 3,456 (FY2010)

Net sales of consolidated group: 891.0 billion yen (FY2010)

Main businesses of the group:

Manufacture, sales, import and export of precious metals (platinum, gold, silver, and others) and various types of industrial precious metals products. Recycling and refining of precious metals.

Website: http://www.tanaka.co.jp/english (Tanaka Precious Metals),
http://pro.tanaka.co.jp/en (Industrial products)

<About the Tanaka Precious Metals>

Established in 1885, the Tanaka Precious Metals has built a diversified range of business activities focused on the use of precious metals. On April 1, 2010, the group was reorganized with Tanaka Holdings Co., Ltd. as the holding company (parent company) of the Tanaka Precious Metals. In addition to strengthening corporate governance, the company aims to improve overall service to customers by ensuring efficient management and dynamic execution of operations. Tanaka Precious Metals is committed, as a specialist corporate entity, to providing a diverse range of products through cooperation among group companies.

Tanaka Precious Metals is in the top class in Japan in terms of the volume of precious metal handled, and for many years the group has developed and stably supplied industrial precious metals, in addition to providing accessories and savings commodities utilizing precious metals. As precious metal professionals, the Group will continue to contribute to enriching people's lives in the future.

The eight core companies in the Tanaka Precious Metals are as follows.

- Tanaka Holdings Co., Ltd. (pure holding company)
- Tanaka Kikinzoku Hanbai K.K.
- Tanaka Denshi Kogyo K.K.
- Tanaka Kikinzoku Jewelry K.K.
- Tanaka Kikinzoku Kogyo K.K.
- Tanaka Kikinzoku International K.K.
- Electroplating Engineers of Japan, Limited
- Tanaka Kikinzoku Business Service K.K.