



Masao Horiba Awards 堀場雅夫賞

Technical Field Selected for 2024 Masao Horiba Awards:

Analytical and Measurement Technologies for a Clean Water Environment and Sustainable Society

The Masao Horiba Award was established in 2003, to highlight innovative work in analytical measurement technologies. This information is critical to understanding many phenomena and, thus, forms the basis of new scientific research. These properties also form the foundation for the transition of materials to industrial production. For the product and process optimization, these analytical and measurement technologies are indispensable. I hope that the Masao Horiba Award, named after the founder of HORIBA, Ltd., will contribute to illuminating the achievement of researchers who are working hard in the field of analytical and measurement technology. We look forward to receiving many applications for this year's award.

Atsushi Horiba
Chairman & Group CEO
HORIBA, Ltd.

● Eligible fields for 2024 Masao Horiba Awards:

1) Novel Measurement Technologies for Sustainable Water Environment.

(This is relevant to technologies contributing to the resolution of societal challenges by enabling the measurement of substances that were previously unmeasurable and thus lead to clean water environment. For example, technologies for measuring hazardous substances such as marine microplastics.)

2) Novel Water Quality Sensing Technologies & Systems for Sustainable Water Treatment.

(This includes technologies contributing to a sustainable society and recycling.)

Liquid samples, mainly composed of water, including biological specimens, fall within the scope of the application. This covers research on advancing sensing technologies, including increased longevity, miniaturization, energy efficiency, resource conservation, zero emissions, and simplification. However, studies exclusively contributing to the advancement of pathology or medicine are excluded.

● Eligibility of Applicant

An applicant should be a researcher or an engineer at a university or a public research facility worldwide, engaged in research and development in the field described above. The applicant should fulfill one of the following criteria:

- The applicant is expected to achieve outstanding academic or technological inventions or discoveries in research or development in a field eligible for this award.
- The applicant is expected to solve important academic or technological issues in the field eligible for this award.

In consideration of the purpose of this award, a paid employee of a private company at the time of application and the awards ceremony is ineligible for the award.

The potential of the applicant is taken into account and highly evaluated rather than his/her current achievement.

● Incentive

A certificate of commendation will be presented to each recipient of the 2024 Masao Horiba Award at the award ceremony to be held in Kyoto city on October 17, 2024 (Venue to be announced at a later date). A supplementary award which is a research subsidy of JPY1,000,000 yen will be presented in the first year, and the same amount of JPY1,000,000 yen will be presented in the next year. The award and the supplementary award will be given on the condition that the winners accept the invitation to attend the award ceremony and that the winners continue to meet the eligibility requirements described above.

In consideration of the purpose of this award, a paid employee of a private company at the time of the research subsidy receipt is ineligible for the research subsidy.

● Submission Deadline

Application deadline: May 10, 2024

Please visit our website to check the details of the application guideline: <https://www.mh-award.org/en/apply/>

● Screening Committee for the 2024 Masao Horiba Awards

Chairperson:

Susumu Kuwabata Professor, Department of Applied Chemistry, Graduate School of Engineering, Osaka University

Judges:

Paul K. Westerhoff Professor, School of Sustainable Engineering and the Built Environment, School for the Future of Innovation in Society, Arizona State University
Qinghui Huang Associate Professor, College of Environmental Science and Engineering, Tongji University
Akio Imai Research Collaboration Coordinator, Regional Environment Conservation Division, National Institute for Environmental Studies
Madoka Takai Professor, Department of Bioengineering, School of Engineering, The University of Tokyo
Yuichi Ichinari Deputy General Manager, Advanced Technology Development Department, Development Division, HORIBA Advanced Techno Co., Ltd.
Yuji Nishio Senior Meister, Advanced Technology Development Department, Development Division, HORIBA Advanced Techno Co., Ltd.

In recent years, with the environmental changes of our planet, there has been a growing interest in sustainable development in various industries, of which water quality analysis and measurement technologies are becoming increasingly important. Water is the foundation of our life and an indispensable resource in a wide range of areas, including drinking water, agriculture, and industrial activities. Water flows from rivers to the oceans, evaporates from the oceans, falls to the earth's surface as rain and snow, and returns to the oceans through rivers. In our daily lives, we use only a small portion of the water in this never-ending cycle, but there have been numerous occasions in the past when the accumulated impact of human industrial activities has become a major water quality issue.

As our rapidly developing society becomes increasingly concerned about the impact of substances contained in wastewater from industrial activities on the global environment and ecosystems, stricter regulations are inevitable. In addition to new measurement technologies to detect substances that have been difficult to measure in the past, new measurement technologies to quickly and easily detect substances (e.g., microplastics and organic fluorine compounds) that have not yet been established as a means of easy on-site detection, even though they already exist technically as detection methods, are needed to protect clean water and the environment. This new measurement technology will be necessary for the future preservation of a clean water environment.

In addition, upgrading water treatment systems is essential for achieving a sustainable water cycle. Treatment of domestic and industrial wastewater for the purpose of reducing the environmental impact of its discharge, or to maintain a safe drinking quality of river water and groundwater, is necessary to establish a water cycle in any country or region in the world. Water treatment systems are closely related to analysis and measurement in that proper management is achieved by monitoring water quality before and after treatment, and they complement each other. Water quality sensing technology and water quality measurement systems are required to contribute to the advancement of water treatment technology in order to efficiently utilize limited water resources and strengthen the foundation for building a recycling-oriented society.

The 2024 Masao Horiba Awards will be open to the above-mentioned water quality analysis and measurement technologies that are expected to contribute to the conservation of the water environment and are necessary for the creation of a sustainable society. This call also includes advanced research that reduces the environmental burden of conventional water quality analysis and measurement technologies (e.g., miniaturization, resource conservation, and longevity, as well as methods for analyzing and analyzing data to achieve these goals). We welcome applications from researchers and engineers both from and outside of Japan who are eager to advance analytical and measurement technologies to protect all types of water quality around the world.

Masayuki Adachi, Dr. Eng.
President & COO
HORIBA, Ltd.



2023 Award ceremony

[For detailed information, please visit our website.](https://www.mh-award.org/en/)

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