



Masao Horiba Awards 堀場雅夫賞

Call for Application
2010

Message from Dr. Masao Horiba

It is extremely important for scientists and technical experts to understand and clarify substances for which the content, properties and behavior are as yet unknown. Solutions to these challenging problems require analytical instruments which use high-level science and technology. Although research on analytical technologies is extremely important, the necessity for such high-level technologies has not been well recognized among the general public or academic circles. This award has been established in the hope that it will provide a level of encouragement and motivation to academic persons who are working to establish new analytical fundamentals, an area that may be unspectacular but is key to all scientific fields. HORIBA looks forward to receiving many applications for this year's award.

April, 2010,
Dr. Masao Horiba





2010 Masao Horiba Awards

2010 Masao Horiba Awards

In 2003, to mark the 50th anniversary of HORIBA, Ltd., HORIBA Group established an award to recognize young scientist's contribution to analytical science. This award is intended to support scientists, outside the HORIBA Group companies, who are devoting themselves to research and development of innovative technology in analysis and measurement. In addition, it aims to strengthen the position of analytical and measurement technology within the scientific and industrial world. Each year a specified technical field for the award is decided, with a focus on the principles and elemental technologies fostered by HORIBA. The award values unique research and development with the findings and potential that deserves a global recognition.

The target field for the 2010 Masao Horiba Awards is "in situ and continuous measurement of harmful airborne substances affecting human health, safety, and security".

As a result of rapid diffusion rates, transport over long distances, and high chemical reactivity, atmospheric pollutants including chemicals and particulates emitted from various sources have widespread effects on ambient air.

To minimize the damaging impacts that these pollutants have on our lives and health, it is important to develop a better understanding of the chemical reactions and their temporal and spatial characteristics in the atmospheric environment. It has been central to the effort to arrive at better estimates on the effects that pollutants have is the rapid and accurate measurement of the atmospheric concentrations and distributions.

Historically, the early studies of atmospheric pollutants focused on urban air pollution, and the study expanded to analyses of emission sources, transfer pathways, chemical reactions, deposition processes, and models. These works required development of measurement technologies that relied upon air sampling system and subsequent processes that extracted, separated, and concentrated the analyte. The extractive nature of the equipment influenced the measurements, often leading to inaccuracies.

Because of these limitations, faster and more accurate methods were sought. To that end, non-intrusive, in situ, and continuous measurement strategies were developed. These methods eliminated the need to sample physically, thus preserving sample integrity and leading to measurements in real time.

The awards focus on analytical technologies that require no sampling processes for the continuous measurement of harmful airborne substances affecting human health, safety, and security. We enthusiastically encourage applications from those who are actively engaged in research in this field. Considered works may include a range from fundamental to applied investigations.

Dr. Kozo Ishida
Chief of the Organizing Committee for 2010 Masao Horiba Awards
Executive Vice President
HORIBA, Ltd.



Guidelines for 2010 Masao Horiba Awards

Outline

The purpose of this award is to encourage and recognize scientists and engineers with relatively short research careers who are achieving distinguished results in the field of analytical science and technology. We cordially invite applications from researchers all over the world who are enthusiastically engaged in original research and development at universities or public research facilities.

Target Technology Fields

The selected field for the 2010 Masao Horiba Awards is the technology for “in situ and continuous measurement of harmful airborne substances affecting human health, safety, and security”

1. Measuring technologies for the direct detection of airborne substances. Methods relying on sample extraction or introduction into the analytical instrument are not eligible.
2. Airborne Substances to be measured are;
 - a) Environmental pollutants such as hazardous air pollutants, heavy metals, and other toxic substances
 - b) Harmful substances caused by man-made or natural disasters
3. Measuring technologies of the air and airborne substances related to industrial activities

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 problems in the field eligible for this award.

Potential of the applicant is highly evaluated rather than his/her current achievement.

Applications from outside Japan must be made at the invitation from an employee of a HORIBA Group company.

Incentive

A certificate of commendation will be presented to each recipient of 2010 Masao Horiba Awards at the award ceremony.

A supplementary award will also be made. In the first year, a cash prize of JPY500, 000 yen will be presented. Recipients will receive the same amount yearly for the next two years as research subsidy.

The award and the supplementary award will be given on the condition that the winners accept the invitation to attend the award ceremony held in Kyoto on Oct. 15, 2010 and that the winners continue to meet the eligibility described above.

Application for the 2010 Masao Horiba Awards

Applicants are required to submit

- i) a completed application form for the 2010 Masao Horiba Awards with seven additional copies,
- ii) a signed recommendation letter written by the director/president of the institution or his/her supervisor using the designated form, with seven copies and
- iii) maximum three publications which are central to the applied research, eight copies each.

Submission Deadline

Applicants must submit the above application documents to the HORIBA Group company employee who invited them to apply for the award by Monday, May 31, 2010.

Screening

The members of the Screening Committee for the 2010 Masao Horiba Awards listed below will determine the winners through examination of the achievements and future prospects of the applicants, based on their application documents.

Screening Committee for the 2010 Masao Horiba Awards

Honorary Chairperson: Dr. Masao Horiba, Supreme Counsel, HORIBA, Ltd.

Chairperson: Mr. Atsushi Horiba, Chairman, President and CEO, HORIBA, Ltd.

Deputy Chairperson: Dr. Masatoshi Morita, Director, Center of Advanced Technology for the Environmental, Ehime University

Judges: Dr. Yutaka Matsumi, Director, Solar-Terrestrial Environmental Laboratory, Nagoya University

Dr. Mitsuo Uematsu, Director, Center for International Collaboration, Atmosphere and Ocean Research Institute,
The University of Tokyo

Dr. Yasunori Saito, Professor, Faculty of Engineering, Shinshu University

Dr. Martin Moskovitz, Professor of Physical Chemistry, University of California, Santa Barbara

Dr. Tadao Nakamura, General Manager, Process & Environmental Instruments Systems Division, HORIBA, Ltd.

Dr. Masayoshi Ito, Process & Environmental Instruments Systems Division, HORIBA, Ltd.

Results

Applicants will be notified of the screening results by the end of July, 2010

Award Ceremony and Commemorative Seminar

Award ceremony and commemorative seminar for the 2010 Masao Horiba Awards, followed by a reception, will be held on October 15, 2010 at Shiran Kaikan, Kyoto University, Kyoto, Japan.

Publication of Awarded Researches

Award-winning researches will be published worldwide in HORIBA's technical journal Readout, HORIBA Technical Reports.

