

## Screening

The members of the Screening Committee for the 2011 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 2011 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. Yoshinobu Baba, Director, FIRST Research Center for Innovative Nanobiodevice, Nagoya University

Judges: Dr. Yasushi Sako, Chief Scientist, RIKEN Advanced Science Institute

Dr. Itaru Hamachi, Professor, Department of Synthetic Chemistry & Biological Chemistry, Kyoto University

Dr. Kouichi Tsuji, Professor, Graduate School of Engineering, Osaka City University

Dr. David Birch, Professor of Photophysics, University of Strathclyde, Glasgow

Dr. Shiro Miyake, Manager, Advanced R&D Center, HORIBA, Ltd.

Dr. Junichi Aoyama, Section Leader, Advanced R&D Center, HORIBA, Ltd.

Special Judge: Dr. Tomoji Kawai, Professor, Osaka University

## Results

Applicants will be notified of the screening results by the end of July, 2011.

## Award Ceremony and Commemorative Seminar

Award ceremony and commemorative seminar for the 2011 Masao Horiba Awards, followed by a reception, will be held on October 17, 2011 at Shiran Kaikan, Kyoto University, Kyoto, Japan.

## Publication of Awarded Research

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



# Masao Horiba Awards 堀場雅夫賞

## Call for Applications 2011

## 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, 2011.  
Dr. Masao Horiba





## 2011 Masao Horiba Awards

To mark the 50th anniversary of HORIBA, Ltd. in 2003, the HORIBA Group established an award to recognize young scientists' contributions 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 chosen 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 deserve a global recognition.

It's not an exaggeration to say that the history of analytical and measurement technology is that of the pursuit of higher sensitivity and measurement speed. Now that ten years have passed since the development of nano-technology has become a US national strategic target, a number of phenomena have been analyzed and measured in real time. Phenomena at the atomic and molecular scale have been reported not only in academic but also in industrial fields. These technologies are possible only with the advancement of various other technologies including semiconductor processing, MEMS, material development with the precise control to atomic and molecular level, new light source development, such as semiconductor lasers which are indispensable for analysis and measurement and marker techniques that can mark a specific site. These technologies are the fruits of human intelligence capable of addressing global issues including energy and natural resource depletion and food shortages, as well as promoting the development of analysis and measurement technologies. The importance of these technologies continues to grow into the future.

In light of these circumstances, the target field for the 2011 Masao Horiba awards is "elemental technologies that realize ultra high-sensitive or ultra high-speed analysis". Specifically, the field includes the analytical principles using electromagnetic radiation from the NIR to the X-ray for the wide range of measurement objects such as solid materials, solutions, and biological substances found in a living cell. We enthusiastically encourage applications from those who are actively engaged in research in this field.

Dr. Kozo Ishida  
Chief of the Organizing Committee for 2011 Masao Horiba Awards  
Executive Vice President  
HORIBA, Ltd.



## 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 2011 Masao Horiba Awards is the technology for "Ultra high-sensitive or ultra high-speed analytical method and technology using electromagnetic radiation from the NIR to the X-ray."

Specifically:

1. Structural evaluation or elemental analysis of additives or contaminants in solid materials used for new energy generation.
2. Quantitative determination of residuals in water relating to the activities of living organisms.
3. Molecular-scale real-time analysis of living organisms in a cell.

The field includes innovations in principle, software, pretreatment and sampling method to achieve ultra high-sensitivity or ultra high-speed analysis.

The innovation must be applicable to the equipment that can be installed at an ordinary laboratory environment, excluding large-scale facilities.

## 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 the 2011 Masao Horiba Awards at the award ceremony.

A supplementary award will also be made. Research subsidy of JPY500,000 yen will be presented in the first year and the same amount yearly for the next two years.

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. 17, 2011 and that the winners continue to meet the eligibility described above.

## Application for the 2011 Masao Horiba Awards

Applicants are required to submit:

- i) a completed application form for the 2011 Masao Horiba Awards with eight additional copies,
- ii) a signed recommendation letter written by the director/president of the institution or his/her supervisor using the designated form, with eight copies and
- iii) a maximum three publications which are central to the applied research, nine 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 Tuesday, May 31, 2011.