

# JAPAN PRIZE NEWS

THE SCIENCE AND TECHNOLOGY  
FOUNDATION OF JAPAN (JSTF)

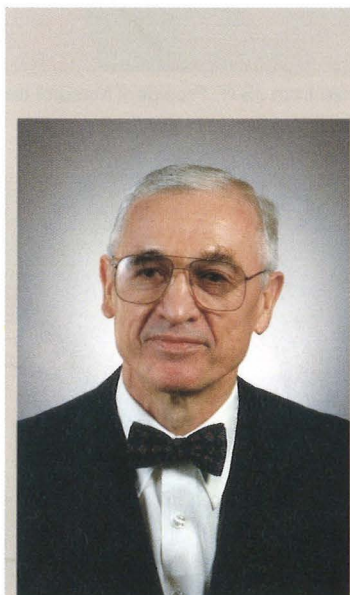
Kamiyacho Mori Building, 4th Floor  
3-20, Toranomom 4-chome, Minato-ku  
Tokyo, 105  
Tel. 03 (3432) 5951

No. 14  
AUGUST 1995



## Two U.S. Scientists Awarded 1995 (11th) Japan Prize

**Recognized for Scientific Achievements in Materials Processing Technologies;  
and Science and Technology for Agriculture, Forestry, and Fishery which conserves the Environment.**



Dr. Nick Holonyak, Jr.

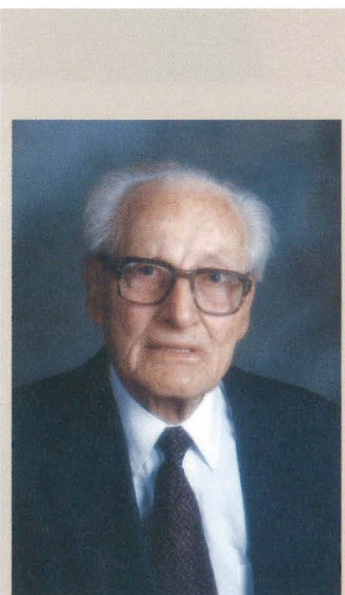
Two U.S. scientists were awarded the 1995 (11th) Japan Prize, the most prestigious and honored prize in the fields of science and technology, during a presentation ceremony held at the National Theatre in Tokyo on April 27, 1995.

The Prize is presented annually by The Science and Technology Foundation of Japan (JSTF) to scientists and researchers who have made substantial contributions to the advancement of science and technology as well as to the peace and prosperity of mankind.

The categories this year were Materials Processing Technologies; and Science and Technology for Agriculture, Forestry, and Fishery which conserves the Environment. Top scientists and academics from around the world submitted 338 nominations, 212 for Materials Processing Technologies; and 126 for Science and Technology for Agriculture, Forestry, and Fishery which conserves the Environment.

Dr. Nick Holonyak, Jr., Professor, Center for Advanced Study, John Bardeen Chair Professor, University of Illinois, received the 1995 (11th) Japan Prize in the category of Materials Processing Technologies. Dr. Holonyak is credited for his outstanding contributions to research and practical applications of light emitting diodes and lasers through pioneering achievements in the understanding of physical principles and in the process technology of intermetallic compound semiconductors.

In the category of Science and Technology for Agriculture, Forestry, and Fishery which conserves the Environment, the Prize went to Dr. Edward Fred Knippling, Retired Director, Entomology Research Division, Agriculture Research Service, U.S. Department of Agriculture, who is credited with Pioneer Contributions in the Development Integrated Pest Management by the Sterile Insect Release Method and other biological approaches.



Dr. Edward Fred Knippling

## JAPAN PRIZE

### Their Majesties The Emperor and Empress Attended The Presentation Ceremony

Their Majesties The Emperor and Empress attended the presentation ceremony at the National Theatre in Tokyo on April 27, 1995. Some 700 prominent guests attended the ceremony, including the President of the House of Councillors, the Chief Justice of the Supreme Court, the Minister of Education, the Minister of Science and Technology Agency, numerous ambassadors to Japan, eminent scholars and researchers, and representatives from other fields, including politics, finance, industry, and the media.

The ceremony began with a rendition of Minoru Miki's *Overture Japan*, a work composed specially for the ceremony and performed by the Toho Gakuen Orchestra under the direction of Masahiko Enjoji. As Chairman of the 1995 Japan Prize Selection Committee, the Foundation Chairman, Prof. Jiro Kondo delivered the opening address and introduced the two winners and spoke of their achievements. After the chairmen of the two selection panels presented the reasons for their selections, Foundation President Dr. Masami Ito presented the winners with their certificates of merit, commemorative medals, and cash awards of 50 million yen for each category.

In his acceptance speech, Dr. Holonyak said, "A great prize reflecting so much credit on myself and my wife, on my teacher, the great scientist John Bardeen, on the University of Illinois, my many

students, and on my colleagues worldwide engaged in semiconductor research. I hope my work has helped shed a little light in a few dark corners." Dr. Knipling expressed his appreciation, saying, "There is still much to be done to resolve insect pest problems in an environmentally safe and economically sound manner. With the expanding world population, more and more food will have to be produced on diminishing agricultural lands. Preventing damage by insect pests can make important contributions toward meeting this requirement."



The laureates, blessed by Their Majesty Emperor and Empress



Dr. Holonyak (left) and Dr. Knipling (right) receiving the Japan Prize from JSTF President Masami Ito



### Japan Prize Week



Courtesy call on the Prime Minister, Tomichi Murayama (April 24)



Press conference at the Japan Press Center (April 25)



Reception Party hosted by American Ambassador (April 25)

## JAPAN PRIZE

### Address by His Majesty the Emperor



I would like to express my sincere congratulations to Dr. Nick Holonyak, Jr. and Dr. Edward Fred Knipling on being awarded the Japan Prize. Dr. Holonyak was awarded the prize for work in the category of Materials Processing Technologies and Dr. Knipling in the category of Science and Technology for Agriculture, Forestry and Fishery which conserves the Environment.

While Dr. Holonyak conducted a broad range of research, he is best known for developing light emitting diodes, indispensable in many household electrical goods, and semiconductor lasers, which are used in compact disk players and other devices. Thus, Dr. Holonyak's work has greatly served to bring comforts and affluence to people's lives.

Among Dr. Knipling's many researches, his developing of the sterile insect release method may be cited as a major achievement. When I visited Okinawa Prefecture, I had an opportunity to witness the sterile insect release method which was being used to control the melon fly.

Two years ago, Okinawa Prefecture was able to eradicate the melon fly from the prefecture using this method. This made a remarkable contribution to agriculture in Okinawa Prefecture. With the concern about the influence of agricultural chemicals on human health and the environment today, Dr. Knipling's development of this insect control system which does not have a negative impact on the environment is extremely important.

I would like to take this opportunity to express my deepest admiration for the outstanding achievements of both Doctors of Science.

Developments in science and technology have brought various benefits to mankind. On the other hand, however, these same developments can also bring much unhappiness to mankind depending on the intentions with which people use the science and technology. I believe that all persons engaged in scientific and technological research should be mindful of the nature of their work, and make every effort to ensure that scientific development will truly contribute to the peace and prosperity of mankind.

Today, remarkable developments in science and technology are being posted as many people in various fields of study throughout the world cooperate to achieve developments that transcend national borders. In closing, I would like to express my hope that the Japan Prize continues to contribute to the promotion of the advancement of science and technology.

### Memorable Banquet Held with Their Majesties the Emperor and Empress

Following the presentation ceremony, a banquet for the 1995 Japan Prize winners was held at the Hotel New Otani in Tokyo on the evening of April 27, in the presence of Their Majesties The Emperor and Empress as well as 300 dignitaries, including Japanese government top officials, the U.S. ambassador to Japan, other ambassadors and ministers, and celebrities from various fields.

An opening address by the Foundation President, Dr. Masami Ito, was followed by dinner, after which His Majesty The Emperor honored the two winners with a congratulatory toast. A second toast was made by His Excellency Ryohachi Kusaba, Chief Justice of the Supreme Court, who represented the three branches of the Japanese government.

Yet another toast was proposed by Her Excellency Makiko Tanaka, Minister of Science and Technology Agency, who asked the guests to toast the Japan Prize's further development and contribution toward

world peace and prosperity.

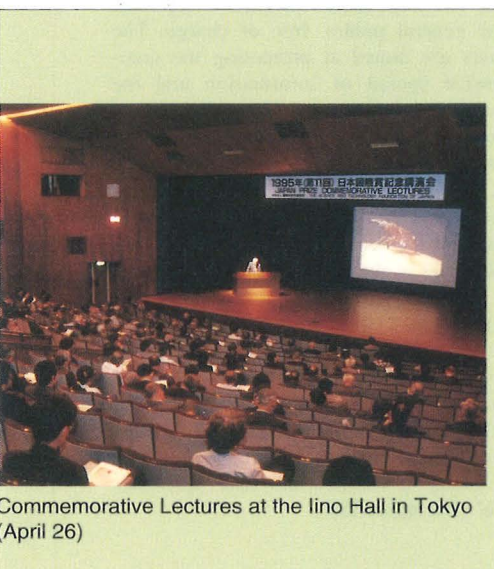
The banquet continued with a congratulatory message from H.E. Fawzi Bin Abdul Majeed Shobokshi, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Saudi Arabia, representing the diplomatic corps in Japan. Thereafter Ambassador Extraordinary and Plenipotentiary, H.E. Walter F. Mondale followed with his own congratulatory speech.

The end of the banquet was highlighted by a performance of Matsushita Chuo Chorus featuring favorite songs of the universities and country where the laureates spent their days as young students.

Prior to the closing of the banquet, Dr. Holonyak and Dr. Knipling delivered speeches of thanks and brought their memorable banquet to an end.



View of the Banquet



Commemorative Lectures at the Iino Hall in Tokyo (April 26)



## JAPAN PRIZE

### Holiday in Kyoto



After the presentation ceremony, Dr. Holonyak and Dr. Knipling enjoyed a holiday in Kyoto and experienced traditional Japanese culture.



### Dr. Knipling Delivered Special Lecture in Okinawa



The melon fly, which inflicted serious damage on fruit and vegetables, was successfully eradicated in Okinawa thanks to Dr. Knipling. He was invited by Okinawa Prefecture to deliver a speech.

## Selection of Winners Begins for the 1996 (12th) Japan Prize

The categories for the 1996 (12th) Japan Prize are Information, Computer, and Communication Systems; and Neuroscience. Candidates have been recommended as a result of numerous letters of nomination from around the world received by the Foundation. The

1996 (12th) Japan Prize Selection Committee has been established and the process of selecting next year's winners is underway. Results will be announced in December 1995 with the presentation ceremony held in April 1996.

### Information, Computer, and Communication Systems

Recent information systems, resulting from progress of computer and communication technologies, play an important role in our society. The prize for 1996 will be awarded for outstanding achievements in basic theory, hardware and software, and systems technologies regarding information, computer, and communication.

### Neuroscience

Neuroscience is an interdisciplinary field that has developed markedly in recent years. It covers such analyses activities as nerve cells, studies of complex system functions, and investigations of brain mechanisms underlying human mental activities. It includes research at molecular, cellular, developmental, behavioral, and cognitive levels. The Prize for 1996 will be awarded for outstanding achievements in development of novel research methods, experimental investigation, and proposal of conceptual framework for elucidating brain function and its mechanisms.

## General Science and Technology Seminars

The Foundation holds a series of monthly science and technology seminars in Japanese for the general public, free of charge. The seminars are aimed at promoting the comprehensive spread of information and the development of ideas regarding science and technology.

Distinguished scholars, scientists, engineers, and other recognized leaders in their fields give lectures in easy-to-understand language for the benefit of the public.

Seminars in the 1995 series are organized under this year's theme, "Science and Technology of the 21st Century." Seminar titles from September through December include "Can we make a brain?" (September 27), "Can the brain understand itself?--Brain Science of the 21st century" (October 25), "Life: the Keyword in Science and Technology in the 21st Century" (November 22), and "Molecules of Life" (December 13).