



# JAPAN PRIZE

## News

November 1985  
Vol.1 No.1



*The First Japan Prize Awarding Ceremony was held at the National Theater, Tokyo.*

### Introductory Message

Awards for outstanding work in the field of science and technology have been established as new international prizes. These have been named as the "Japan Prize." And to have this annual award become more widely known as an international award, this news letter will be published and distributed twice a year.

The First Japan Prize Awarding Ceremony was held in Tokyo on April 20, 1985, with the gracious attendance of H.I.H. Crown Prince Akihito, who commented as follows:

"It is my hope and high expectations that this prize will contribute to the progress of science and technology as well as to the prosperity and welfare of mankind and, furthermore, to lasting world peace."

The fruit of science and technology is a product of the 20th Century. The Nobel Prize, founded in 1901, is awarded for outstanding works in the fields of physics, chemistry, medicine, physiology, literature, peace and, later, economics, but it does not include science and technology. The Japan Prize may also serve to complement the Nobel Prize in the field of science and technology.

In response to the high expectations of our country, our cherished hope is to develop the Japan Prize into a truly international honor, with peace for mankind as our underlying goal. Towards these ends, we seek your benevolent cooperation and wholehearted understanding.



# Progress through Originality and Cooperation

## T.I.H. Crown Prince and Crown Princess Attend

April 20th propitiously turned out to be a fine, clear day, and on this day, at 4:30 p.m., the First Japan Prize Awarding Ceremony was initiated at the National Theater, fronting the Imperial Palace Moat, with the presence of T.I.H. Crown Prince Akihito and Crown Princess Michiko.

Also honoring the ceremony were Prime Minister Yasuhiro Nakasone, Executive Director S. Ramel of the Nobel Foundation's Board of Trustees, Professor T. Ganelius of the Royal Swedish Academy of Sciences, members of the diplomatic corps and approximately 1,500 eminent scholars from throughout the world and Japan, to offer their respects to the recipients of the prizes.

The Crown Prince said in summation, "It is meaningful and significant that we pay tribute to those who have contributed to the world of science and technology," which he had preceded with "Japan owes her prosperity to foreign scholars and researchers."

A congratulatory address by Prime Minister Nakasone was followed by the awarding of the Prizes by President Konosuke Matsushita of The Science and Technology Foundation of Japan, to the first two laureates of the Japan Prize, Dr. John R. Pierce of the U.S. and Dr. Ephraim Katchalski-Katzip of Israel.

In response, Dr. Pierce said, "My research is aimed to bring about peace among mankind and I am extremely happy that it has been recognized as such. The awarding of this prize is a proof that there are no national boundaries to the development and the advancement of science and technology."

Dr. Katchalski-Katzip, in his remarks, said, "Japanese scientists have obtained excellent results in the fields of fermentation engineering. I am certain that biotechnology has a very promising future."

The First Japan Prize Awarding Ceremony ended with renditions of Mozart and Honegger by the Tokyo Philharmonic Orchestra under the baton of Yoichiro Omachi.

Another climax of the ceremony was the Banquet held one hour later at the Hotel New Otani.

Attending this function were numerous dignitaries. Seated at the table were T.I.H. Crown Prince Akihito and Crown Princess Michiko, Dr. Pierce and Dr. Katchalski (the recipients of the Japan Prize), Chief Justice of the Supreme Court Jiro Terada, Minister of State for Science and Technology Reichi Takeuchi, Tokyo Governor Shin-ichi Suzuki, and a number of other distinguished personages, including representatives of the foreign diplomatic corps and of the Nobel Foundation.



H.I.H. Crown Prince Akihito led the toast at the Banquet held at the New Otani Hotel, Tokyo



The Japan Prize Banquet was held at the New Otani Hotel (Tsuru Room), Tokyo

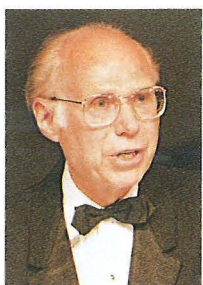


Dr. & Mrs. J. R. Pierce (left) and Dr. & Mrs. E. Katchalski-Katzip enjoyed the pleasant courtesy call on Prime Minister Yasuhiro Nakasone.

Later, in a private room, informal talks were held by the Crown Prince and Crown Princess with Drs. Pierce and Katchalski, and others in a very sociable atmosphere, which caused time to be forgotten so that the function ended far past the original schedule.



Profiles of Laureates of the Japan Prize



Dr. John R. Pierce, guest honorary professor of Stanford University; born 1910. Dr. Pierce is a representative scientist in the United States, who has contributed much to the field of information on communication technology, including the theoretical and realistic use of communication satellites, pulse code modulation and wide-band digital transmission via multivalued codes, development of LAN (local area network) and others. He has also contributed greatly to the development of Japan's information and communication technology.



Dr. Ephraim Katchalski-Katzir, professor of Tel Aviv University and Weizmann Institute of Science; born 1916. Dr. Katchalski invented the bioreactor and bioanalyzer for enzyme immobilization and cell immobilization, a basic technology for biotechnology. He is the first Israeli to be appointed a member of the American Science Academy. He was appointed the fourth president of the State of Israel (1973-78).



*Drs. Pierce and Katchalski enjoyed their visit to Tsukuba Expo '85.*

Lecture Meetings in Tokyo and Kyoto

Lecture meetings by Dr. Pierce and Dr. Katchalski, the two laureates of the Japan Prize, were held in both Tokyo and Kyoto to commemorate the event. Their talks were received with enthusiastic applause by scholars, researchers of major companies and others who attended the lectures.

In his lecture, Dr. Pierce said, "Promising researchers should be given all possible support to carry out researches in complete freedom."

Dr. Katchalski spoke on the present and future prospects of enzyme fixation technology and enzyme reaction device and emphasized the need for inter-



*A Commemorative Lecture Meeting was held in Kyoto.*

national cooperation in making advancements in this field of study. He left a deep and lasting impression on the audience by ending his lecture with the words "but what is of more value than science and technology are impartiality, justice and love."



*Drs. Pierce and Katchalski paid courtesy calls on the Science Council of Japan.*

Major Events During "The First Japan Prize Week"

The "Japan Prize Week" was held to commemorate the awarding of the prizes to Dr. J. Pierce and Dr. E. Katchalski-Katzir and to spread further interest and information on science and technology. The schedule for the two laureates was:

- April 19 (Fri.):** A call on the Prime Minister of Japan. A visit to the Japan Academy and Science Council of Japan. Press Conference.
- April 20 (Sat.):** Honored participation in the Japan Prize Awarding Ceremony and the Banquet that followed.
- April 21 (Sun.):** Commemorative Lecture Meeting (Asahi Hall, Tokyo).
- April 22 (Mon.):** Audience with the Emperor. Attended reception by foreign diplomatic corps in Tokyo (Israeli Embassy).
- April 23 (Tues.):** Commemorative Lecture Meeting (International Hall, Kyoto).
- April 25 (Thurs.):** Attended reception by foreign diplomatic corps in Tokyo (U.S. Embassy).
- April 26 (Fri.):** Visited Science Expo'85.



# JAPAN PRIZE—Aiming for Internationalization like the Nobel Prize—

## With Global Science & Technology As the Goal

The common desire of all the peoples of the world is that mankind should attain lasting peace and prosperity irregardless of the era in which they live. The role that science and technology plays in this respect is immeasurable. And to attain this goal, the inventiveness and cooperation of the people are of paramount importance.

The "Japan Prize" is awarded to persons who, through their outstanding work in the field of science and technology, have contributed to the prosperity and peace of mankind. The prize was established by The Science and Technology Foundation of Japan with the endorsement of the Cabinet, an unprecedented recognition for this type of prize.

The prize covers all fields of endeavor related to science and technology, but the field is limited each year to two or three areas, to be announced annually beforehand. In principle, the prize is awarded to individuals but research groups are also considered as possible recipients. The recipients of the first Japan Prize were each awarded a certificate of merit, a commemorative medal and a supplementary cash prize of ¥ 50 million. The prize awarding ceremony is held in April every year in Tokyo.

## Selection of Laureates

The three fields of endeavor selected for the first Japan Prize were Information & Communication, Medical Engineering and Biotechnology. Letters requesting recommendation of candidates for the prize were sent to qualified persons (see "Note") in March last year. The number of the letters sent reached 5,826. By the deadline date of June 30, last year, 432 answers were received. Each nominee was carefully evaluated by the First Japan Prize Examination Committee, chaired by Masao Yoshiki, president of the Science University of Tokyo, which was established within The Science and Technology Foundation of Japan. Two preeminent laureates were selected from among the nominees: Dr. J. Pierce of the U.S. in the field of information and communication, and Dr. E. Katchalski-Katzir of Israel in the field of biotechnology. The recommendations of the Examination Committee were submitted to the board of directors of the Foundation in



The First Japan Prize Examination Committee convened in Tokyo.



The Commemorative Medal designed by Yusaku Kamekura

February, this year, and the selection of two nominees were confirmed.

Note: The following persons throughout the world are deemed qualified to make recommendations of potential candidates for the Japan Prize:

- Regular and associate members of national academic organizations.
- Representatives of academic institutions or those with similar credentials.
- Presidents, deans, professors and assistant professors of renowned universities.
- Heads of renowned scientific and technological bodies or scientific research institutes, or those with similar credentials.
- Recipients of authoritative awards.
- Other intellectuals as designated by the Foundation.



Dr. & Mrs. Katchalski (left) and Dr. & Mrs. Pierce (right) at the Awarding Ceremony held at the National Theater.



The names of the two laureates are announced at the press conference.





## Recommendation and Examination Procedures for the Second Japan Prize

By the end of March 1985, more than 7,300 candidate recommendation forms were sent to accredited scientists and technologists in Japan and overseas for nominations of candidates for the Second Japan Prize (1986), which will be awarded in April 1986.

The following two scientific and technology fields were deemed as eligible for the second Japan Prize:

### 1. Materials Technology

This includes the complete scope of materials science and engineering of metallic or other organic or inorganic materials for structural or nonstructural applications.

### 2. Medical Technology

This includes the development of precision medical instruments for diagnosis and therapy using highly advanced technology, the study of biological phenomena in medical science based on technological principles, and the application of gene technology for the establishment of biological methods of diagnosis and treatment in the medical field.

Candidates for the Japan Prize are limited to living persons. There are no restrictions as to nationality, profession or sex, but self-recommendation is not acceptable. As a rule, recent advanced achievements in science and technology fall within the scope of the Prize but other achievements will be considered as eligible if the importance of these achievements has been recently reevaluated.

In consideration of mail delivery differences by countries, all letters of recommendation postmarked up to and including June 30 were accepted as valid for the second Japan Prize. This deadline will also be applied to subsequent annual recommendations. Candidate recommendation forms were sent to 72 countries and recommendations were received from 28 countries.

Number of letters of recommendation received by field of endeavor. Figures in parentheses are the number of nominees, some of whom received several recommendations.

Materials Technology	194 (133)
Medical Technology	209 (143)
<b>Total</b>	<b>403 (276)</b>

The Second Japan Prize Examination Committee was formed in July of this year with Masao Yoshiki being reelected as chairman. The selection of the two laureates of the Prize is expected to be finalized by the end of January 1986.

Although the acceptance of the second Japan Prize candidate recommendations has already been closed, those who wish to obtain the recommendation form for the third Japan Prize and thereafter, are kindly requested to write to the Foundation, providing them

with your name, age, occupation and address.

Those who are eligible to recommend the candidates will be registered with the Foundation and recommendation forms will be sent regularly.

## Announcements

### Japan Prize Commemorative Publication to Be Issued

In commemoration of the First Japan Prize Awarding Ceremony, a publication including the achievements of the prize laureates is now in the planning stage.

### Autobiographies of Dr. Pierce and Dr. Katchalski-Katzir

With the aim of making the Japan Prize more meaningful and significant, autobiographies of Dr. J. Pierce and Dr. E. Katchalski-Katzir, the laureates of the first Japan Prize, will be published. This proposal was initially suggested by Tsuguaki Kawamura, managing director of The Science and Technology Foundation of Japan, during the occasion of the farewell reception, given in honor of the two laureates, by the Foundation.

The suggestion was approved by Dr. Pierce and Dr. Katchalski and others attending the commemorative function. All copies for the book are to be delivered to the Foundation, where the material will be translated into Japanese. It is scheduled to be completed in about March 1986. The book will be of B-5 format (257mm x 364mm) and will number about 200 pages.

### Official Record of First Japan Prize

Official records of all functions pertaining to the first Japan Prize, from its establishment to the Japan Prize Week, are being compiled in both Japanese and English. The record will cover such events as the Japan Prize Awarding Ceremony, the commemorative lecture meetings by the two laureates, and other pertinent activities, with a number of photographs.

The record book will be issued free of charge. Those desiring the book are requested to write to the Foundation, enclosing postal charges (domestic ¥700 and overseas sea-mail ¥770).

### VTR for "The Japan Prize 1985" Produced

A twenty-minute video tape which records every event of "The First Japan Prize Week" has been completed. It covers the outline on the establishment of the Prize, the selection of laureates, their visits to Japan, the First Awarding Ceremony and Banquet, their commemorative lectures and visit to Tsukuba Expo '85.

Two types of tapes (three copies in VHS; two, in Beta) are available for short-term loans free of charge to qualified individuals or organizations. If you desire to borrow a copy, please contact the Foundation.



## à la carte

Nobel Prize and Japan  
—Science for Peace

By Stig Ramel

Executive Director of Nobel Foundation

The establishment of the Nobel Prize coincides in time with the beginning of modern Japan. At the time when the inventions by Alfred Nobel were playing a decisive role in the development of the modern industrial society, Japan was just greeting the Meiji Restoration which played a decisive role in the internationalization of Japan.

But as Nobel himself clearly realized, his great inventions bore the seeds of self-destruction—that science and technology could be used as tools of war if so desired. Seeing the clouds of war gathering in the horizon in his final years of life, he ardently hoped that his inventions would be employed for peace. It was this cherished hope that gave birth to the Nobel Peace Prize.

No country has experienced as Japan has the horrors of a scientific war. Perhaps, that is also why Nobel's idea of science for the benefit of mankind has met with such enthusiastic responses in Japan.

Nobel wanted his prizes in the sciences to go to those who had made the most brilliant discoveries. It is notable that this will to achieve excellence is profoundly characteristic of Japan. If there is one thing that characterizes the culture of this ancient nation, it is that very striving to achieve the exquisite, the refined, the best; the striving for excellence. It is this indefatigable will that is the driving force in the Japan of today—and that has enabled this country, to an ever increasing degree, to make decisive contributions to the development and advancement of the world community.

We welcome the establishment of the Japan Prize. We regard The Science and Technology Foundation of Japan, not only as one of the great prize-awarding foundations of the world, but also as friends and allies in the task of furthering and stimulating the advancement of science and technology for the benefit of mankind.

I am pleased and proud to be here today to represent the Nobel Foundation on this historic occasion of the first awarding of the Japan Prize. Our heartfelt congratulations to the first recipients, Dr. Pierce and Dr. Katchalski.

(Summary of the speech at the 1st Awarding Ceremony, April, 1985)



Executive Director S. Ramel of the Nobel Foundation delivered a congratulatory address at the Awarding Ceremony.

## Careful Nurturing of Japan's International Prize

Editorial from February 17, 1985 issue

Mainichi Shimbun

The recipients of the first Japan Prize, an award which is hoped to become eventually as meaningful as the Nobel Prize, were announced on February 15th. The Japan Prize is presented to persons who have been recognized for having presented original and progressive work in the advancement of science and technology, resulting in substantial contributions towards peace and prosperity of mankind. The cash prize of ¥50 million for the recipients is slightly more than the Nobel Prize's ¥48 million.

The Science and Technology Foundation of Japan, sponsor of the award, established the Japan Prize with funds donated by Konosuke Matsushita and Matsushita Electric Industrial Co., Ltd. The award is the outcome of the desire on the part of Japan to serve the international society, even so slightly, and is with the support and cooperation of the Japanese Government with Cabinet endorsement.

To praise and reward outstanding research achievements serves as a driving force in the advancement of science and technology. In this respect, the Nobel Prize has played a vital role. There have been and will continue to be many persons who become geniuses through their devotion to study with the Nobel Prize as the ultimate goal. The admiration and respect paid to the laureate also serve as a strong stimulant.

But in the field of natural science, the Nobel Prize is limited to only the three areas of physics, chemicals and medicine, while there are many areas of study related to engineering which are outside the scope of the Nobel Prize. It would be very significant and meaningful indeed should the new prize supplement and make complete the Nobel Prize.

Japan has come to be ranked among the high technology countries of the world, manufacturing technology in particular, an area in which she has become highly successful. This has given rise among European and American nations an image of a "nation which attaches more importance to pragmatic research rather than on basic research" and a "nation which lays stress on the research of profitability."

Having gained such a flourishing economy, there is a need for Japan to efface her image of "technological egoism." In order to do so, she must foster the role of becoming more involved in non-profitable international activities. The establishment of the Japan Prize can be evaluated as being one such activity.

According to the Nobel Foundation Executive Director Stig Ramel, the four primary factors making the Nobel Prize an authoritative one are: 1. the largeness of its cash prize, 2. its international characteristics, 3. the awarding nation is a neutral and small country, and 4. the large number of and the fairness of the examination committee.

The Japan Prize satisfies the first two conditions. The most important factor probably is the fourth factor. Of course it is most desirable that the recipients be of top level in his or her field of endeavor. Fortunately, the two recipients of the first Japan Prize are top-class researchers.



John R. Pierce, guest honorary professor at Stanford University of the U.S. who won the Japan Prize in the field of "Information and Communication," was recognized for his outstanding work in the theory and design of microwave and satellite communications, and others. In the "Biotechnology" field, Ephraim Katchalski-Katzir, professor at Tel Aviv University, Israel, was awarded the Japan Prize for the development of the bioreactor and bioanalyzer which are indispensable in the study of biotechnology.

As the second and third Japan Prizes are awarded year by year, the Japan Prize will gain further authority and distinction. For this, it is necessary that the greatest care is exercised at the examination stage of nominees, and that the opinions and advice of overseas experts are sought and, at times, even those of the Nobel Foundation. The fact that only a handful of foreign correspondents were present at the announcement of the Japan Prize winners shows the lack of publicity activities on the part of the Science and Technology Foundation of Japan. This will probably remain as a subject for further study.

We hope that the seed sown in the field of science and technology by Japan will grow tall, sturdy and straight.

### Busy with "Japan Prize" Work Hoping for World Peace

By Kisaburo Yokota, item from May 14, 1985 issue  
Yomiuri Shimbun

There is a Japanese expression "Bochu kan ari," which means that even the busiest man can enjoy intervals of leisure. In contrast to this perhaps one can also say "Kanchu bo ari?" which can be translated as a man of leisure may be deluged with work. This phrase has not been used before, yet, I think it is permissible to apply such a phrase in the case a man retired from active life who is suddenly called upon to undertake a task which requires weeks and weeks of toil and hardship, as well as much worry and anxiety.

For nearly the past twenty years, I have been leading a life of restful retirement, free of worldly cares. When I retired as Chief Justice of the Supreme Court at the age of seventy, I thought that from now on I could lead a life of ease and I was determined to refuse all work requiring responsibility. (portion omitted)

But that was not to be. From the end of last year through this spring, I was tremendously busy. In particular, I was extremely busy for about ten days around April 20 and was completely exhausted.

This was because of the Japan Prize. A supplementary prize of ¥50 million was to be awarded to each of two persons selected for the Prize, bestowed on those who have accomplished outstanding work in the field of science and technology. This amount was about the same as that for the Nobel prize.

This award is based on the monetary donation made by Mr. Konosuke Matsushita. It was because of this that The Science and Technology Foundation of Japan was established and I was named its chairman. As a man who had been leading an easy life for the past ten years and more, I was reluctant to accept the position, but due to strong persuasion and the belief that the Japan Prize would eventually contribute to



Dr. K. Yokota (center), with the laureates at the Official Residence of the Prime Minister.

world peace, I agreed.

The advancement of science and technology contributes to the prosperity and welfare of mankind. Should the prosperity and welfare of mankind advance, it is only natural that world stability and peace can be attained.

As a young man, I studied international law, and world peace had been my lifelong dream. And in the belief that the Prize would help bring peace, I accepted the post.

Another reason why I accepted the post of chairman of the Foundation was that the award was named "Japan Prize" and not "Matsushita Prize." This kind of prize is often named after the donor such as "Mr. so and so Prize." Mr. Matsushita deliberately avoided this. As a result, Japan Prize became an award founded purely for the advancement of science and technology and one that would contribute to world peace.

The mission of The Science and Technology Foundation of Japan and my hope are that the Japan Prize in time would become equal to the authority and prestige of the Nobel Prize. The Nobel Prize, of course, has a history close to one century while the Japan Prize is still in its infancy. But if the achievements in the field of science and technology of the world are properly grasped and the nominees are selected in all fairness, hopefully the Japan Prize eventually will be called the Nobel Prize of the East and will be recognized by the world as such.

Thus, it was because of the Japan Prize, particularly the job of selecting the winners and planning the awarding ceremony, that I had been busy since the end of last year.

Having led a life of ease for so long, the work was so hard that I became utterly exhausted. But thanks to the warm backing and cooperation given to me by people in and out of the government, the Japan Prize awarding ceremony and the week of events that followed were accomplished with great success.

What gave the prize awarding ceremony and the banquet that followed more delight and meaning was the presence of Crown Prince Akihito and Crown Princess Michiko and the short address made by the Crown Prince. This added high honor and solemnity to the Japan Prize. Another was the presence of the representatives of the Nobel Foundation at the events.

Nobel Foundation Executive Director Stig Ramel and Royal Swedish Academy of Sciences Secretary-General Tord Ganelius came all the way from faraway Sweden to attend the event, bringing warm words of congratulation. In a way, this means that the Nobel Prize and Japan Prize have tied the knot of deep friendship and cooperation.

#### About Kisaburo Yokota

Chairman of the Science and Technology Foundation of Japan, Professor Emeritus of Tokyo University, former Chief Justice of the Supreme Court.



# Contributing to the International Advancement of Science and Technology

The Science and Technology Foundation of Japan was formally established on May 5, 1983 with the primary objectives of promoting public awareness and enlightenment with regard to the contributions being made by science and technology to advance the common goal of all people in the world—prosperity and peace for mankind. It was founded with the unstinted support of the Prime Minister (Prime Minister's Office, The Science and Technology Agency), and the Ministers of Foreign Affairs and Education.

The Foundation's main activities are:

1. Survey the achievements of scientists and engineers, both domestic and foreign, who have made outstanding contributions to the progress of science and technology.
2. Hold symposiums of lectures inviting distinguished Japanese and foreign scientists.
3. Publish pamphlets and collections of monographs.
4. Present an international award called the "Japan Prize" to those who have made remarkable achievements in the fields of science and technology.
5. Maintain close contacts with related Japanese and foreign scientific and technological organs and organizations.

## Fostering of the Japan Prize Desired

The forerunner of the Foundation was the Japan Prize Preparations Committee formed on November 1, 1982 with the approval of the Prime Minister of Japan. Consequently, the primary task of the Foundation was to foster the Japan Prize as an outstanding international prize which merits the interest and the support of people throughout the world.

In relation to the establishment of the Japan Prize, the Japanese Government gave the following Cabinet Endorsement on October 28, 1983:

"It is the view of the Japanese Government that the 'Japan Prize,' to be bestowed by The Science and Technology Foundation of Japan, will serve to deepen understanding of the role played by science and technology in furthering world peace and prosperity, thereby making a vital contribution to the positive development of mankind. Based on this judgment, concerned government agencies will offer whatever cooperation necessary in all phases of this prize."

Konosuke Matsushita, executive adviser of Matsushita Electric Industrial Co., Ltd., is president of



*Shisei Kaikan, where the Main Office of the Foundation is located.*

The Science and Technology Foundation of Japan which he has worked so hard to establish. The Foundation is run by the Board of Directors, chaired by Kisaburo Yokota, former Chief Justice of the Supreme Court, with the assistance of other members of the Board, who are representative figures in their respected fields of endeavor. The Foundation is also supported by the Advisory Council, Japan Prize Examination Committee and others.

The First Japan Prize Awarding Ceremony was held in April this year at the National Theater with T.I.H. Crown Prince Akihito and Crown Princess Michiko, and other foreign and Japanese dignitaries attending. It is the hope of the Foundation to foster the Japan Prize into becoming a significant and truly international award, a prize in which Japan can take pride in.

## Editor's Notes:

We are forwarding you the initial issue of our "Japan Prize News." Our desire has been, ever since the formation of the Foundation, to publish a newsletter in order to foster and maintain close communications with our numerous correspondents. We are pleased that this desire has been realized within the same year that the First Japan Prize Awarding Ceremony was held.

Thanks to the heartwarming cooperation of all persons concerned, the Japan Prize has taken its first steps most auspiciously. Hereafter, we hope to move steadily and actively towards wider understanding of our objectives. Your frank opinions and helpful comments about our newsletter will be warmly appreciated.