



# Japan Society for the Promotion of Science

## San Francisco

2001 Addison Street, Suite 260 Berkeley, CA 94704 USA

### Director Takeda expresses his hopes for FY2011.

JSPS San Francisco has stimulated academic exchange and cooperation programs over not only the West Coast, but the whole of the United States as well as Canada since its establishment in April 2003.

With the intent of creating new scientific exchange between Japan and North America, JSPS SF has given special focus to planning and holding symposia with universities in the U.S. and Canada and introducing JSPS Fellowship Programs to invite researchers to Japanese Universities.

JSPS SF has also concentrated all its strength in supporting the activities of Japanese universities in North America and supporting the activities of Japanese university branch offices in the U.S. by creating a network amongst Japanese postdoctoral fellows, administrative officers, and faculty of Japanese universities studying in the U.S.

As for holding symposia, JSPS SF will co-organize two joint-symposiums this fiscal year: "Japanese Imperial Maps as Sources for East Asian History: A Symposium on the History and Future of the Gaihozu" with the Center for East Asian Studies, Stanford University in October 2011 and "Japan's Information Technology Challenge: Government Policies and Market Dynamics in the Digital Age" with the Center for Japanese Studies, University of California, Berkeley in February 2012.

Today, all of Japan is opening up to the outside world amidst the rapid progression of internationalization. Ten Japanese universities have opened their branch offices in the San Francisco Bay Area to stimulate academic exchange between Japan and the U.S. The Japanese University Network in the Bay Area (JUNBA) was organized in August of 2006 to create more active academic exchange by collaborating with individual universities. JSPS San Francisco serves the administrative function of JUNBA and is in the process of organizing the sixth JUNBA Summit, called "JUNBA 2012", which will be held in the SF Bay Area in January 2012.

JSPS San Francisco strives to promote even further international scientific exchange between Japan and North America across a wide spectrum of research fields. In this endeavor, we would like to thank all of you for your cooperation and support.



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Issue June 2011

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## THE OFFICE STAFF SWITCH

### JSPS San Francisco Welcomes Two Program Coordinators

#### JSPS San Francisco Welcomes new Program Coordinators !

Tomomi Norita, joined our office as Program Coordinator and is in charge of administrative affairs for the Japanese University Network in the Bay Area (JUNBA) along with coordinating gatherings for Japanese researchers in the U.S.

Last year she worked at JSPS headquarters in the Overseas Division where she coordinated JSPS Invitation Fellowships for Research in Japan.

Prior to that, she had been working for the general affairs division in faculty of medicine at Shimane University.

She wants to learn about the international systems in U.S univer-

sities. And she also wishes to learn about American life, culture and English during her stay.

She is interested in the world heritage sights, so she wants to visit many places.

Rieko Inagawa, joined our office as Program Coordinator. Her duties will include overseeing accounting affairs, managing the JSPS SF website and editing the quarterly newsletter. She is also in charge of coordinating gatherings for faculty and administrative staff of Japanese universities which have overseas offices located throughout the United States. Last year she worked at JSPS headquarters, where she was in charge of the overseas offices section in which she managed JSPS's 10

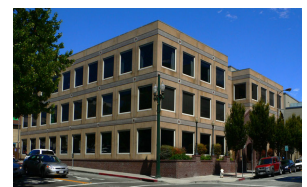
overseas offices. Before that, she had been working for the financial affairs department of Hokkaido University.

She is eager to learn about university operations, especially in terms of finance and faculty developments for teachers and staffs.

Moreover she is looking forward to making friends and visiting many places across the country.



Tomomi Norita Rieko Inagawa



Phone: 510-665-1890

Fax: 510-665-1891

Questions or Feedback?

Email: jspssf@jpspsusa-sf.org

## JSPS San Francisco Wishes a Heartfelt Farewell to Deputy Director Hasegawa

### Farewell to our Deputy Director, Toshiko Hasegawa!



Toshiko Hasegawa has fulfilled her 2 year contract as Deputy Director for the JSPS San Francisco. Returning to Japan at the end of June, she immediately began working for The University of Tokyo as Assistant Manager in the International Exchange Group, International Affairs Department. During her short stay here, She managed and organized our office. Here is what she had to say about her experience here in America.

**Q. What did you accomplish professionally and personally during your time here in the U.S. and with JSPS San Francisco?**

A. Professionally I was able to organize many events and communicate with a lot of

people through this job. Personally, I was able to make many friends.

**Q. Could you give any advice to your successor?**

A. I would like to tell her to enjoy life in Berkeley and meet as many people as you can. You can experience a lot of things here and that experience should be beneficial and helpful for you in the future.

**Q. What will you miss the most about America?**

A. I will miss my co-workers and SF Office. And also I will miss the friendly people in Berkeley and the nice weather. I love this liberal atmosphere. As I like driving in California, I will remember that I drove here .I didn't drive in Japan before I came here.

**Q. What are you looking forward to the most in Japan?**

A. Personally I want to see my friends, my family and co-workers. I would like to eat nice Japanese food when I go back to Japan.

**Q. How has living in America changed you?**

A. Since working as Deputy Director, I have learned a lot of things.. Through this job, I think I became more able to decide more quickly what I should do at first than before and I became receptive to many things. After living in Berkeley, maybe I have also become a little more friendly than before.

**Q. What farewell message would you like to leave for everyone?**

A. I have so many people to thank for their support and dedication that have been outstanding. I have learnt so much from you so thanks for your huge contribution! I will never forget it.

From the entire staff of JSPS SF, we will miss you too and we wish you all the best,Toshiko!

## EVENTS OF SPRING 2011

### The 17th Gathering of JSPS Japanese Fellows in the U.S.

On May 20th, JSPS San Francisco held its 17th "Gathering of JSPS Japanese Fellows" .

These meetings are meant to promote cross-disciplinary exchange among Japanese researchers laboring in the U.S. While serving to deepen the friendly relationships among them, the meeting also provides the researchers with an opportunity to build working networks. Participating in this year's first gathering were about 20 researchers, many of whom were on JSPS Postdoctoral Fellowships for Research Abroad and Research Fellowships for Young Scientists. Still others were invited from among Japanese researchers currently residing in the U.S. Staff from JSPS Tokyo headquarters and San Francisco Office also attended.

The meeting started with greetings from San Francisco Director Dr. Seishi Takeda. Time was set aside for the participants to introduce themselves and briefly describe their research work through PowerPoint. Participants eagerly listened to each presenter as they described their research work. After their presentation, they engaged each other in free conversation about their diverse activities and experiences in the U.S. in a pleasantly relaxed atmosphere. Giving them a context to delve deeper into each other's work, this further energized their discussions. It is hoped that such vibrant interchange will lead to wider networking among Japanese researchers in the U.S.



JSPS San Francisco will continue to play an important role in providing such an opportunity for network building events among young Japanese researchers.

The next gathering for young Japanese researchers will be held in Boston this coming October.

# EVENTS OF SPRING 2011

## The 6th meeting for university administration officers in the U.S.

JSPS San Francisco held the 6th meeting for university administration officers in the U.S. on June 2nd.

The purpose of this meeting is to exchange information and establish a network between administration officers from Japanese universities, which are based especially around the San Francisco Bay area. Participants at this gathering were from Obihiro University of Agriculture and Veterinary Medicine, Hokkaido University, Miyagi University of Education, Tohoku University, University of Tsukuba, The University of Tokyo, Kyoto University, Nara Institute of Science and Technology, Kobe University, Okayama University, Kyushu University, San Francisco State University, Japan Arts Council, and the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Some of the participants have been staying in the U.S. as LEAP (Long-term Educational Administrators Program for International Exchange). In the meeting, participants briefly introduced themselves, and talked about their current work or activities and also about their future prospects. We exchanged information with each other and created networks which will be beneficial to our work as individuals in the higher education profession. The next meeting will be held in December.



The meeting was held at the same time as the 2011 NAFSA event.



## BAY AREA & JAPAN RELATED NEWS

### The "JUNBA General Assembly Meeting 2011" was held on April 28th.

# JUNBA

JAPANESE UNIVERSITY NETWORK IN THE BAY AREA

On April 28th, JUNBA held its 5th general assembly meeting at Hakone gardens. The purpose of this annual meeting is to broadly report on JUNBA's affairs, over the course of an entire year. It brought together about 30 participants. The meeting started with remarks from JUNBA president Dr. Matsuo. Following the opening remarks, he introduced the newest board member Dr. Maria Domoto, Executive Director of Obirin Gakuen Foundation of America. He also reported on JUNBA's affairs of FY2010 and presented a plan for FY2011.

In the second half of the meeting, Dr. Satoshi Watanabe, Visiting Professor of Hiroshima University delivered a lecture titled "Who's better? Ins and outs of the comparison of higher education between Japanese and U.S. universities". He provided many concrete examples about the process of getting a graduate degree in America. And he also provided examples of hot-button issues of American as compared to Japanese higher education. After the lecture, a lively question-and-answer session was held. A reception followed the meeting where the participants were able to exchange information and make new networks with each other.

**JUNBA (Japanese University Network in the Bay Area) comprises a network of Japanese universities with overseas offices in the San Francisco Bay Area. The mission of JUNBA is to contribute to the betterment of education, research and business creation both in Japan and the U.S. through a support of internationalization activities, personnel training of Japanese universities and a stimulation of IAG Collaborations between Japan and the U.S.**

President of JUNBA  
Dr. Masato Matsuo



Lecture by Dr. Satoshi Watanabe

**JUNBA Website <http://www.jspsusa-sf.org/junba/>**

# BAY AREA & JAPAN RELATED NEWS

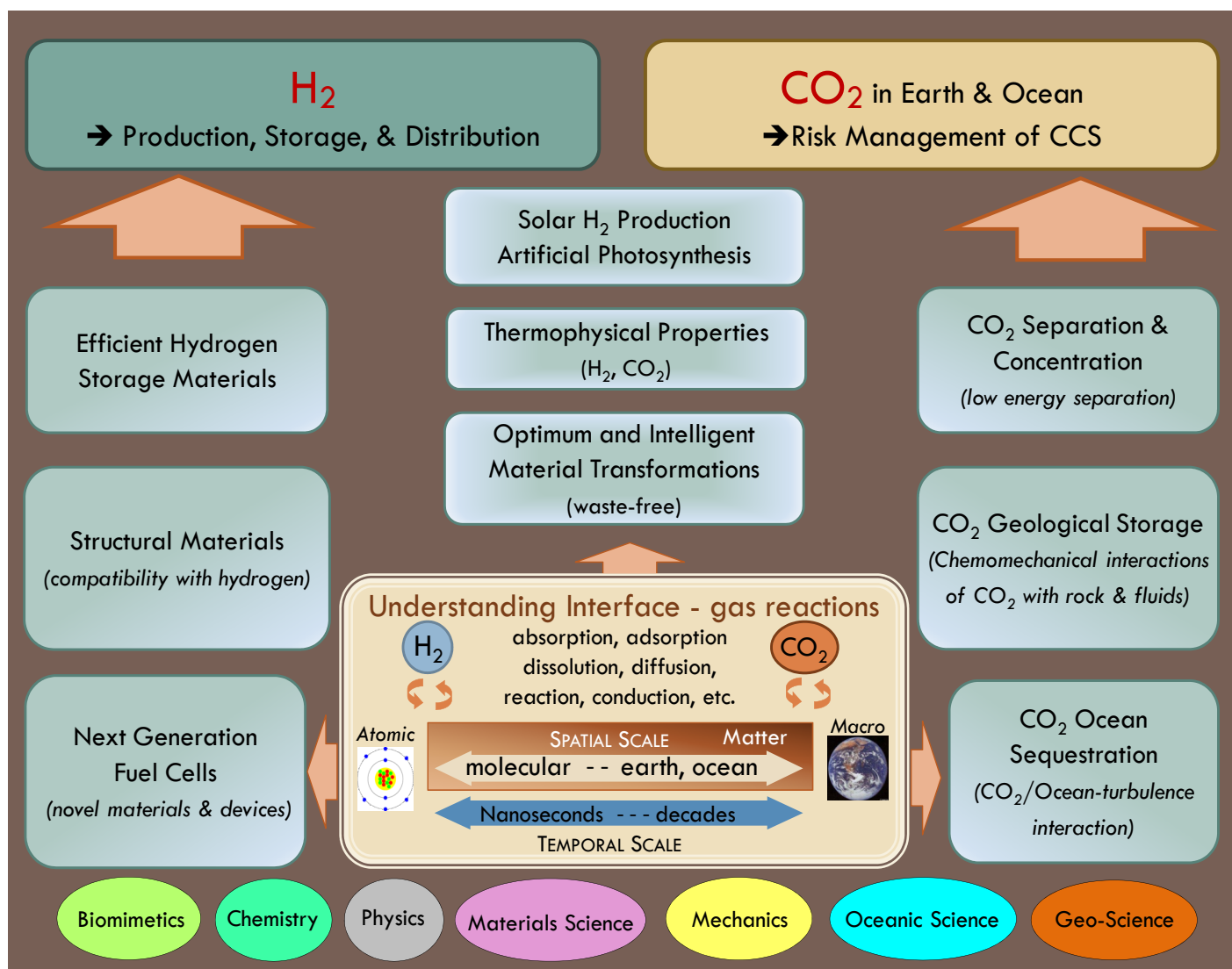
## Kyushu University



### International Institute for Carbon-Neutral Energy Research (I<sup>2</sup>CNER)

The objective of I<sup>2</sup>CNER is to develop the science required to eliminate barriers and enable the technological breakthroughs necessary for a hydrogen-based society and efficient CO<sub>2</sub> capture and sequestration (CCS) in both the ocean and the earth, and establish a non-fossil based energy carrier system. By achieving this, I<sup>2</sup>CNER will accomplish its' mission in creating a sustainable and environmentally friendly society. Our research agenda covers the areas of hydrogen production and storage; hydrogen tolerant materials; fuel cells; "greening" chemical reactions and catalysts; CO<sub>2</sub> capture; as well as oceanic and geological sequestration. This broad-based approach cuts across the boundaries of chemistry, physics, materials science, mechanics, geoscience, oceanic science, and biomimetics bridging multi-dimensional spatial and temporal scales for phenomena occurring at the interface between materials and hydrogen, oxygen, and CO<sub>2</sub>.

Launched by Kyushu University in collaboration with the University of Illinois, the I<sup>2</sup>CNER seeks to provide the resources, facilities and environment needed to attract the top scientists from a wide range of disciplines.



# BAY AREA & JAPAN RELATED NEWS



**HIROSAKI  
UNIVERSITY**

## Hirotsaki University

**Development of Innovative Technologies for HV and EV  
in NJRISE**

The North Japan Research Institute for Sustainable Energy (NJRISE), Hirotsaki University is located in Aomori prefecture which is well known for being a cold and snowy-region where rather high energy demand exists for heating, snow melting, snow removal and so forth during the cold months. Thus effective utilization of renewable energies such as biomass, geothermal heat, solar light and wind power, which are a key technology for comfortable living, is under investigation. Additionally, development of innovative technologies for energy conservation is also our mission. The reduction of CO<sub>2</sub> emission and the suppression of fossil-fuel consumption are important from the standpoint of environmental conservation and the depletion crisis of the earth's natural resources.



Currently, several studies including both the material and device developments for the next generation vehicle are being conducted as one of the research topics at our institution. The magnetostrictive torque sensor is an elemental device for the steering-by-wire (SBW) system which enables both safe-driving and reduction in size and weight of the system compared to conventional mechanical systems, and thus expands the possibility of car design. The high-efficiency reactor can miniaturize the in-vehicle converter with adequate voltage-boosting ability. Development of the high-power motor with arbitrary size promises early practical realization of the in-wheel-motor drive system and improves electrical power-saving while driving. Furthermore, biomass gas engine as the supplemental power system which allows for long-range driving along with comfortable air conditioning will also be examined. These technological developments will be useful for the current hybrid vehicles (HV) and electric vehicles (EV). In particular, simultaneous realization of low-carbon, long-range transport and the low-cost associated with these developed devices are important for cold regionally-specified EV that requires much high energy for heating when in use. In the near future, collaborative research with affiliated companies in Aomori prefecture will also be conducted for practical use.

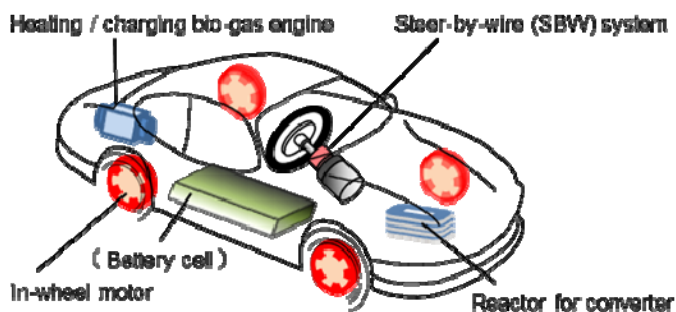
We will work to develop the above-mentioned technologies, and hope that the technological proposals by NJRISE can make a contribution to the realization of a sustainable energy-saving society.

### Contact:

North Japan Research Institute for Sustainable Energy (NJRISE), Hirotsaki University,

2-1-3 Matsubara, Aomori 030-0813 Japan.

Telephone and fax: +81 17 762 3363 / +81 17 735 5411



Various elemental technologies for cold regionally-specified EV (schematic image).

Developing torque sensor for SBW system.

## BAY AREA & JAPAN RELATED NEWS

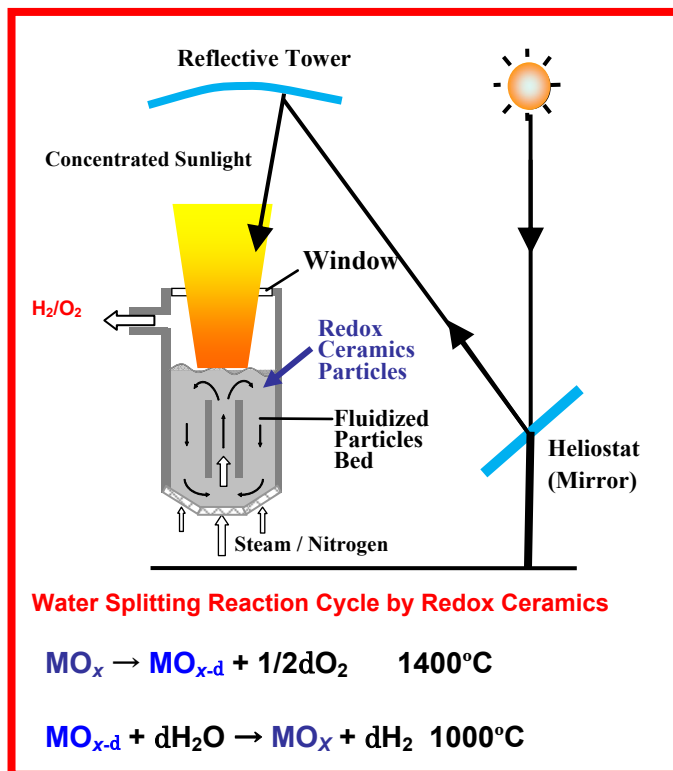


### Niigata University

**Clean Energy of Hydrogen Can Be Produced from Concentrated Solar Thermal Energy Advanced key Technologies Are Being Developed at Niigata University, Japan**

Using concentrated solar thermal energy, a research team in Niigata University, Japan, has discovered a clean, safe and inexpensive way to produce hydrogen. The research team has invented a novel redox ceramic material (metal oxides) to split water via a two-step reaction cycle at 1000-1400°C. By the two-step cycle using metal oxide redox reactions at high temperatures between 1000-1400°C, steam can be thermally split into hydrogen and oxygen. The high temperature solar heat can be collected by a new solar concentrating system named “beam-down concentrator” which has been developed by Japanese optical maker, MITAKA KOHKI Co. Ltd. The research team in Niigata University also has invented a novel solar water splitting reactor using concentrated sunlight by the beam-down concentrator.

The research team has successfully demonstrated a 5kW<sub>th</sub> scale reactor in laboratory experiments. The Niigata University research team started a new R&D project to upscale this novel solar water splitting system up to 100kW<sub>th</sub> and demonstrate its performance at a solar field in Southwestern Japan. This project is funded by the Japanese Cabinet Office research fund, “Funding Program for Next Generation World-Leading Researchers (NEXT Program)”.



Solar Water Splitting Reactor by Niigata University



### 東京工業大学

Tokyo Institute of Technology

#### International students volunteer and tell of earthquake experience

Just over a month after the major earthquake and tsunami hit north-east Japan, three of Tokyo Institute of Technology's international students visited the university's Center for Public Information, keen to recount their experiences and set the record straight for those back home. Bayu Prabowo and Darmastyo, both from Indonesia, and Julian Prokay from the United States told of what happened on March 11, and their actions since.

All three had different experiences on the day of the earthquake. Julian had been chatting on Skype when the shaking started and found himself relaying real-time information to his friend back in the U.S, whereas Bayu, similar to many others in Tokyo, spent many hours walking home due to train stoppages.

On the Sunday immediately afterwards, Darmastyo traveled seven hours to Sendai by bus with the Indonesian embassy, and picked up over 100 people stranded after the disaster. He said that he could see the stress that the victims were under, partially due to the sudden request to return home, and the uncertainty that they might face. Bayu had to bring some of his experiments to a halt, but they are now happily back on course. Julian initially had some issues due to the United States' travel alert, but said that these were handled well by the university.

All three said that many international students had felt under pressure from their families or friends to leave Japan, partly as a result of sensationalist reporting overseas. Although the disaster has been devastating for those in Tohoku, Julian stressed that in Tokyo “for the most part everybody's reverting back to normal.” He continued with a final message for other students back home:

“I hope that this doesn't discourage people in the future. Here is a very good school to study at. It's a very fun place to live. So I hope that the students in the United States can get through what the news has taught them and come to their own opinion and continue to come.”

# VISIT TO THE INSTITUTION IN THE BAY AREA

## IIE can assist Japanese universities!

Tsuyoshi Yamamoto, Advisor of JSPS SF, visited the Institute of International Education (IIE) West Coast Center in San Francisco to talk with Trish Tierney, Executive Director and Naoko Y. Dunnigan, Director of International Scholarship & Training Programs.

### What is IIE?

( [www.iie.org](http://www.iie.org) )

Founded in 1919, IIE is an independent nonprofit leader in the international exchange of people and ideas. It is dedicated to increasing the capacity of people to think and work on a global scale. In collaboration with governments, foundations and other sponsors, IIE creates programs of study and training for students, educators and professionals from all sectors. These programs include the flagship Fulbright Program administered for the U.S. Department of State.

IIE implements more than 250 international programs benefiting over 26,000 men and women from 175 countries, serving corporations, foundations and government agencies worldwide. IIE designs and manages programs focused on four core service areas

- Global Fellowship and Scholarship Management
- Higher Education Institutional Development
- Leadership Development
- Emergency Assistance to Students and Scholars

IIE also conducts policy research, provides resources on international exchange opportunities and offers support to scholars in danger. “*Open Doors*,” published by IIE, provides valuable information about international exchange in the U.S. ( <http://www.iie.org/en/Research-and-Publications/Open-Doors.aspx> )

### Center for Higher Education Capacity Development

( [www.iie.org/HECD](http://www.iie.org/HECD) )

Ms. Tierney, Ms. Dunnigan and Mr. Yamamoto talked about the “Center for Higher Education Capacity Development” (HECD) that was created by IIE in 2010. The mission of HECD is to offer customized consulting and training services to universities, corporations, government ministries, and other institutions to build their capacity to manage world-class scholarship exchange and higher education programs.

IIE’s approach is based on strategies and lessons learned from developing and implementing many of the world’s largest and most prestigious educational initiatives. IIE is also well positioned to assist colleges and universities to develop and sustain partnerships with their counterparts around the world. “We can offer our higher education networks, best practices and staff expertise”, Ms. Tierney said.

This center provides a wide range of consulting services, including training in scholarship management and outreach. Their staff experts can conduct short or long term training programs for staff from scholarship, exchange, career and academic preparatory offices. IIE will custom design trainings to meet the specific needs of the institution. Specific workshops areas include outreach to attract talented students, managing all aspects of the scholarship process, advising and monitoring students and alumni programs.

### HECD’s accomplishment

According to IIE, HECD has held several successful events and trainings since its inception, including custom designed training for scholarship management staff from a graduate level university, a seminar on international scholarship best practices held in Washington, D.C., and an interactive roundtable discussion on defining mission and vision for world-class scholarship programs in higher education held at the World Innovation Summit for Education (WISE) in Doha, Qatar.

Over 40 universities, institutions and organizations from the U.S., Asia, Middle East, Europe and Africa attended these activities in total. Currently, HECD is in discussions to develop potential projects with universities and higher education organizations in the U.S., Middle East and Asia including Japan.

# VISIT TO THE UNIVERSITY IN THE BAY AREA

## How can HECD assist Japanese universities?

IIE thinks that HECD is well-positioned to work with Japanese universities in four main areas:

- **Strategic Planning and Advisory** services on scholarship program development, understanding the U.S. higher education system, building the capacity of scholarship, exchange, career and academic preparation offices, or strategic planning to support internationalization in Japanese universities.
- **Strategic identification of talent, including how to conduct targeted outreach** for prospective students, faculties and administrators to lead recruitment and development efforts.
- **Forming Global higher education initiatives** through our partner IIE center, the Center for International Partnerships (CIP).
- **Training in scholarship and exchange management** conducted by IIE experts to build the knowledge and capacity of university staff members who are responsible for designing, implementing and assessing scholarship and exchange programs.

In addition, there are a number of current activities and other opportunities offered by IIE that support universities and students in Japan. These include:

- **The Japan-Emergency Assistance Fund (Japan-EAF)** that IIE launched shortly after the earthquake/tsunami. IIE is providing a total of \$400,000 in emergency funding to 100 students from the Tohoku region who currently study in the US.
- **Fulbright Programs for students and scholars**, including the **Fulbright International Education Administrators Program** which sends US administrators to Japan.
- **IIE's annual conference on Best Practices in Internationalizing the Campus and the IIE Heiskell Awards for Innovation in International Education.**

Internationalization is definitely one of the most important issues for Japanese universities. There may be a possibility for Japanese universities to collaborate with IIE's HECD in the near future.



With Trish Tierney (second from the left) and Naoko Y. Dunnigan (second from the right) Center: Tsuyoshi Yamamoto

(Do you have any question about IIE and HECD?)

Naoko Y. Dunnigan

Director, Int'l Scholarship & Training Programs

Institute of International Education (IIE) West Coast Center

Phone: 415-362-6520 (x201)

Fax: 415-392-4667



## Interview with JSPS Fellow in the U.S.



### Dr. Yoshiaki Maeda

2005: B.S., Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology

2007: M.S., Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology

2010: Ph.D., Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology

2010-2011: Postdoctoral Fellow at Department of Chemistry, Hunter College of the City University of New York (TUAT International Training Program)

2011-present: JSPS Postdoctoral Fellow for Research Abroad at Department of Chemistry, Hunter College of the City University of New York

Dr. Yoshiaki Maeda has been studying molecular biology and microbiology at TUAT, and has especially researched magnetotactic bacteria.

*Magnetospirillum magneticum* AMB-1 synthesize nanosized magnetite nanoparticles called “magnetosome”. Magnetosome shows strong ferromagnetism, therefore can be applied for numerous biological usages. He developed a novel methodology for functionalization of magnetosomes using gene fusion techniques to immobilize antibodies or other functional nanoparticles, and applied them for immunoassay to detect cancer marker with high sensitivity, and for cancer cell detection and separation. While doing research at TUAT, he became attracted to bio-nanotechnology. Now he is researching bio-nanotechnology using precisely designed protein or peptide, and is studying general chemistry and material science at Prof. Hiroshi Matsui’s Lab at Hunter College of the CUNY. One of his ongoing projects is to create highly ordered 3D superstructure using site-specifically modified peptide nanowire. He is also challenging to find catalytic peptide to grow inorganic nanoparticles using phase-display biopanning system.

**Q1 Why did you choose the U.S. to pursue your research?**

Because a longing Principal Investigator is there. My present supervisor, Prof. Hiroshi Matsui is one of the researchers who keeps creating state-of-the-art research in bio-nanotechnology. I would love to learn how I can create such an attractive and high-impact research. This is why I decided to pursue my research in NY.

**Q2 What is your impression of the research environment in the U.S.? How is it different from your lab in Japan?**

In Prof. Matsui’s Lab, people have diverse major fields because students come to the U.S. from all over the world to obtain a PhD. Furthermore, Prof. Matsui intentionally changes postdocs every 2-3 years. I’m impressed by the fluidity of students and postdocs which brings new ideas and knowledge into the lab, and attributes to the creation of novel research fields.

**Q3 What merits do you derive from conducting your research in the U.S.?**

I often get a new idea in the lab due to the basis of diverse research fields. Spontaneously, I have opportunities to think about whether I can apply this new idea to my research. This trains

my scientific creativity. On the other hand, a new idea from unfamiliar fields might cause a lot of misunderstanding. Therefore I have to keep in mind that I might be wrong. Thanks to these two sides, I can develop a better sense of balance between audacity and carefulness with regards to my research.

**Q4 What is your dream? And do you have any advice about doing research abroad for young researchers?**

To keep creating “happiness” in an ordinary daily life is my goal. Towards this goal, satisfaction in both work and household is necessary. I guess research is one of the most appropriate works to achieve this because we can realize our own ideas, and can control the work-life balance by ourselves. In my opinion, just researching abroad is not really so special anymore, though it is still challenging. You don’t need to make a huge hurdle for researching abroad these days. Both U.S. and Japanese PhD students have comparable and sufficient research capacities. You just have to feel you are qualified to be active internationally, and then you can enjoy the differences between Japan and other countries.