



Science & Technology News from Japan, April 2012

Education Fair At Tokyo Tech

Switzerland enjoyed a strong presence at the Study Abroad Fair at the Tokyo Institute of Technology, which was attended by 300 students. Participants at the event, held on April 18, included higher education institutions from Australia, China, France, Germany, Italy, Sweden and the U.S. Switzerland, represented by the Science & Technology Office Tokyo, and with the support of Mr. Marius Helten, a student from ETH Zurich studying at Tokyo Tech, received many inquiries from students at one of Japan's top universities in science and technology. In addition to individual consultations, Dr. Felix Moesner gave a presentation on "Studying in Switzerland".

(April 18, 2012)



The University Of Tokyo Education Fair

The Swiss higher education scene was well represented at the University of Tokyo Study Abroad Fair held on April 27 by the Science & Technology Office Tokyo. More than 1200 students from Japan's top university attended the event and the Swiss Universities booth received a constant flow of inquiries. The students with higher-than-average language skills expressed interest in a broad range of studies. Switzerland was one of the selected countries to participate along with Australia, Canada, China, Finland, France, Germany, the UK and US. Mr. Helten again helped to present Switzerland following his successful experience at Tokyo Tech.

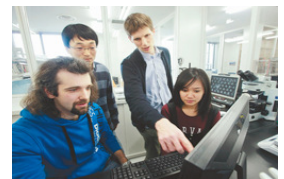
(April 27, 2012)



Swiss Scientist Team Next To Supercomputer K

After the 1995 Great Hanshin Earthquake, the central and Kobe city governments began an initiative to convert Port Island into a hub for medical industries by concentrating public and private hospitals and research institutes there. The K Supercomputer is located there. Urs Frey, a 34-year-old Swiss scientist who moved to the center from the IBM lab in Zurich, develops microchip type devices for analyzing sophisticated information-processing mechanisms in nerve cells. His lab is staffed by young international researchers. Kobe also attracts researchers from all over the world because advanced study institutes, such as the Spring-8 synchrotron radiation facility and the SACLA X-ray free electron laser facility, are close by.

(April 15, 2012)



Swiss-Japanese Cooperation In Battery Production

Bühler Holding AG, the Swiss specialist for production technologies for food and chemical materials, has signed an exclusive cooperation agreement with the Japanese Primix Corporation to build production sites in Europe and North America. The key element of the Primix technology for the production of electrode slurries was inspired by the Japanese tea ceremony bamboo brush. Thus, an industrially proven and leading solution from Asia will now be available in the western hemisphere. The thin-film, spin methodology of Primix Corporation ensures sharp distribution of nanometer-sized particles that has been impossible with conventional mixers.

(April 17, 2012)



Swiss Foray Into Japan's Solar Power Sector

The Japanese market for bigger solar power plants is underdeveloped. At the recent Photovoltaic Expo 2012 in Tokyo Big Sight, ABB presented its DC 1,000 Volt solar solutions from panels to power condensers. With households as the main producers of solar power in Japan, the Pacific nation has not seen much need for high-voltage equipment. At a seminar on "Swiss Green Technologies" in Ariake, ABB explained the numerous advantages of using a higher voltage when building mega solar farms. "If you increase the voltage to 1,000 volt you can cut 40 percent of the parallel circuits", said ABB's Toshiyasu Sakamoto at the seminar. Hence, the installation and maintenance costs would also be reduced by 40 percent. The cable weight goes down even by 50 percent.

(April 06, 2012)



Swiss-Japanese Breast Cancer Antibody-Drug

Chugai Pharmaceutical plans to apply to the Health Ministry for approval to make and market an antibody-drug conjugate for treating patients with Her2- positive breast cancer. T-DM1, short for trastuzumab emtansine, is being

(April 25, 2012)



developed for the global market by Chugai's parent company, F. Hoffmann-La Roche Ltd. It is an antibody-drug conjugate, or ADC, that combines Roche's antibody drug for breast cancer, Herceptin, with the cancer-killing chemotherapy agent DM1. Herceptin binds to the Her2 receptor on cancer cells and inhibits their proliferation. When combined with DM1, it also acts as a direct-delivery mechanism for the cancer-killing agent. Tests show that T-DM1 is more effective than if both the drug and agent are administered separately.

Japanese High-Tech Acquisitions In Switzerland

(April 12, 2012)

Stagnation in the Japanese high-tech market in recent years has forced Japanese companies to increase their investments overseas and Swiss firms are increasingly becoming the recipients of this investment. Known for the quality and reliability of their products and business practices, Swiss firms are seen as solid investment opportunities. In 2012, the company Uster will be acquired by Toyota. Landis&Gyr and Oerlikon Solar have met similar fates in recent years. Swiss TV: <http://tinyurl.com/SFTV-120412>

Huge Incinerator For Switzerland

(April 19, 2012)

Hitachi Zosen has clinched an order to build a large refuse incinerator plant in Switzerland. The order, the company's second for an incinerator facility in Europe this year, is likely to be worth around 80 million Swiss francs. To be built in the central Swiss canton of Lucerne, the plant will take the place of multiple small incinerators and be able to dispose of 600 tons of refuse a day. It will also generate electricity using excess heat, supplying 38,000 households with power and an adjacent paper mill with steam. Hitachi Zosen will be responsible for building the incinerator and the equipment for treating exhaust gases.

Swiss Red Cross Helps Reopen Tsunami-Damaged Hospital

(April 17, 2012)

A hospital with an attached nursing home for the elderly that was severely damaged by the devastating earthquake and tsunami on March 11 last year in Onagawa, Miyagi Prefecture, made a fresh start after the facility was rebuilt with donations from Switzerland. The only medical institution in the coastal town of about 8,300 people was refurbished at a cost of some ¥1.9 billion shouldered by the Swiss Red Cross. Onagawa Mayor Yoshiaki Suda, together with Swiss Ambassador Urs Bucher and other dignitaries, unveiled a plaque commemorating Swiss financial assistance to rebuild the medical center. Bucher said the discipline and self-control shown by victims of the disaster made lasting impressions around the world. "Let me assure you that you will not walk this way alone and that we will continue to support your path toward reconstruction," Bucher said.



1. Science and Technology Policy in Japan

- World's Highest Feed-In Tariff Rate Nearly Finalized
- Existing Renewable Power To Benefit From Feed In Tariff
- New Law Boosts Generic Drug Prescriptions
- New Safety Plan For Children
- New Nuclear Safety Standard
- Greater Independence Demanded For Nuclear Commission

2. Education

- Pan-Asian MBA Program
- Education Reform Details Released
- High School Students Reluctant To Study Abroad
- English Test Increasingly Popular
- Inter-Asian Human Resources Training Programs
- Competition Amongst Universities
- Shorter Job-Hunting Season Causing Pressure
- Nearly 2 Million Students Take Unified Achievement Tests
- Need For A Stronger Focus On Liberal Arts



- Internship Programs In Developing Countries
- More Wide-Ranging University Reform
- Students Interested In SMEs
- Shift Away From Single-Sex Schools
- University Reform Hindered By High Costs And Low Revenues

3. Life Science / Health Care

- Cancer-Aiding Protein Identified
- Development Race Of Cancer Vaccines
- Food Satiation Feeling Tied To Visual Perception
- First Clinical Trials Using iPS Cells
- Museum Of Medicine
- Extremely Promising New Hair Generation Technique
- Japanese Nursing Homes In Shanghai
- Alzheimer's Research With iPS Cells
- Osteoporosis Cure
- Heart Transplant Age Limit Rising
- Long Term Research Funds Suggested
- Cancer-Sniffing Labrador
- Emergency Flu Bill In Effect
- Infant Brain Development Responds To Touch
- Ova Donations Sought Abroad
- Affordable Personal Genome Sequencing
- Small Firms At Forefront Of Antibody Research

4. Nano / Micro Technology / Material Science

- Forefront Innovations in Li-ion Battery Technology
- Packaging Material Recycled From PET Bottles

5. Information & Communications Technology

- Streamlined Access To Supercomputer Network
- New SmartWatch Interfaces With Smartphones
- New OEL Panel Alliance
- University Orders Supercomputer
- Competition Amongst Supercomputer Providers To Universities
- Super High Resolution TV In Focus
- Cloud Computing In High-Tech Agriculture
- Next-Generation Fast-Lane Car Navigation Systems
- US Internet Giants Holding Technology Competitions
- Three Cell Phone Service Providers Receive 700 MHz Band
- Major Cloud Computing Collaboration
- New Major E-Book Entry
- Microblogging Highly Popular In Japan
- Projected Keyboard
- Largest LCD TV With 80 Inches
- Next Generation Lithium Air Batteries For EVs
- Improved Bone Conduction Technology For Mobile Phones
- Popularity For IT Start Ups
- Solar Power Converters In Increased Mass Production



6. Energy / Environment

- Tsunami Risk For Central Japan
- Smart Housing Complex
- Sewer Technology Ready for Export
- New Ultra Thin Solar Cell
- Very Efficient Home Insulation Panels
- Cloud Computing Used To Decrease Energy Usage
- Office Waste Used As Biofuel
- Fast Quake Scale Estimate
- Dominant LED Ceiling Light Share
- Recycling In Water Treatment Research Center
- 30% More Efficient Geothermal Power Generation
- Governments Sharing Electricity-Saving Tips
- New, Large Solar Cell Battery System
- Recycled Rare Earths From Hybrid Car Batteries
- Carbon Capture And Storage Technology
- March 11 Quake Focal Region To Be Probed
- Worst Case Scenario Predicts Tokyo Death Toll Of Nearly 10,000
- Nationwide Smart Meter Installation
- Highly Efficient Home Energy System
- Better LED Lighting Accelerates Plant Growth
- Increasing Global Geothermal Dominance
- Revised Tsunami Forecast
- Proposed Incentives For Renewable Energies
- Rolling Blackouts In Summer

7. Space Development

- Future-Orientated JAXA Projects
- New, Improved Supersonic Plane In Design Stage
- Laboratory Mice For Zero-Gravity Testing In Space

8. Engineering / Robotics

- Robotic Hair-Washer
- Cardboard Church For Christchurch
- R&D Investment In Cloud Computing and Environment
- Advanced Accident-Prevention Radar System

9. Nuclear Development

- No Operating Nuclear Reactors On May 6
- New Earthquake Projection Delays Restart Of Hamaoka, Ikata Reactors
- Japanese-Russian Nuclear Cooperation Accord
- New Reactor Guidelines Under Discussion
- Oi Reactors Safe Enough For Reactivation
- Only 50 Operable Nuclear Reactors Left
- Continued Importance Of Nuclear Energy Forecasted
- Lower Popularity Of Nuclear Study Programs
- Remote-Controlled Machines For Fukushima Reactor Building



- WEF Warning On Energy Security Risk
- Fukushima Air To Remain Radioactive In 2022
- Tsuruga Nuclear Plant Poses Risk
- Power Utilities Will Likely Not Meet August Demand

10. Physics

- Mystery Of Dark Matter
- New Planetarium Boasts 15 Million Stars

11. Intellectual Property Rights / Technology Transfer / Alliances

- Record Foreign Mergers & Acquisitions
- Competition To Set International Technology Standards
- Japan Second Largest FDI Provider
- Corporations Team Up For Start Ups
- Smartphone Patent War
- Steel Sheet Technology Lawsuit

12. General Interest

- Record Decline In Population
- Growth Sectors Predicted To Create 10 Million Jobs

Upcoming Science and Technology Related Events in Japan

- > **Longterm JSPS Postdoctoral Fellowships** [Grants], Deadline: May 15, 2012
Applications for the JSPS Postdoctoral Fellowships need to be sent to international@snf.ch
Webseite: www.jsps.go.jp/english/e-fellow/postdoctoral.html
Application forms: www.jsps.go.jp/english/e-fellow/long_list.html
→ Applications need to be sent to international@snf.ch
- > **Japan-EU Funding Opportunities** [Exchange Promotion]
Latest funding and research calls between Europe and Japan
Newsletter: http://ec.europa.eu/euraxess/links/japan/docs/Newsletter_January_2012.pdf
- > **Swiss Innovation Booth @ Innovation Japan 2012** [Innovation], End of September, 2012
Organized by the Science & Technology Office Tokyo, Embassy of Switzerland
→ If you wish to receive more information, please contact felix.moesner@eda.admin.ch
- >> More events on the Science and Technology Office Tokyo homepage:
<http://tinyurl.com/News-Events-in-Japan>

Information Contact

If you wish to receive more detailed information or would like to introduce new readers, please feel free to contact the Science & Technology Office Tokyo. Email: tok.science@eda.admin.ch
Thank you for your interest!