



## Science & Technology News from Japan, October 2012

### Message from the Science & Technology Office Tokyo

Having started as Science & Technology Counselor at the Embassy of Switzerland in September of this year, I would like to take this opportunity to thank my predecessor, Dr. Felix Moesner who moved westwards to become the Director of Swissnex Boston. He did everything in his power to make my start in Tokyo as easy and efficient as possible. I was also very lucky to find a highly motivated and professional team at the Science & Technology Office Tokyo, as well as a very welcoming and supportive environment at the Embassy of Switzerland. Thank you, Felix, and all the best for your personal and professional future in Boston!



I am happy to receive comments and suggestions by email ([matthias.frey@eda.admin.ch](mailto:matthias.frey@eda.admin.ch)) and am open to connect via [LinkedIn](#) and [XING](#). I am looking forward to fruitful collaborations, interesting projects, and many benefits for the Swiss STI environment.

With best regards/ douzo yoroshiku onegai itashimasu!  
Matthias Frey

### Japanese Scientist Awarded With 2012 Nobel Prize In Physiology, Medicine

The Nobel Assembly at Karolinska Institute decided to award the 2012 Nobel Prize in physiology or medicine jointly to Shinya Yamanaka and John Gurdon for the discovery that mature cells can be reprogrammed to become pluripotent. The organization says the Nobel Prize recognized the two scientists who discovered that mature, specialized cells can be reprogrammed to become immature cells capable of developing into all tissues of the body. It also mentioned that their findings have revolutionized understanding of how cells and organisms develop and thus created new opportunities for studying disease and for developing methods for diagnosis and therapy by reprogramming human cells. Yamanaka is currently a professor at Kyoto University and affiliated with the Gladstone Institute in San Francisco.

(October 09, 2012)



### New Student Exchange Agreement Between University Of Lucerne And Toyo University

The University of Lucerne and Toyo University in Tokyo concluded a new student exchange agreement for the Faculty of Culture and Social Sciences to enhance the relationship between the two universities. The agreement will support students who wish to study for a semester or two at the partner institution. Located in central Tokyo, Toyo University is one of the most prestigious universities in the disciplines of humanities and social sciences, which fit well with the academic profile of the University of Lucerne. A university-level Memorandum of Understanding has been signed by the two partners in January. This year marks the 125<sup>th</sup> anniversary of Toyo University.

(October 16, 2012)



## 1. Science and Technology Policy in Japan

- Environment Tax Introduced
- New Science Minister Questions New Energy Strategy
- Government Support For Stem Cells
- Subsidies For Nobel Prize Laboratory To Be Extended By 10 Years
- Japanese & Swiss Companies Collaborate To Detect Water Leaks



## 2. Education

- Language Universities Branching Out
- Education At University of Tokyo In English
- Tourism Introduced In Japanese Universities
- Fall Enrollment For Talented Students
- University Entrance Examination Reform
- Huge Financial Boost From Nobel Prize
- University Of Tokyo To Keep Spring Graduation Despite Switch To Fall Enrollment

## 3. Life Science / Health Care

- Low-Priced Digital Thermometer
- Pioneering Information Technology In Medical Institutions
- New Gastrointestinal Endoscope
- Devices For Growing iPS Cells
- Ova Produced From Stem Cells
- Tsushima Felines Affected By Alzheimer's
- New Organism Found In Sea
- Cloud Back-Up For Medical Records
- Start-Ups Tapping iPS Cells In Drug Research
- iPS Cell Bank Advertised By Nobel Prize Winner
- Ethics Expert For iPS Center
- iPS Cells Already Used To Develop New Medicines
- Long-Term Safety Studies For iPS Cells
- Human Trial For iPS Cells
- Nobel Prize To Drive iPS Cell Patent Licensing
- Needle-Free Vaccine Technology
- Costly Technologies Driving Up Medical Expenses
- Small Firms Build Deep-Sea Explorer
- First iPS Cell Clinical Trials

## 4. Nano / Micro Technology / Material Science

- Japan To Propose International Durability Standard
- Development Of New Materials Through Cooperation Between Academia And Industry
- Water Purification Technologies
- R&D Collaboration For Alternatives To Rare-Earth Magnets
- World-Class Material Technology From Japan
- Slime Mold As Model For Next-Generation Semiconductor
- Safer Platinum Recycling Process

## 5. Information & Communications Technology

- Wireless Smartphone Speakers
- Bleak Future For Japanese Smartphone Manufacturers
- Mobile Phone Carrier Merger
- Latest Smart-Home Technologies At CEATEC
- New Factory To Produce OEL Panels For Smartphones
- Supercomputer Envisioned To Accelerate Development Of Regenerative Medicine
- Spin Off Of LCD Business



- Carriers To Double Wireless Connection Speeds
- Asian Cyberdefense Network
- Ecommerce Alliance For NFC Payments
- Transparent Circuit Boards
- Ultrasmall Japanese Parts In New Smartphone
- Gadget Makers Challenged By Rise Of Smartphones
- Capacitor With 10 Times Increased Capacity
- Increased Distance For Writing On Electronic Blackboard

## 6. Energy / Environment

- Foreign Companies Investing In Japanese Power Market
- Household Storage Batteries For Lease
- Japanese Company To Take Part In U.S. Megasolar Project
- Power-Saving Pilot Project
- Greenhouse Gas Emissions Likely To Rise In 2012
- Investigation On The Effect Of LEDs On Rearing Poultry
- 2MW Solar Farm In Kyushu
- Predicting Ecological Impact Of Construction Projects
- TEPCO To Import Shale Gas From The U.S.
- Ministry Creates New Guidelines For Methane-Fueled Power
- DVD-Sized Dye-Sensitized Solar Cells
- Yield From Sugar Cane Quadrupled
- 60MW Offshore Wind Farm
- Japan And India To Form Alliance To Combat High LNG Costs
- More Gold Mining
- Low-Cost Devices For Removing CO<sub>2</sub>
- Cogeneration System Burning Less Natural Gas
- Order For Energy Storage System From Italy
- 2.4MW Offshore Wind Turbine
- Subsidies For Development Of Offshore Plants
- Project To Store Excess Energy In Hydrogen Fuel
- 300MW Wind Farm In Mongolia
- 1.2MW Solar Farm In Yamaguchi
- Methane Hydrate Sources Found
- Ozone Hole Back To 1990 Levels
- Large Scale Home Energy Management System
- Research On Termite Digestion To Produce Biofuels More Efficiently

## 7. Space Development

- Japan And The U.S. Plan To Promote Space Cooperation
- Five Satellites Released From ISS
- Japanese Astronaut Added To ISS Crew
- Cargo Ship Successfully Docks With The ISS
- New-Type Rocket Launch Next Year

## 8. Engineering / Robotics

- New Generation Of Prosthetics Interacts With Nerves
- Fuel Cell System Goes Aloft



- Japan, Thailand Aiming To Cooperate In High-Speed-Rail Technology
- Improved Battery Technology Boosts EV Range By 30%
- Indonesian Railway Project For Japanese Companies
- Venezuela Buys Japanese Railway Cars
- Increasing The Production Of Key Dreamliner Part
- Fuel-Efficient Domestic Plane Promises Significant Savings
- Subfloor Inspection Robot
- Rare-Earth Used In Hybrid Motors Cut By 30%
- Japan Loses Fight For EV Charging Standard
- Robotic Suit To Offer Stronger Radiation Protection
- Accident Prevention Systems Proliferate
- Modified Hybrid Car As Emergency Power Source
- Alliance For Overseas Rail Projects
- Brazilian R&D Operations Upscaled
- Car Radar Detects People & Obstacles
- Robot To Solve University Entrance Exam
- Young Engineers Launch Wheelchair Start-Up

## 9. Nuclear Development

- Atomic Energy Commission Gives Up Compiling Nuclear Policy
- New Regulatory Body Not Deciding On Reboot Of Nuclear Reactors
- Nuclear Regulation Authority Issues Disaster Guidelines
- Moratorium For New Nuclear Plant In Yamaguchi
- Investigation Of Fukushima No. 1 Reactor
- Reactor 1 Water Level Higher Than Expected
- TEPCO Convenes Nuclear Reform Committee
- No Restarts Of Nuclear Reactors This Year
- Nuclear Crisis Avoidable
- Waterless Radiation Removal Method
- Japan Releases Radiation Spread Projections In Severe Accidents
- Storage Capacity Problems With Radioactive Water

## 10. Physics

- Superconducting Motor For EVs In Development
- Highest Lightning Observation Device On Tokyo Skytree

## 11. Intellectual Property Rights / Technology Transfer / Alliances

- Korean Company Buys Japanese Social Game Developer
- Japanese Company To Acquire U.S. Biotechnology Firm
- Investment Facility For Venture Capital
- Japanese University Secures iPS Cell Patents
- Investing In Nuclear Power
- Japanese Telecom Subsidiary Buys U.K. IT Consulting Firm
- Swiss-Made Waterless Urinals Sold In Japan
- Generic Drug Unit To Be Sold
- Fynomer Drug Discovery Contract
- Joint-Venture For AIDS Drug Sales
- Endoscope Business Alliance



## 12. General Interest

- Graduate Employment Ceremonies Coming Up This Fall
- Engineers For EV Development Sought-After
- Foreigners To Be Hired
- Kinect As A Tool For Disabled
- Boarding Gate Detecting Explosives In Seconds
- Law Office For Foreigners
- Female Imperial Branches To Counteract Dwindling Numbers Of Qualified Heirs
- Underground Expressways In Tokyo
- Chairs For U.N. Made In Japan
- The Garden In The Sky
- Wrestler Yoshida Granted People's Honor Award
- Japan: From 20th To 24th In 'Ease Of Doing Business'
- Second Most Millionaires Living In Japan
- Tokyo Ranks 10th In Cities Of Opportunity Ranking
- Mobile Phone Disaster Alert System

### Calls

- > **EU Seventh Framework Programme (FP7)**  
The seventh EU Framework Programme on Science Research and Innovation  
[http://cordis.europa.eu/fetch?CALLER=FP7\\_NEWS&ACTION=D&RCN=34831](http://cordis.europa.eu/fetch?CALLER=FP7_NEWS&ACTION=D&RCN=34831)
- > **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\\_June\\_2012.pdf](http://ec.europa.eu/euraxess/links/japan/docs/Newsletter_June_2012.pdf)

### Upcoming Science and Technology Related Events in Japan

- > **Swiss Solar Pavilion @ PV EXPO 2013** [Photovoltaics], Feb 27 – March 1, 2013  
Organized by the Swiss Science & Technology Office  
→ If you wish to participate in the Swiss Solar Pavilion, please contact [tok.science@eda.admin.ch](mailto:tok.science@eda.admin.ch)
- > **150 Years Anniversary: Switzerland-Japan Friendship Year 2014**  
The year 2014 will mark a milestone in the friendly relations between Switzerland and Japan which will celebrate the establishment of diplomatic relations 150 years ago.  
<http://www.eda.admin.ch/eda/en/home/rebs/asia/vjpn/embjpn/anchjp.html>
- >> More events on the Japan Science and Technology Office 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](mailto:tok.science@eda.admin.ch)  
Thank you for your interest!