



**“Next Step to a Greener Earth”
JUNBA 2009 TECHNOLOGY FAIR
(Japanese University Network in the Bay Area)**

Date: Tuesday, January 13, 2009

Venue: San Francisco Airport Marriott, Burlingame, CA

Time & Room:

Exhibition 1:00pm to 6:00pm at Irvine, 1st Floor

Oral Presentation 1:00pm to 6:15pm

Breakout Session A at Anaheim, 1st Floor

1:00- 3:45 Session A-1: Solar Energy, Fuel Cells

3:45- 4:00 Coffee Break

4:00- 5:15 Session A-2: Hydrogen

5:15- 6:10 Session A-3: Electric Cars and Other

Breakout Session B at Newport Beach, 1st Floor

1:00- 3:40 Session B-1: Environmental Issues

3:40- 3:55 Coffee Break

3:55- 5:20 Session B-2: Bio Fuel, Bio Technology

5:20- 5:45 Session B-3: Rare Metal Recovery

Reception 7:00pm to 9:00pm at Salon F, 2nd Floor

Breakout Session A – Anaheim Room

Moderator: Masato (Marty) Matsuo

Session A-1: Solar Energy, Fuel Cells

1:00-1:10

“The High Efficiency Spherical Single Crystal Si Production for Solar Cells in the Near Future”

Katsuhisa Nagayama, Department of Materials Science & Engineering,
Shibaura Institute of Technology (UCIP Member)

Speaker: *Keisuke Watanabe*, Intellectual Property Center,
Shibaura Institute of Technology (UCIP Member)

1:10-1:35

“Promise of Solar Concentrators”

Steve Horne, Founder, CTO,
Sol Focus

- 1:35-2:00 **“Driving Down the Solar Cost Curve: An Integrated Systems Approach”**
Keely Wachs, Sr. Director, Corporate Communications,
BrightSource Energy
- 2:00-2:30 **“Fabrication and Materials Design of Next-Generation Solar Cells”**
Mutsumi Sugiyama, Associate Professor, Department of Electrical Engineering,
Faculty of Science & Technology,
Tokyo University of Science
- 2:30-2:55 **“Next Generation Solar Cells from Colloidal Nanoparticles”**
Sue Carter, Associate Professor, Physics Department, ISB,
University of California, Santa Cruz
- 2:55-3:05 **“The Development of Highly Efficient Distributed Energy System Based
on Solid Oxide Fuel Cell (SOFC)”**
Shinji Kimijima, Department of Machinery & Control Systems,
Shibaura Institute of Technology (UCIP Member)
Speaker: *Keisuke Watanabe*, Intellectual Property Center,
Shibaura Institute of Technology (UCIP Member)
- 3:05-3:30 **“Prospects of Low Temperature Fuel Cells and Other Hydrogen
Devices”**
Zuhair Munir, Distinguish Professor, Dept of Chemical Engineering and Material
Science,
University of California, Davis
- 3:30-3:45 **“New Fuel Reformer for Polymer Electrolyte Fuel Cell System”**
Kazutoshi Higashiyama, Professor, Fuel Cell Nanomaterials Center,
University of Yamanashi (UCIP Member)

Note: The following subject has no oral presentation. See the exhibition booth.

**“Thin Film Semiconductor Devices (Transistors and Solar Cells) for
Environmentally Friendly Technology”**
Tokyo University of Agriculture and Technology (TUAT)

3:45-4:00 **COFFEE BREAK**

Session A-2: Hydrogen

- 4:00-4:15 **“EMF Type Hydrogen Sensor Developed and Designed by Niigata
University Presents Variety of Functions in Accordance with Users'
Specific Needs.”**
Shuji Harada, Professor, Institute of Science and Technology,
Niigata University (UCIP Member)
Speaker: *Yoji Yuki*, President & CEO, NIIGATA-TLO INC.
Niigata University (UCIP Member)

- 4:15-4:45 **“Hydrogen Storage Technology”**
Hirohisa Uchida, Vice Chancellor (Education and Research), Professor, School of Engineering,
Tokai University
- 4:45-5:15 **“Reliable Hydrogen Technologies: Challenges in the Kyushu University Hydrogen Project”**
Kazunari Sasaki, Professor, Faculty of Engineering / Hydrogen Technology Research Center,
Kyushu University

Session A-3: Electric Cars and Other

- 5:15-5:40 **“Tesla Motors - The Drivetrain Technology Powering the Roadster”**
Kurt Kelly, Director, Energy Storage Technologies,
Tesla Motors
- 5:40-6:10 **“Hiroshima University Research Seeds Database ‘Himawari’”**
Takashi Shimizutani, Collaborative Research Fellow, International Industry-Academia Collaboration Division, Collaborative Research Center,
Hiroshima University

Note: The following subjects have no oral presentation. See their exhibition booths.

“Broad-Based Energy Research Program”
Energy Institute, University of California, Davis

“Wave-propelled Boat”
Tokai University

“Wasted heat utilization and thermal energy transportation by Solution Transportation Absorption Heat Pump”
Tokyo University of Agriculture and Technology (TUAT)

- 6:10-6:15 **CLOSING REMARKS**
- 7:00-9:00 **NETWORKING RECEPTION**
At Salon F (2nd Floor)

Breakout Session B – Newport Beach Room

Session B-1: Environmental Issues

Moderator: Chikaosa Tanimoto

- 1:00-1:15 **“A Technique for Efficient Removal and Recovery of Polychlorinated Biphenyls (PCBs) from Oils”**
Mitsuru Akashi, Professor, Graduate School of Engineering,
Osaka University

- 1:15-1:45 **“Introduction of Some Research of Integrated Research System of Sustainability Science (IR3S)”**
Akimasa Sumi, Professor, Integrated Research System for Sustainability Science (IR3S),
The University of Tokyo
- 1:45-2:15 **“Microwave Sterilization, Quartz Crystal Capacitive Sensor, Ultra-high Temperature Furnace”**
Yoshinori Kanno, Professor, Innovation Technology,
Tokyo Metropolitan University
- 2:15-2:30 **“Poverty Alleviation through Rehabilitation of Negative Impacts to Aquatic Environment and Fisheries resources in coastal area in Southeast Asia”**
Tatsuro Matsuoka, Professor, Faculty of Fisheries,
Kagoshima University
- 2:30-2:45 **“Present changes and requested stability of a tropical forest in South-East Asia”**
Tsuyoshi Yoneda, Professor, Faculty of Agriculture,
Kagoshima University
- 2:45-3:00 **“Integrated Management Technologies for Environment in River-Lake Basin”**
Kiyoshi Yamada, Professor, Research Organization of Science and Engineering,
Ritsumeikan University
- 3:00-3:15 **“Precise Diagnosis of Soil by Microbial Activity”**
Motoki Kubo, Professor, College of Life Sciences,
Ritsumeikan University
- 3:15-3:40 **“Advanced Carbon Footprinting Tools for Households, Bbusinesses and Local Governments”**
Christopher M. Jones, Staff Research Associate, Berkeley Institute of the Environment,
University of California, Berkeley
Mia Yamauchi, Intern, Berkeley Institute of the Environment,
University of California, Berkeley

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“Biochemical Gas Sensor (Bio-Sniffer) for Toluene Measurement”
Tokyo Medical and Dental University

“Pellet Watch: Global Monitoring of Persistent Organic Pollutants (POPs) Using Beached Plastic Resin Pellets”
Tokyo University of Agriculture and Technology (TUAT)

“Urinary biomarker to estimate individual exposure to diesel exhaust-derived air pollutants”
Kanazawa University

“Visible light activity of N-doped TiO₂ photocatalyst prepared by a simple sol-gel process”

Shinshu University (UCIP Member)

“Portable high-resolution mass spectrometer for greenhouse gas monitoring”

Osaka University

“Kagoshima Satellite -New Tool for Atmospheric Water Vapor Observation”

Kagoshima University

3:40-3:55

COFFEE BREAK

Session B-2: Bio Fuel, Bio Technology

Moderator: Hiroko Yamazaki

3:55-4:20

“Biomass to Biofuel”

Pamela Contag, Founder,
Cygnet Biofuels

4:20-4:50

“Germ Cell Transplantation in Fish”

Hiroshi Nakamura, Associate Professor, Collaboration Center,
Tokyo University of Marine Science and Technology

4:50-5:20

“Overview of TUAT and Research Projects”

Kazuhiro Chiba, Director, Center for Innovation and Intellectual Property (CIIP)
Associate Dean and Professor, United Graduate School of Agricultural Science,
Tokyo University of Agriculture and Technology (TUAT)

“Development of Mycovirus Causing Hypovirulence to Phytopathogen as Biocontroller”

Hiromitsu Moriyama, Senior Assistant Professor, Laboratory of Molecular Cell
Biology, Department of Applied Biological Sciences,
Tokyo University of Agriculture and Technology (TUAT)

Note: The following subjects have no oral presentation. See their exhibition booths.

“CD38 Protein for AUTISM”

Kanazawa University

“Formation of Anhydrosugars from Polysaccharide in Ionic Liquids”

Kanazawa University

“Toxic cyanobacteria control technique using the Oscillating-Wave generator”

Shinshu University (UCIP Member)

Session B-3: Rare Metal Recovery

5:20-5:45 **“Biotechnology for Recovery of Rare Metals in Wastewater”**
Satoshi Soda, Associate Professor, Division of Sustainable Energy and
Environmental Engineering, Graduate School of Engineering,
Osaka University
Mitsuo Yamashita, Professor, Department of Applied Chemistry,
Shibaura Institute of Technology (UCIP Member)

5:45-5:50 **CLOSING REMARKS**

7:00-9:00 **NETWORKING RECEPTION**
At Salon F (2nd Floor)