International Symposium on Innovative Solar Cells 2009

The University of Tokyo, Komaba Research Campus II, Convention Hall (Building An, 2F)
4-6-1 Komaba, Meguro-ku, Tokyo, JAPAN

Monday, March 2nd

9:00 ~ Registration

	Opening Session
9:30 ~ 9:45	Opening and welcome address – K. Miyano (Director, Research Center for Advanced Science and Technology, The University of Tokyo, Japan) – METI (Ministry of Economy, Trade and Industry, Japan) – NEDO (New Energy and Industrial Technology Development Organization, Japan)
9:45 ~ 10:10	Keynote Speech
	PV2030+ and Its Background K. Kurokawa (Tokyo Institute of Technology, Japan)
10:10 ~ 11:40	Introduction of Innovative Solar Cells R&D in Japan
10:10 ~ 10:40	Post-Silicon Solar Cells for Ultra-High Efficiencies Y. Nakano (The University of Tokyo, Japan)
10:40 ~ 11:10	Novel Concept of Multi-Junction Thin Film Solar Cells Using a Smart Stack Technique M. Kondo (Advanced Industrial Science and Technology, Japan)
11:10 ~ 11:40	Thin Film Full Spectrum Solar Cells with Low Concentration Ratios M. Konagai (Tokyo Institute of Technology, Japan)

– Lunch Time – (11:40 ~ 13:00)

13:00 ~ 14:00	World Trends of R&D on Innovative Solar Cells
13:00 ~ 13:30	FULLSPECTRUM: Motivation and Results. The Intermediate Band Solar Cell A. Luque (Universidad Politécnica de Madrid, Spain)
13:30 ~ 14:00	Basic Research for Solar Energy: Challenges and Opportunities G. Crabtree (Argonne National Laboratory, USA)
14:00 ~ 15:30	III-V Ultra-High Efficiency Solar Cells
14:00 ~ 14:30	R&D of Concentrator Multi-Junction Solar Cells in Japan M. Yamaguchi (Toyota Technological Institute, Japan)
14:30 ~ 14:50	CL and TEM Characterization of Multi-Junction Solar Cells M. Al-Jassim (National Renewable Energy Laboratory, USA)
14:50 ~ 15:10	Modeling of High Efficiency Solar Cells and Systems R. Schwartz (Purdue University, USA)
15:10 ~ 15:30	Development of III-V-Based Concentrator Solar Cells and Their Applications A. Bett (Fraunhofer ISE, Germany)

–Break –

15:40 ~ 17:00	Effective Photonic Utilization
15:40 ~ 16:00	Research of TCO in Thin-Film Full Spectrum Solar Cells Program T. Wada (Ryukoku University, Japan)
16:00 ~ 16:20	Third Generation Photovoltaics G. Conibeer (University of New South Wales, Australia)
16:20 ~ 16:40	Plasmonic and Si Wire Array Nanostructures for High Efficiency Photovoltaics H. Atwater (California Institute of Technology, USA)
16:40 ~ 17:00	Plasmonic and Biomimetic Light－Trapping in Silicon Thin Films D. Bagnall (University of Southampton, UK)

– Break –

	Poster Session
17:20 ~ 18:50	Poster Presentation
19:00 ~	Convivial Party

Tuesday, March 3rd

9:00 ~ 10:00	Keynote Speech
9:00 ~ 9:30	Detailed Balance Limit for Solar Cell Efficiency H. Queisser (Max-Planck-Institut, Germany)
9:30 ~ 10:00	The Advent of Mesoscopic Solar Cells M.Grätzel (Ecole Polytechnique Fédérale de Lausanne, Switzerland)

– Break –

10:10 ~ 12:30	Nano-Structured Solar Cells
10:10 ~ 10:30	Ultra-High Efficiency Solar Cells Based on Quantum Dot Superlattice Y. Okada (The University of Tokyo, Japan)
10:30 ~ 10:50	Band Engineering Approaches for Full-Spectrum Solar Cells A. Yamada (Tokyo Institute of Technology, Japan)
10:50 ~ 11:10	Quantum Well Solar Cells K. Barnham (Imperial College London and QuantaSol Ltd, UK)
11:10 ~ 11:30	High Efficiency Concentrator Photovoltaic Systems J. Harris (Stanford University, USA)
11:30 ~ 11:50	New Materials and Concepts for High Efficiency Solar Cells: The Berkeley Perspective W. Walukiewicz (Lawrence Berkeley National Laboratory, USA)
11:50 ~ 12:10	Solar Cells Based on Nano Tetrapods and Carbon Nanotubes D. Kim (Korea University, South Korea)
12:10 ~ 12:30	Photovoltaics Research in the Arizona Institute for Renewable Energy S. M. Goodnick (Arizona State University, USA)

– Lunch Time – (12:30 ~ 13:40)

13:40 ~ 15:40	Thin Film Materials I (CIS & Thin Film Si)
13:40 ~ 14:00	Silicon-Based Three-Junction Thin-Film Solar Cells I. Sakata (Advanced Industrial Science and Technology, Japan)
14:00 ~ 14:20	Effect of Light Scattering Surface Morphologies on Growth of Nanocrystalline Silicon R. E. I. Schropp (Universiteit Utrecht, Netherlands)
14:20 ~ 14:40	Nanotechnological Concepts for Photovoltaics' Uwe Rau (Forschungszentrum Jülich GmbH, Germany)
14:40 ~ 15:00	Current Challenges and Novel Approaches for Thin－Film Silicon Solar Cells B. Rech (Helmholtz Centre Berlin for Materials and Energy)
15:00 ~ 15:20	Development of High-Efficiency Compound Semiconductor-Based Tandem Solar Cells S. Niki (Advanced Industrial Science and Technology, Japan)
15:20 ~ 15:40	Chalcopyrite and Related Compounds- Prospects for Future Photovoltaics H-W. Schock (Helmholtz Centre Berlin for Materials and Energy, Germany)

–Break –

16:00 ~ 17:20	Thin Film Materials II (Organic/Inorganic and Hybrid Solar Cells)
16:00 ~ 16:20	Novel Photovoltaics Based on Direct Interfacial Charge Transfer Transition from Surface-Bound Organic Compounds to Semiconductor H. Segawa (The University of Tokyo, Japan)
16:20 ~ 16:40	Toward Highly Efficient Organic "Solid" Solar Cells by Structural Control of Crystalline Films Y. Yoshida (Advanced Industrial Science and Technology, Japan)
16:40 ~ 17:00	Novel Transparent Conducting Oxide Films for Solar Cells R.P.H. Chang（Northwestern University, USA）
17:00 ~ 17:20	Molecular Approaches to Up-Conversion and the Intermediate Band Solar Cell N. Ekins-Daukes (Imperial College London, UK)
Closing Session	
17:20 ~	Closing Remarks