

***10th Workshop on the Future Direction of Photovoltaics***  
***6-7 March 2014, Tokyo Tech Front, Tokyo Institute of Technology***  
***Tokyo, Japan***

**Organized by:** The Japan Society for the Promotion of Science,  
The 175<sup>th</sup> Committee on Innovative Photovoltaic Power Generating Systems

**March 6, Thursday**

<b>Opening</b> 10:00-10:10	<b>Opening Remarks</b> Makoto Konagai, Tokyo Tech, Chairman of the JSPS 175 <sup>th</sup> Committee	(Session Chairperson, Y.Ueda)
<b>Plenary Session</b> 10:10 -10:40	<b>Present Status and Future Prospects of Si Solar Cells in Japan</b> Yoshio Ohshita, Toyota Tech	(Session Chairperson, Y.Ueda)
<b>Session 1</b> 10:40-11:10	<b><i>Bulk and Thin-Film Si solar Cells -I</i></b> <b>Luminescence from Silicon Wafers and Solar Cells - Great Advice for Solar Cell Improvement</b> Martin Schubert (Meiji Univ./JAXA and Fraunhofer ISE)	(Session Chairperson, S.Miyajima)
11:10-11:30	<b>Introduction of R&amp;D Activities of C-Si Solar Cells and Modules in AIST (FREA)</b> Katsuhiko Shirasawa, N.Suzuki, Y.Kida, T.Fukuda and H.Takato (AIST)	
11:30-12:00	<b>Options for Future Crystalline Si Solar Cells and Modules</b> Rolf Brendel (ISFH)	
12:00-12:30	<b>Present Status of Solar Cell R&amp;D in Taiwan's Industry</b> Sam Hong (NEO SOLAR POWER CORPORATION)	
12:30-12:50	<b>Growth of Si Single Bulk Crystals for Solar Cells by the Noncontact Crucible Method</b> Kazuo Nakajima (Kyoto University)	
13:00-14:00	<b>Lunch</b>	
<b>Session 2</b> 14:00-14:30	<b><i>Bulk and Thin-Film Si solar Cells -II</i></b> <b>Recent Progress in Thin-Film Silicon Solar Cells: Towards Wafer Quality on Glass</b> Bernd Rech (Helmholtz Berlin)	(Session Chairperson, T.Matsui)
14:30-15:00	<b>Advanced Transparent Conducting Oxides for High-Efficiency Thin Film Silicon Modules</b> Bernd Stannowski (Helmholtz Zentrum Berlin)	
15:00-15:20	<b>Development of Next Generation Turnkey Solutions for a-Si/<math>\mu</math>c-Si Tandem Thin Film Module</b> Lin Jun (TEL)	
15:20-15:40	break	
15:40- 16:10	<b>Market Outlook &amp; R&amp;D Strategy in Korea</b> Chang-Sik Son, KETEP	
16:10-16:30	<b>Recent Developments of High-Efficiency Thin-Film Silicon Solar Cells</b> Takuya Matsui <sup>(1)</sup> , Hitoshi Sai <sup>(1)</sup> , Takashi Koida <sup>(1)</sup> , Takashi Suezaki <sup>(2,3)</sup> , Mitsuhiro Matsumoto <sup>(2,4)</sup> , Kimihiro Saito <sup>(2,5)</sup> , Isao Yoshida <sup>(2)</sup> , and Michio Kondo <sup>(1)</sup> <sup>(1)</sup> AIST, <sup>(2)</sup> PVTEC, <sup>(3)</sup> Kaneka, <sup>(4)</sup> Panasonic, <sup>(5)</sup> Fukushima Univ.	

**Session 3** *Tutorial* (Session Chairperson, T.Wada)  
16:40-17:40 **Perspectives on Status and Future of CIGS Technology :R&D and Manufacturing**  
Rommel Noufi (NREL)

18:00 *Reception* ( Chairperson, Y.Ueda)  
*at Tokyo Tech Front*

## March 7, Friday

**Session 4** *CIS and CZTS* (Session Chairperson, S.Niki )  
10:00-10:30 **Can CZTS Match the Performance of CIGS?**  
Ingrid Repins (NREL)

10:30-11:00 **Recent and Future Developments of CIGS Based Solar Cells:  
Concepts for Improved Efficiency**

Marika Edoff, Uppsala University  
11:00-11:30 **The Elemental Present Conditions for Photovoltaic**  
Tomoko Yanagisawa (TANAKA HOLDINGS)

11:30-13:00 *Lunch*

**Session 6** *Perovskite Solar Cells* (Session Chairperson, H.Segawa)  
13:00-13:20 **Organic Inorganic Hybrid Perovskite Solar Cell :Current Progress and Future Potential**  
Tsutomu Miyasaka (Toin University of Yokohama)

13:20-13:50 **Perovskite Solar Cell : New Horizons in Photovoltaics**  
Nam-Gyu Park (Sungkyunkwan University)

13:50-14:10 **Charge Separation Interface Control for All-Solid-State-Perovskite Sensitized Solar Cells**  
Shuji Hayase (Kyusyu Institute of Technology)

14:10-14:40 **Progress and Fundamental Insights of Perovskite Solar Cells**  
Nripan Mathews (Nanyang Technological University)

14:40-15:00 **X-ray Crystallographical Approach toward Reproducible Fabrication  
of Efficient Perovskite Solar Cells**  
Atsushi Wakamiya (Kyoto University)

15:00-16:00 **Pannel Discussions**  
**Future Prospects of Organic-Inorganic Hybrid Solar Cells**  
Tsutomu Miyasaka, Nam-Gyu Park, Shuji Hayase, Nripan Mathews, Atsushi Wakamiya,  
and Hiroshi Segawa (navigator)

16:00 **Announcement**