

7th Workshop on the Future Direction of Photovoltaics
3-4 March 2011, Tokyo Tech Front, Tokyo Institute of Technology
Tokyo, Japan

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

March 3, Thursday

Opening

10:00-10:10

Opening Remarks

M. Konagai, Tokyo Tech, Chairman of the JSPS 175th Committee

Plenary Session

10:10 -10:40

The Photovoltaic Power Generation Era is Coming

Y. Kuwano, Photovoltaic Power Generation Technology Research Association

Session 1

10:40-11:00

National Program

Japanese PV R&D program

M. Yamamoto, NEDO

11:00-11:30

Photovoltaic development in China

Deren Yang, Zhejiang University

11:30-12:00

PV Status in Thailand

Porponth Shichanugrist, Tokyo Tech

12:00-12:30

PV Status in Malaysia

Nowshad Amin, The National University of Malaysia

12:30-13:30

Lunch

Session 2

13:30-14:00

Si Solar Cells I –heterojunction and passivation

The use of a-Si based heterojunctions for crystalline-silicon thin film solar cells and modules

Ivan Gordon, IMEC

14:00-14:30

Key Features of highly efficient silicon heterojunction solar cells

Delfina Munoz, Commissariat à l’Energie Atomique et aux Energies Alternatives

14:30-15:00

Passivation Concepts for n-type Silicon Solar Cells

Martin Hermle, Fraunhofer ISE

15:00- 15:20

HIGH-PERFORMANCE HIT SOLAR CELLS FOR THINNER SILICON WAFERS

K. Maki, H. Kanno, E. Maruyama and M. Tanaka, Sanyo Electric Co., Ltd.

15:20-15:40

Development of silicon heterojunction solar cell with nc-3C-SiC window layer and

Al₂O₃ passivation layer

T. Watahiki, Tokyo Tech

15:40-16:00

Break

Session 3

16:00-16:30

Si Solar Cells II –heterojunction and passivation

High-efficiency silicon heterojunction solar-cells:From physics to production lines

Stefaan De Wolf, EPFL

16:30-17:00

Recent progress in Si heterojunction solar cells

L-S Hong, National Taiwan University of Science and Technology

17:00-17:30

PV Activities in Korea: A Silicon-Centered R&D and Industry

Donghwan Kim, Korea University

17:30-17:50

High-precision characterization of a-Si:H/c-Si heterojunction solar cell structures by spectroscopic ellipsometry

N. Matsuki, Y. Tanaka, K. Mizoguchi, H. Fujiwara, Gifu University

18:30

Reception

March 4, Friday

- Session 4** ***CIGS and Related Issues -I***
- 10:00-10:30 **Thin Film CIGS Solar Cells: Evaluation of its Potential, Challenges, and Opportunities**
R. Noufi, NREL
- 10:30-11:00 **Potentials and limitations of multinary compounds for future thin film solar cells**
Hans-Werner Schock, Helmholtz-Zentrum Berlin
- 11:00-11:20 **Abundant-type solar cells prepared by sputtering of CZTS compound target**
Ryouta Nakamura, Kouji Yamaguchi, Kazuo Jimbo and Hironori Katagiri, NNCT
- 11:20-11:50 **Flexible CIGS solar cells and modules**
A. N. Tiwari, EMPA
- 11:50-12:10 **Development of CIGS thin film solar cells at AGU**
T. Nakada, Aoyama Gakuin University
- 12:10-13:30 ***Lunch***
(Visiting CIGS PV System at Tokyo Tech Library)
- 13:30-14:00 **Rapid Reactive Transfer Processing Technology for Manufacture of High-Efficiency CIGS**
Billy J. Stanbery, HelioVolt
- Session 5** ***CIGS and Related Issues -II***
- 14:00-14:30 **CIGS Technologies and Challenges in Taiwan**
Chung-Wen Lan, Taiwan University
- 14:30-15:00 **Present status of CIGS research activities in KAIST**
Byung Tae Ahn, KAIST, Korea
- 15:00-15:20 **Current Status and Future Prospect of CIS-based Thin-film PV Modules prepared by Showa Shell Sekiyu/Solar Frontier**
Katsumi Kushiya, Solar Frontier
- 15:20-15:40 ***Coffee Break***
- 15:40-16:00 **High-efficiency CIGS integrated submodules on glass and flexible substrates**
S. Niki, AIST
- 16:00-16:20 **Theoretical and Experimental Studies on CIS and CZTS solar cells at Ryukoku University**
T. Wada, Ryukoku University
- 16:20-16:40 **Highly Efficient Cu(InGa)Se₂ Solar Cells - Characterization and Growth -**
A.Yamada, Tokyo Tech
- Session 6** **Closing Session**
- 16:40-17:10 **Status and outlook on CdTe PV Thin Film modules**
Michael Bauer, CALYXO GmbH
- 17:10-17:40 **Applied Materials' work on advanced thin-film Si PV (tentative)**
Zheng Yuan, AMAT