C-3 Solar Cell

Representative Organizer
Takashi ITOH (Gifu University)
Co-organizers
Noritaka USAMI (Nagoya University)
Tamotsu OKAMOTO (Kisarazu National College of Technology)
Hidetoshi SUZUKI (University of Miyazaki)
Yasuhiko TAKEDA (Toyota Central Research and Development Labs., Inc.)
Takeshi TAYAGAKI (Kyoto University)
Katsunori MIKIHARA (Nagoya University)
Nobuyuki MATSUKI (Gifu University)

Oral Session March 29 (Sun.) Room 4

Chair : Tamotsu Okamoto (Kisarazu National College of Technology)

8:50 C3-I-01 **Subcells Diagnosis and Energy Balance Sheets in Tandem Solar Cells via Absolute Electroluminescence-efficiency Measurements** [Invited Lecture]

Hidefumi Akiyama

INSTITUTE FOR SOLID STATE PHYSICS (ISSP), UNIVERSITY OF TOKYO, AND JST-CREST

9:20 C3-I-02 **Perspective on Realizing Nanostructured Intermediate-Band Solar Cells** [Invited Lecture]

David Michael Tex, Yoshihiko Kanemitsu

INSTITUTE FOR CHEMICAL RESEARCH AND JST-CREST, KYOTO UNIVERSITY

9:50 C3-O-01 **Investigation of Crystallinity and Planer Defects in the Si-NWs Grown by VLS Mode Using Indium Catalyst for Efficient Solar Cells Application**

[2]M.Ajmal Khan, [1]I.Kita, [1]Y.Tani, [1]H.Yano, [1]T.Fuyuki, [1,2]Y.Ishikawa, [2]M.Konagai

1 NARA INSTITUTE OF SCIENCE AND TECHNOLOGY (NAIST)
2 MEXT, FUTURE-PV INNOVATION

10:05 C3-O-02 **Control of Hydrogen and Carbon Impurity Inclusion During the Growth of GaAsN Thin Film by an Atomic Layer Epitaxy**

Yuki Yokoyama, Tomohiro Haraguchi, Toshihiro Yamauchi, Hidetoshi Suzuki, Atsuhiko Fukuyama, Tetsuo Ikari

FACULTY OF ENGINEERING, UNIVERSITY OF MIYAZAKI

Chair : Hidetoshi Suzuki (University of Miyazaki)

15:50 C3-I-03 **High Efficiency Nano Energy Devices Using Bio-Template Ultimate Top-Down Process** [Invited Lecture]

[1,2]Seiji Samukawa, [1]Mohammad Maksudur Rahman

1 INSTITUTE OF FLUID SCIENCE, TOHOKU UNIVERSITY
2 WPI ADVANCED INSTITUTE FOR MATERIALS RESEARCH, TOHOKU UNIVERSITY

16:20 C3-O-03 **Characterization of Nanometer-Size Void Structure in a-Si:H/c-Si Heterojunctions Based on a Correlation Between Optical and Positron Annihilation Parameters**

[1]Nobuyuki Matsuki, [2]Akira Uedono, [3]Brian E.O'Rourke, [3]Nagayasu Oshima

1 DEPT. OF ELECTRICAL, ELECTRONIC AND COMPUTER ENGINEERING, GIFU UNIV.
2 DIV. OF APPL. PHYS., UNIV. OF TSUKUBA
3 RES. INST. OF INSTRUMENTATION FRONTIER, NATIONAL INST. OF ADV. INDUSTRIAL SCI. AND TECH. (AIST)

16:35 C3-O-04 **Deep Trench Texturing on Heterojunction Silicon Solar Cells by Nanoimprint Technology**

[1,2]Guan-Chiun Li, [1,2]Mei-Chen Liu, [2,3]Jyh-Liang Wang, [3]Tsang-Yen Hsieh, [1,2]Chun-Lin Chen, [1,2]Pi-Chun Juan

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2 CENTER FOR THIN FILM TECHNOLOGIES AND APPLICATIONS, MING CHI UNIVERSITY OF TECHNOLOGY
2 DEPARTMENT OF ELECTRONICS ENGINEERING, MING CHI UNIVERSITY OF TECHNOLOGY

16:50 C3-O-05 **Solid Phase Epitaxy of $Ge_{1-x-y}Sn_xC_y$ Ternary Alloy Layers**

[1]Hiroki Oda, [1]Takashi Yamaha, [1,2]Masashi Kurosawa, [1]Wakana Takeuchi, [1]Mitsuo Sakashita, [1]Osamu Nakatsuka, [1]Shigeaki Zaima

1 GRADUATE SCHOOL OF ENGINEERING, NAGOYA UNIVERSITY

2 RESEARCH FELLOW OF JSPS

17:05 C3-O-06 **Electrical Characterization of CZTSSe Solar Cells and Comparison with Simulated Devices**

[1]Xinya Xu, [2]Zhenghao He, [3]Ian Forbes, [4]Stefan Georg Haass, [3]Jose Marquez Prieto, [2]Fali Tan

1 CHINA-EU INSTITUTE FOR CLEAN AND RENEWABLE ENERGY, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

2 SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

3 NORTHUMBRIA PHOTOVOLTAICS APPLICATIONS CENTRE, NORTHUMBRIA UNIVERSITY

4 LABORATORY FOR THIN FILMS AND PHOTOVOLTAICS, EMPA-SWISS FEDERAL LABORATORIES FOR MATERIALS SCIENCE AND TECHNOLOGY

17:20 C3-O-07 **Electrochemical Potential Control to Synthesize MoSx ($2 \leq x < 3$) as a Pt-Free Counter Electrode for Dye-Sensitized Solar Cells**

[1]Chao-Kuang Cheng, [2]Che-Hsien Lin, [2]Chuen-Horng Tsai, [1]Chien-Kuo Hsieh

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