

CONFERENCE PROGRAMME

TUESDAY, 22 September 2009

Please note, that this Programme may be subject to alteration and the organisers reserve the right to do so without giving prior notice. The current version of the Programme is available at www.photovoltaic-conference.com.

(i) = invited

PLENARY SESSION 2BP.1

8:30 – 10:10 Wafer-Based Silicon Solar Cells and Materials Technology (1)

Chairpersons:

M.A. Green
University of NSW, Sydney, Australia

G. Beaucarne
IMEC, Leuven, Belgium

- 2BP.1.1** W.C. Sinke, G. Coletti & M. De Wild-Scholten
ECN, Petten, The Netherlands
G. Hahn
University of Konstanz, Germany
S. Reber
Fraunhofer ISE, Freiburg, Germany
G. Beaucarne & E. Van Kerschaver
IMEC, Leuven, Belgium
A. Metz
SCHOTT Solar, Alzenau, Germany
Wafer-Based Crystalline Silicon Modules at 1€/Wp: Final Results from the CRYSTALCLEAR Integrated Project
- 2BP.1.2** J. Haunschild, M. Glatthaar, W. Kwapil & S. Rein
Fraunhofer ISE, Freiburg, Germany
Comparing Luminescence Imaging with Illuminated Lock in Thermography and Carrier Density Imaging for Inline Inspection of Silicon Solar Cells
- 2BP.1.3** J. Benick, B. Hoex & S.W. Glunz
Fraunhofer ISE, Freiburg, Germany
High Efficiency n-Type Si Solar Cells with Front Side Boron Emitter
- 2BP.1.4** K. Ramspeck, K. Bothe, J. Schmidt & R. Brendel
ISFH, Emmerthal, Germany
Dynamic ILM – An Approach to Infrared Camera Based Dynamical Lifetime Imaging
- 2BP.1.5** D. Macdonald, F. Rougieux & A. Cuevas
The Australian National University, Canberra, Australia
B. Lim & J. Schmidt
ISFH, Emmerthal, Germany
M. Di Sabatino
SINTEF, Trondheim, Norway

L.J. Geerligs
ECN, Petten, The Netherlands
Boron-Oxygen Defects in Compensated p-type Czochralski Silicon

VISUAL PRESENTATIONS 4BV.1

8:30 – 10:10 Balance of System Components

Engineering and System Integration

Detailed information on Session 4BV.1 is presented in the section entitled 'Visual Presentations'.

BREAK 10:10 – 10:30

ORAL PRESENTATIONS 2BO.1

10:30-12:00 Mono- and Multicrystalline Silicon Materials and Cells

Metallisation

Chairpersons:

D. Biro
Fraunhofer ISE, Freiburg, Germany

H. Nagel
SCHÖTT Solar, Alzenau, Germany

- 2BO.1.1** D.K. Fork, S.E. Solberg, R.B. Rao, M. Prondzinski, A. Kalio, D. Duff, C. Eldershaw & A.R. Lewis
PARC, Palo Alto, United States
D.H. Neuhaus
Solarworld Innovations, Freiberg, Germany
F. Bamberg
Deutsche Cell, Freiberg, Germany
High Aspect Ratio Solar Cell Gridlines by Focused Flow Extrusion
- 2BO.1.2** M. Hörteis, J. Bartsch, V. Radtke, A. Filipovic & S.W. Glunz
Fraunhofer ISE, Freiburg, Germany
Different Aspects of Seed Layer Printed and Light-Induced Plated Front Side Contacts
- 2BO.1.3** J. Hoornstra, B. Heurtault & A. Carr
ECN, Petten, The Netherlands
Stencil Print Applications and Progress for Crystalline Silicon Solar Cells
- 2BO.1.4** A.J. Lennon, V.A. Allen, A. Ho-Baillie & S. R. Wenham
University of NSW, Sydney, Australia
New Dielectric Patterning Technique for Silicon Solar Cells

- 2BO.1.5** N.E. Posthuma, T. Janssens, E. Van Kerschaver, G. Beaucarne & J. Poortmans
IMEC, Leuven, Belgium
D. Chen, L. Maretti & E. Webb
MLI, Moses Lake, United States
Investigation of Copper Plated Contacts for Silicon Solar Cells
- 2BO.1.6** A. Knorz, M. Alemán, N. Bay, A. Grohe, R. Preu & S.W. Glunz
Fraunhofer ISE, Freiburg, Germany
Laser Ablation of Antireflection Coatings for Plated Contacts Yielding Solar Cell Efficiencies Above 20 %

ORAL PRESENTATIONS 1BO.5

10:30-12:00 Space and Concentrator PV Technology

Chairpersons:

C. Signorini
ESA, Noordwijk, The Netherlands

A.W. Bett
Fraunhofer ISE, Freiburg, Germany

- 1BO.5.1** R. Campesato, M. Casale, G. Gori, G. Gabetta & C. Flores
CESI RICERCA, Milan, Italy
M. Kagan & V. Semenov
OJSC RPE "KVANT", Moscow, Russian Federation
Triple Junction Solar Cells and Solar Panels for the New Generation of Russian Spacecraft
- 1BO.5.2** H.W. Brandhorst Jr., J.A. Rodiek & S.R. Best
University of Auburn, United States
M.J. O'Neill
ENTECH, Fort Worth, United States
M.F. Piszczor
NASA Glenn Research Center, Cleveland, United States
High-Voltage Multi-Junction-Cell Concentrator Array Direct-Driving an Electric Thruster Test Results
- 1BO.5.3** G. D'Accolti, C. Signorini & H. Fiebrich
ESA-ESTEC, Noordwijk, The Netherlands
A. Accomazzo
ESA-ESOC, Darmstadt, Germany
G. Schwehm
ESA-ESAC, Madrid, Spain
Rosetta Solar Array Flight Data Analysis
- 1BO.5.4** S.P. Philipps, G. Peharz, T. Schult, R. Hoheisel, F. Dimroth & A. W. Bett
Fraunhofer ISE, Freiburg, Germany
A Theoretical Analysis on the Energy Production of III-V Multi-Junction Concentrator Solar Cells under Realistic Spectral Conditions
- 1BO.5.5** G. Flamand, L. Zhao, Y. Mols, J. Van der Heide & J. Poortmans
IMEC, Leuven, Belgium
Development of Mechanically Stacked Multi-Junction Solar Cells Applying Thin, One-side Contacted III-V Cells

- 1BO.5.6** B. Groß, G. Siefer, M. Steiner, W. Guter, V. Klinger, B. George, M. Peters, J.C. Goldschmidt & F. Dimroth
Fraunhofer ISE, Freiburg, Germany
Highly Efficient Light Splitting Photovoltaic Receiver

ORAL PRESENTATIONS 3BO.9

**10:30-12:00 Amorphous and Microcrystalline Silicon Solar Cells
TCO and Light Scattering**

Chairpersons:

R.E.I. Schropp
University of Utrecht, The Netherlands

M. Topic
University of Ljubljana, Slovenia

- 3BO.9.1** M. Vanecek, A. Poruba, Z. Remes, J. Holovsky & A. Purkr
Academy of Sciences of the Czech Republic, Prague, Czech Republic
Five Roads towards Increased Optical Absorption and High Stable Efficiency for Thin Film Silicon Solar Cells
- 3BO.9.2** M. Kambe, N. Taneda, K. Masumo, S. Higashi, A. Takahashi, W. Nishida, T. Ikeda, T. Oyama & K. Sato
Asahi Glass, Yokohama, Japan
T. Matsui, H. Sai & M. Kondo
AIST, Ibaraki, Japan
Light-Trapping Effect in a-Si:H / μ -Si:H Tandem Solar Cells by Using High Haze SnO₂:F Thin Films
- 3BO.9.3** S. Benagli, D. Borrello, J. Meier, E. Vallat-Sauvain, U. Kroll & J. Steinhauser
Oerlikon Solar-Lab, Neuchâtel, Switzerland
High-Efficiency Amorphous Silicon Devices on LPCVD-ZnO TCO Prepared in Industrial KAI TM R&D Reactor
- 3BO.9.4** F. Lükermann, V. Mönkemöller, M. Sacher & U. Heinzmann
University of Bielefeld, Germany
H. Kurz, F. Hamelmann & H. Stiebig
Malibu, Bielefeld, Germany
Surface Modification of LPCVD ZnO-Films for Silicon Thin Film Solar Cells
- 3BO.9.5** O. Isabella & M. Zeman
Delft University of Technology, The Netherlands
J. Krc
University of Ljubljana, Slovenia
Application of Photonic Crystals as Back Reflectors in Thin-Film Silicon Solar Cells
- 3BO.9.6** C. Pflaum & C. Jandl
University Erlangen-Nuremberg, Germany
C. Haase
Forschungszentrum Jülich, Germany
H. Stiebig
Malibu, Bielefeld, Germany
Simulation of Light In-Coupling at Oblique Angles in Thin-Film Silicon Solar Cells

VISUAL PRESENTATIONS 5BV.2

10:30 – 12:00 PV Power Plants

PV and Architecture

Detailed information on Session 5BV.2 is presented in the section entitled 'Visual Presentations'.

LUNCH 12:00 – 13:00

ORAL PRESENTATIONS 2BO.2

13:00 – 14:30 Silicon Feedstock, Crystallisation and Wafering

Silicon Feedstock Production and Analysis

Chairpersons:

H. Aulich
PV Crystalox Solar, Erfurt, Germany

K. Hesse
Wacker Chemie, Burghausen, Germany

2BO.2.1 W. Osborne
REC Silicon, Moses Lake, United States
Commercial Fluid Bed Process for High Quality Granular Polycrystalline Silicon in Efficient Low-Cost PV Applications

2BO.2.2 R. Reis
REC Silicon, Moses Lake, United States
D. Fowler
REC Silicon, Butte, United States
F. Hugo
Etec, Aschaffenburg, Germany
New Reactor Concept for Continuous Production of High Purity Solargrade Silicon

2BO.2.3 E. Olsen
Norwegian University of Life Sciences, As, Norway
S. Rolseth
SINTEF, Trondheim, Norway
3-Layer Electrochemical Refining of Silicon

2BO.2.4 G. Coletti & P. Bronsveld
ECN, Petten, The Netherlands
C.C. Swanson
Eastman Kodak Company, New York, United States
R. Kvande & L. Arnberg
NTNU, Trondheim, Norway
H. Habenicht
Fraunhofer ISE, Freiburg, Germany
C. Knopf
Deutsche Solar, Freiberg, Germany
What Metal Concentrations Can We Allow in Silicon Feedstock?

2BO.2.5 B. Herzog & G. Hahn
University of Konstanz, Germany
C. Knopf & K. Wambach
Deutsche Solar, Freiberg, Germany
J. Geilker & W. Kwapil
Fraunhofer ISE, Freiburg, Germany
Studies of Compensation Behaviour in p-Type mc-Silicon

2BO.2.6 N. Usami, K. Kutsukake, I. Takahashi, R. Yokoyama, K. Fujiwara & K. Nakajima
Tohoku University, Sendai, Japan
How Can We Decrease Defect Density in Si Multicrystals to Realize High-Efficiency Solar Cells?

ORAL PRESENTATIONS 1BO.6

13:00 – 14:30 Organic-Based PV

Processing and Production

Chairpersons:

J.M. Kroon
ECN, Petten, The Netherlands

N.N.

1BO.6.1 Y. Kashiwa, Y. Ogomi, J. Usakawa & S. Hayase
Kyushu Institute of Technology, Kitakyushu, Japan
M. Kono & Y. Yamaguchi
Nippon Steel Chemical, Kitakyushu, Japan
3D-TCO-Less-Dye-Sensitized Solar Cells Consisting of Hybrid and Tandem Structures

1BO.6.2 J. Goldstein, B. Breen & I. Yakupov
3GSolar, Jerusalem, Israel
Towards Commercialization of Photovoltaic Dye Cells at 3GSolar

1BO.6.3 J. Desilvestro, K. Brooks, P. Murray, S. Tulloch & G. Tulloch
Dyesol, Queanbeyan, Australia
Dye Solar Cells for the Market Place

1BO.6.4 invited

1BO.6.5 C. Giroto, B.P. Rand, S. Steudel, A. Hadipour, T. Aernouts, J. Genoe & P. Heremans
IMEC, Leuven, Belgium
Spray-Coating as Deposition Technique for Fully Solution Processed Polymer Solar Cells

1BO.6.6 C. Hoth, A. Seemann & R. Steim
Konarka Technologies, Nürnberg, Germany
T. Ameri, H. Azimi & C.J. Brabec
Konarka Technologies, Linz, Austria
Commercialization of Organic Solar Cells

ORAL PRESENTATIONS 3BO.10

**13:00 – 14:30 Amorphous and Microcrystalline Silicon Solar Cells
Deposition Technologies**

Chairpersons:

D. Mataras
University of Patras, Greece
N.N.

- 3BO.10.1** P. Obermeyer, D. Severin, J. Müller, M. Kress, N. Kuhr, J. Schroeder, K. Witting, K. Schwanitz, T. Stolley, S. Klein, J. Haack, T. Repmann, U.I. Schmidt & S. Wieder
Applied Materials, Alzenau, Germany
S. Shrauti
Applied Materials, Santa Clara, United States
Large Area Thin Film Silicon Solar Cells and Modules on Textured ZnO:Al Front Contacts
- 3BO.10.2** T. Fujinaga, S. Asari & K. Saito
ULVAC, Kanagawa, Japan
Preparation of Micro-Crystalline Silicon for Tandem Solar Cells
- 3BO.10.3** T. Kilper, D. Hrunski, J. Kirchoff, S. Muthmann, T. Nyangonda, W. Reetz, S. Schicho, G. Schöpe, C. Zahren & A. Gordijn
Forschungszentrum Jülich, Germany
High-rate Deposited a-Si:H/ μ c-Si:H Tandem Modules
- 3BO.10.4** M. Geisler, R. Beckmann, G. Grabosch, T. Merz, M. Röder & A. Zeuner
Leybold Optics, Alzenau, Germany
PECVD Cluster for Manufacturing Gen 5 Silicon Thin Film Tandem Solar Cells
- 3BO.10.5** R.E.I. Schropp, C.O. Van Bommel, M. Brinza, J.P.H. Jongen & H. Li
University of Utrecht, The Netherlands
Feasibility of In-Line Continuous Hot-Wire Chemical Vapor Deposition for Proto- and Nanocrystalline P-I-N Solar Cells
- 3BO.10.6** Y. Yamauchi, B. Tomoyoshi, Y. Takeuchi & H. Takatsuka
Mitsubishi Heavy Industries, Nagasaki, Japan
H. Muta, K. Uchino & Y. Kawai
Kyushu University, Kasuga, Japan
Characteristics of SiH₄/H₂ Plasma Produced by Short Gap VHF Discharge

VISUAL PRESENTATIONS 5BV.3

13:00 – 14:30 Off-grid Applications and Rural Electrification

Detailed information on Session 5BV.3 is presented in the section entitled 'Visual Presentations'.

BREAK 14:30 – 14:45

ORAL PRESENTATIONS 2BO.3

**14:45 – 16:15 Silicon Feedstock, Crystallisation and Wafering
Impurities in c-Si and Wafer Technology**

Chairpersons:

T. Bruton
TMB Consulting, Woking, United Kingdom
E. Perezagua
Consultores de Energía Fotovoltaica, Madrid, Spain

- 2BO.3.1** C. Reimann, M. Trempa & J. Friedrich
Fraunhofer IISB, Erlangen, Germany
S. Würzner & H.J. Möller
TUBA Freiberg, Germany
The Incorporation of Carbon during Directional Solidification of Multi-Crystalline Silicon for Solar Cells
- 2BO.3.2** U. Wunderwald & M. Zschorsch
Fraunhofer THM, Freiberg, Germany
K. Dadzis
Deutsche Solar, Freiberg, Germany
T. Jung & J. Friedrich
Fraunhofer IISB, Erlangen, Germany
Influence of Travelling Magnetic Fields on Melt Convection During Bridgman Type Solidification of Multi-Crystalline Silicon
- 2BO.3.3** T. Trupke, R. A. Bardos, J.W. Weber, W. Macmillan, R. Kroeze & I.A. Maxwell
BT Imaging, Surry Hills, Australia
J. Nyhus
REC ScanWafer, Porsgrunn, Norway
Photoluminescence Imaging on Silicon Bricks
- 2BO.3.4** P.C.P. Bronsveld & L.J. Geerligs
ECN, Petten, The Netherlands
E.J. Ovreid
SINTEF, Trondheim, Norway
R. Kvande
Fesil Sunergy, Lilleby, Norway
G. Stokkan
NTNU, Trondheim, Norway
E. Olsen
Norwegian University of Life Sciences, Ås, Norway
Eliminated Impact of Aluminium Contamination in MC-SI Solar Cells
- 2BO.3.5** F. Noca
Geneva Institute of Technology, Switzerland
P. Monkewitz
EPFL, Lausanne, Switzerland
B.H. Alhosseini
ETH, Zurich, Switzerland
P.M. Nasch
Applied Materials, Lausanne, Switzerland
Fluid Mechanics of Wire Sawing

- 2BO.3.6** O. Anspach, B. Hurka, J. Zeh & F.-W. Schulze
PV Silicon, Erfurt, Germany
Influence of Abrasive Shape and Size Distribution on the Wire Sawing Process

ORAL PRESENTATIONS 1BO.7

14:45 – 16:15 Terrestrial Concentrator Systems

Concentrator Systems and Technology

Chairpersons:

R.P. Kenny
European Commission, DG JRC, Ispra, Italy
G. Sala
UPM, Madrid, Spain

- 1BO.7.1** M. Vivar, I. Antón & G. Sala
UPM, Madrid, Spain
C. Morilla
BP Solar, Madrid, Spain
Si-Cells Radial Parquet for Parabolic Dish Receivers
- 1BO.7.2** O. Stalter & B. Burger
Fraunhofer ISE, Freiburg, Germany
Inverter Integrated Motor Control Unit for Two-Axis (C)PV Trackers: The "Tracking Inverter"
- 1BO.7.3** A. Antonini, M. A. Butturi, P. Di Benedetto, D. Uderzo, P. Zurru & E. Milan
CPower, Ferrara, Italy
M. Stefancich
CNR, Ferrara, Italy
A. Parretta
ENEA, Bologna, Italy
N. Baggio
SOLON, Carmignano di Brenta, Italy
Rondine PV Concentrators: Field Results and Innovations
- 1BO.7.4** A. Gombert, A. Hakenjos, I. Heile, J. Wüllner, T. Gerstmaier & S. Van Riesen
Concentrix Solar, Freiburg, Germany
FLATCON® CPV Systems – Field Data and New Developments
- 1BO.7.5** M. Martínez, D. Sánchez, J. Perea, F. Rubio & P. Banda
ISFOC, Puertollano, Spain
Isfoc Demonstration Plants: Rating and Production Data Analysis
- 1BO.7.6** C. Domínguez, S. Askins, I. Antón & G. Sala
UPM, Madrid, Spain
Indoor Characterization of CPV Modules Using the Helios 3198 Solar Simulator

ORAL PRESENTATIONS 4BO.11

14:45 – 16:15 Engineering and System Integration (1)

Chairpersons:

I. Weiss
WIP-Renewable Energies, Munich, Germany
N.N.

- 4BO.11.1** F. P. Baumgartner & N. Allet
ZHAW University of Applied Sciences, Winterthur, Switzerland
B. Aeschbach & M. Pezzotti
EKZ Utility of the Canton Zurich, Switzerland
Potential of Electrical Vehicles Powered by Photovoltaics and Dynamic Grid Management in the Greater Zuerich Area
- 4BO.11.2** M. Braun & K. Büdenbender
ISET, Kassel, Germany
M. Perrin, H. Collin & Z. Feng
INES, Le Bourget-du-Lac, France
D. Magnor
ISEA, Aachen, Germany
Photovoltaic Self-Consumption in Germany - Using Lithium-Ion Storage to Increase Self-Consumed Photovoltaic Energy
- 4BO.11.3** D. Magnor & D.U. Sauer
RWTH Aachen, Germany
Concept of a Battery Ageing Model for Lithium-Ion Batteries Considering the Lifetime Dependency of the Operation Strategy
- 4BO.11.4** M. Vetter & S. Schwunk
Fraunhofer ISE, Freiburg, Germany
X. Le Pivert & J. Merten
CEA, Le Bourget du Lac, France
Electric Mobility and Photovoltaics - The Low Voltage Grid on the Way to Energy Autonomy?
- 4BO.11.5** D.J. Ha, P. Perichon & J. Merten
INES/CEA, Le Bourget du Lac, France
S. Ploix
G-SCOP/INPG, Grenoble, France
F. Wurtz
G2ELab/INPG, Grenoble, France
Energy Management System for a Photovoltaic Grid-Connected Building
- 4BO.11.6** E. Caamaño-Martín, D. Masa, A. Gutiérrez, F. Monasterio, F.J. Jiménez, J. Porro & M. Cagigal
UPM, Madrid, Spain
Optimizing PV Use through Active Demand Side Management

VSUAL PRESENTATIONS 3BV.4

14:45 – 16:15 Amorphous and Microcrystalline Silicon Solar Cells

Detailed information on Session 3BV.4 is presented in the section entitled 'Visual Presentations'.

BREAK 16:15 – 16:30

ORAL PRESENTATIONS 2BO.4

**16:30 – 18:00 Mono- and Multicrystalline Silicon Materials and Cells
Surface Passivation**

Chairpersons:

J.C. Müller (*i*)
CNRS, Strasbourg, France

J.M. Fernández
BP Solar, Madrid, Spain

- 2BO.4.1** F. Granek, C. Reichel & S.W. Glunz
Fraunhofer ISE, Freiburg, Germany
Stability of Front Surface Passivation of Back-Junction Back-Contact Silicon Solar Cells under UV Illumination
- 2BO.4.2** B. Vermang, X. Loozen, Y. Ma, B.T. Chan, J. John, G. Beaucarne, J. Poortmans & R. Mertens
IMEC, Leuven, Belgium
Characterization and Implementation of Thermal ALD Al₂O₃ as Surface Passivation for Industrial Si Solar Cells
- 2BO.4.3** V. Verlaan, J. H. H. Gielis, B. Hoex, N.M. Terlinden, G. Dingemans, M. van de Sanden & W. Kessels
Eindhoven University of Technology, The Netherlands
Comparing a-Si:H, SiNx:H, SiO₂ and Al₂O₃ Films for c-Si Surface Passivation Using the Contactless Optical Technique of Second-Harmonic Generation
- 2BO.4.4** J. Benick, K. Zimmermann & M. Hermle
Fraunhofer ISE, Freiburg, Germany
J. Spiegelman
RASIRC, San Diego, United States
Passivation Quality of Wet Oxides Grown from Purified Steam
- 2BO.4.5** G. Dingemans, M. van de Sanden & W. Kessels
Eindhoven University of Technology, The Netherlands
Impact of Film Thickness, Post-Deposition Anneal, and Firing on the Excellent Surface Passivation of c-Si by Atomic Layer Deposited Al₂O₃
- 2BO.4.6** M. Rauer, C. Schmiga, M. Hermle & S.W. Glunz
Fraunhofer ISE, Freiburg, Germany
Passivation of Screen-Printed Aluminium-Alloyed Emitters for Back Junction n-Type Silicon Solar Cells

ORAL PRESENTATIONS 1BO.8

16:30 – 18:00 New Materials, Cells and Modules

Novel Solar Cells

Chairpersons:

A. Martí Vega
UPM, Madrid, Spain

M. Yamaguchi
Toyota Technological Institute, Nagoya, Japan

- 1BO.8.1** G.N. Nielson, M. Okandan, P.J. Resnick, J.L. Cruz-Campa, P.J. Clews, W.C. Sweatt, E. Steenberg & V.P. Gupta
Sandia National Laboratories, Albuquerque, United States
M. Wanlass
NREL, Golden, United States
Microscale PV Cells for Concentrated PV Applications
- 1BO.8.2** V.P. Khvostikov, S.V. Sorokina, N.S. Potapovich, A. S. Vlasov, M. Z. Shvarts, N.K. Timoshina & V.M. Andreev
Ioffe Physico Technical Institute, St. Petersburg, Russian Federation
Powerful High Efficiency GaSb TPV and PV Cells
- 1BO.8.3** G.J. Conibeer, R. Patterson, P. Aliberti, D. König, S. Shrestha & M.A. Green
University of NSW, Sydney, Australia
L.M. Huang & J.F. Guillemoles
CNRS, Paris, France
Hot Carrier Solar Cell Absorbers
- 1BO.8.4** P. Wahnón, P. Palacios & I. Aguilera
UPM, Madrid, Spain
J. C. Conesa, R. Lucena & D. Gamarra
CSIC, Madrid, Spain
New Complex Intermediate Band Materials for Highly Efficient Photovoltaic Cells
- 1BO.8.5** M. Künle, A. Hartel, P. Löper & S. Janz
Fraunhofer ISE, Freiburg, Germany
O. Eibl
Karl-Eberhards-University Tübingen, Germany
Preparation of Si-Quantumdots in SiC: Single Layer vs Multilayer Approach
- 1BO.8.6** R. Oshima, A. Takata, Y. Shoji & Y. Okada
University of Tokyo, Japan
K. Akahane
National Institute of Information and Communications Technology, Tokyo, Japan
Recent Progress on Multi-Stacked InAs/GaNAs Self-Assembled Quantum Dot Solar Cell

ORAL PRESENTATIONS 4BO.12

16:30 – 18:00 Engineering and System Integration (2)

Chairpersons:

M. Powalla
ZSW, Stuttgart, Germany

N.N.

- 4BO.12.1** B. Goss, C. Benfield & R. Gwillim
Perpetual Energy, Knutsford, United Kingdom
M. Bliss, M. Strobel & R. Gottschalg
University of Loughborough, United Kingdom
Inter-Continental Optimisation of Photovoltaic Technologies in Large Arrays
- 4BO.12.2** S. Sarhan
National Semiconductor, Santa Clara, United States
Performance Assessment of Grid-Tied Photovoltaic Arrays Equipped with Shade Mitigation Technology
- 4BO.12.3** B. Azzopardi & J. Mutale
University of Manchester, United Kingdom
Optimal Integration of Grid-connected PV Systems Using Emerging PV Technologies
- 4BO.12.4** R. Niemi & P. Lund
Helsinki University of Technology, Espoo, Finland
Novel Design Method for Optimal Placement and Maximum Utilization of PV in Grids
- 4BO.12.5** R. Bründlinger & B. Bletterie
Arsenal Research, Vienna, Austria
G. Arnold & T. Degner
ISET, Kassel, Germany
C. Duvauchelle
EDF R&D, Clamart, France
PV Inverters Supporting the Grid - First Experiences with Testing and Qualification According to the New Grid Interconnection Guidelines in Germany, Austria and France
- 4BO.12.6** A.H.M.E. Reinders & A. de Boer
University of Twente, Enschede, The Netherlands
A. De Winter & M. Haverlag
Philips Lighting, Eindhoven, The Netherlands
Designing PV Powered LED Products – Integration of PV Technology in Innovative Products

VISUAL PRESENTATIONS 3BV.5

16:30 – 18:00 CIS and Other (II-VI) Ternary Thin Film Solar Cells

CdTe Solar Cells

Detailed information on Session 3BV.5 is presented in the section entitled 'Visual Presentations'.