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1.1	<a href="#">Welcoming comments</a> M.A. Green
1.2	<a href="#">Opening address</a> R.H. Annan, U.S. Dept. of Energy (presented by M.B. Prince, U.S. Dept. of Energy)
1.3	<a href="#">Keynote Paper: The Greenhouse Effect and Energy Policy</a> (Invited) Dr. A. Barrie Pittock, CSIRO Atmospheric Research
1.4	<a href="#">The Social Costs of Electricity Generation Photovoltaic Versus Fossil and Nuclear Energy</a> (Invited) O.H. Hohmeyer Fraunhofer Institute for Systems and Innovation Research

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2.1	<a href="#">Progress in Amorphous Silicon Thin-Film Photovoltaic Cell Research and Development</a> (Invited) Jack L. Stone, Solar Energy Research Institute
2.2	<a href="#">Progress in Crystalline Silicon Research</a> (Invited) Dan Arvizu and David King, Sandia National Laboratories.
2.3	<a href="#">Advances in Polycrystalline Thin Film Solar Cells</a> (Invited) W. Bloss and H.W. Schock, Universitat Stuttgart

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4.1	<a href="#">Progress in GaAs Solar Cell Research</a> (Invited) Stephen P. Tobin, Spire Corporation
4.2	<a href="#">Photovoltaic Power Plants: Present and Future</a> (Invited) Elliot Berman and K. Mitchell, ARCO Solar, Inc.
4.3	<a href="#">Progress in Space Photovoltaic Systems</a> (Invited) Henry W. Brandhorst, Jr. NASA Lewis Research Center

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5(a).2	<a href="#">Progress in Homogeneous CVD of Amorphous Silicon for Photovoltaic Applications</a> J.F. Nijs, Z.M. Qian, H. Michiel, A Van Ammel, R.P. Mertens, I.M.E.C., Belgium
5(a).3	<a href="#">Properties of Hydrogen Diluted a-SiC:H Film and Its Application to Amorphous Solar Cells</a> K. Nomoto, Y. Takeda, S. Moriuchi, H. Sannomiya, T. Okuno, A Yokota, M. Kaneiwa, M. Itoh, Y. Yamamoto, Y. Nakata, T. Inoguchi, Sharp Corporation, Nara, Japan
5(a).4	<a href="#">The CPM (Controlled Plasma Magnetron) Method for High Deposition Rate a-Si and High-Conductive Materials</a> M. Nishikuni, K. Nonomiya, M. Tanaka, T. Matsuoka, S. Nakano, N. Okuda, H. Shibuya, M. Ohnishi, Y. Kishi, Y. Kuwano, S. Ohara, Sanyo Electric Co., Ltd., Osaka, Japan
5(a).5	<a href="#">Energy Band Engineering in Amorphous Silicon Multilayers for High Efficiency Solar Cells</a> Y. Hazama, S. Miyazaki, M. Hirose, Hiroshima University

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5(b).2	<a href="#">High Efficiency Polycrystalline Silicon Solar Cells</a> S. Narayanan S.R. Wenham, M.A. Green, University of N.S.W., Australia
5(b).3	<a href="#">Impurity Effects in Silicon Sheet Grown by the Edge-Defined Film Fed Growth (EFG) Technique</a> B.R. Bathey, R.O. Bell, C.E. Dube, J.P. Kalejs, F.V. Wald, Mobil Solar Energy Corporation, U.S.A.
5(b).4	<a href="#">Cast Polycrystalline Silicon Solar Cells</a> J.H. Wohlgemuth, Solarex Corporation, U.S.A.
5(b).5	<a href="#">Bulk and Surface Passivations of Large-Area Polycrystalline Silicon Solar Cells</a> H. Yagi, S. Kokunai, Y. Kida, S. Suzuki, Y. Saegusa, K. Matsukuma, T. Saitoh, M. Nakatani, K. Nishinoiri, R. Shimokawa, Y. Hayashi, K. Morita, Hitachi Works, Central Research Laboratory, Electrotechnical Laboratory, Kumamoto Institute of Technology

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6.2	<a href="#">Novel Implementations of Backside-Contact Si Solar Cell Designs in One-Sun and Concentrator Applications</a> (Invited) RA Sinton, R.R. King, R.M. Swanson, Stanford Electronics Laboratories
6.3	<a href="#">Thin Silicon-Film Solar Cells on Ceramic Substrates</a> (Invited) Allen Bamett, University of Delaware and F.A. Domi, D.H. Ford, C.L. Kendall, J.A. Rand, M.L. Rock and R.B. Hall, Astrosystems
6.4	<a href="#">Improvements in Silicon Solar Cell Performance</a>

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7(a).3	<a href="#">Photovoltaic Systems for Today's Remote Power Applications</a> H.N. Post, M.G. Thomas and V.V. Risser, Sandia National Laboratories and Southwest Technology Development Institute
7(a).4	<a href="#">10 kWp-Solar Plant in Berlin (FRG), Plant Design and First Results</a> T. Mierke, B. Voigt, R. Hanitsch, K. Burgel EAB Energie-Anlagen, Berlin
7(a).5	<a href="#">Pacific Gas &amp; Electric Company's (U.S.A.) Research, Development, Demonstration and Future Options for Photovoltaic Technology: An Overview</a> C.J. Weinberg, Pacific Gas & Electric Co., San Ramon, U.S.A

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7(b).2	<a href="#">Bandgap Engineering in a-Si, Ge:H, F Alloys</a> J.P. Conde, D.S. Shen, V. Chu, S. Wagner, Princeton University, U.S.A. (Presented by Dr. M. Lux-Steiner)
7(b).3	<a href="#">Production Experience with an Innovative Amorphous Silicon Module Fabrication System</a> G.Duran, K.K. Mackamul, D.D. Metcalf, M.J. Stem, Utility Power Group
7(b).4	<a href="#">Approaches for High-Efficiency a-Si Solar Cells</a> H. Tarui, Y. Hishikawa, H. Dohjo, S. Okamoto, T. Matsuoka, N. Nakamura, S. Tsuge, S. Tsuda, S. Nakano, H. Shibuya, M. Ohnishi, Y. Kishi, Y. Kuwano, S. Ohara, Sanyo Electric Co., Ltd., Osaka, Japan
7(b).5	<a href="#">Fabrication and Performance of Amorphous Silicon Based Tandem Photovoltaic Devices and Modules</a> P. Nath, K. Hoffman, S.R. Ovshinsky. Sovonics Solar Systems

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8(a).2	<a href="#">Stable and High Quality a-Si Films for Solar Cells</a> T. Matsuyama, T. Takahama, M. Nishikuni, M. Matsuoka, N. Nakamura, S. Tsuda, S. Nakano, H. Shibuya, M. Ohnishi, Y. Kuwano, S. Ohara, Sanyo Electric Co., Ltd., Osaka, Japan
8(a).3	<a href="#">Temperature Dependence of Conductivity of Amorphous Silicon Doping Modulated Multilayers</a>

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8(a).4	<a href="#">Improvement of the Light-Stability of Intrinsic a-Si:H by Hydrogen Plasma or Light Pulse Treatment</a> W.A Nevin, H. Yamahishi, M. Yamaguchi, Y. Tawada, Kanegafuchi Chemical Industry, Japan
8(a).5	<a href="#">Deposition Mechanisms of a-Si Film in ECR Plasma CVD</a> Y. Ichikawa, N. Itoh, H. Sato, H. Sakai, Fuji Electric Co. Research and Development, Ltd., Japan
8(a).6	<a href="#">Fermi Energy Dependence of Hydrogen Effusion and Diffusion in Hydrogenated Amorphous Silicon</a> W. Beyer, J. Herion, H. Wagner, Institut für Schicht-und Ionentechnik, Germany
8(a).7	<a href="#">Multi-Bandgap Solar Cell Modeling</a> M. Kameda, T. Maysuyama, I. Ogura, K. Wakisaka, T. Matsuoka, S. Tsuda, H. Shibuya, M. Ohnishi, Y. Kishi, S. Nakano, Y. Kuwano, S. Ohara, Sanyo Electric Co., Ltd., Osaka, Japan
8(a).8	<a href="#">Surface Photovoltage on P-and N-Type Doped Amorphous Silicon Films</a> F. Siebke, M. Foller, J. Herion, W. Beyer, H. Wagner, Institut für Schicht-und Ionentechnik, Germany
8(a).9	<a href="#">Closed-form approximation for Internal Field and Free Carrier Densities in a PIN amorphous Silicon Solar Cell</a> A Shah and J. Hubin, Institut de Microtechnique de L'Universite de Neuchatel
8(a).10	<a href="#">High Rate Deposition of Hydrogenated Amorphous Silicon and Its Solar Cell by Using Disilane</a> Y. Ashida, K. Miyachi, H. Tanaka, M. Koyama, N. Fukuda, A Nitta, Mitsui Toatsu Chemicals Inc., Japan
8(a).11	<a href="#">Structure of Amorphous Silicon Film Produced by 50 HZ A C Glow Discharge</a> S.C. Goh, I. Hawkes, Telecom Research Laboratories, Victoria
8(a).12	<a href="#">a-Si:H Films by Direct Photo-CVD and Doping Characteristics</a> H.Matsunami, K. Tokuda, T. Fuyuki, M. Yoshimoto, Kyoto University, Japan
8(a).13	<a href="#">Density of States in Amorphous Carbon Based Semiconductors Alloys</a> F. Demichelis, G. Kaniadakis, C.F. Pirri, A Tagliaferro, E. Tresso Politecnico di Torino
8(a).14	<a href="#">Chemical Ordering in Amorphous Silicon-Carbon and Germanium-Carbon Alloy Films</a> D.R. McKenzie, G.B. Smith, S.B. White, Sydney University and University of Technology
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8(a).16	<a href="#">Remark on the Photoconductivity Decrease with Increasing Ge Content in a-SiGe:H Films</a> C.S. Hong, K.S. Hsu, L.C. Kuo, H.L. Hwang, National Tsing Hua University, Sinor Corp. Industrial Tech Research Institute

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8(b).6	<a href="#">Photovoltaic Cells Fabricated on Electrodeposited CuInSe<sub>2</sub> Films</a> C.X. Qiu, S.N. Qiu, I Shih, McGill University, Montreal, Canada
8(b).7	<a href="#">Preparation of CuInSe<sub>2</sub> Crystals by the Bridgman Method</a> W.S. Weng, L.S. Yip, I. Shih, C.H. Champness, McGill University, Canada
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8(b).10	<a href="#">Deposition of II-VI Based Solar Cells by Low Temperature MOCVD</a> S. Hinckley, G.I. Christiansz, A. Koplick, M. Kwietniak, G. Pain, A.W. Stevenson, T. Warminski, Telecom Australia, Victoria, CSIRO, Victoria, N.S.W.
8(b).11	<a href="#">Junction Characteristics of GaAs on Si for Solar Cell Application</a> T. Soga, T. Egawa, S. Nozaki, N. Noto, T. Jimbo, M. Umeno, Nagoya Institute of Technology and Daido Steel Company Ltd., Japan
8(b).12	<a href="#">The Electrodeposition of Semiconductor Alloys for Photovoltaic Applications</a> S. Hinckley, G.I. Christiansz, A van den Bergen, B.O. West, Telecom Australia, Victoria, Monash University, Victoria
8(b).13	<a href="#">CuInSe<sub>2</sub> Films for Solar Cells by Multi-Source Sputtering of Cu, In and Se-Cu Binary Alloy</a> T. Nakada, M. Nishioka, A. Kunioka, Aoyama Gakuin University
8(b).14	<a href="#">Performance of n-ITO/InPn/p InP of Variable Junction Depth and n/p GaAs Solar Cells under 10 MeV Proton Irradiation</a> I. Weinberg, D.J. Flood, C.K. Swartz, R.E. Hart Jr., T.J. Coutts, NASA Lewis Research Center and Solar Energy Research Institute Co., U.S.A.
8(b).15	<a href="#">Common Sourced Multiple Load vs Separate Source/Individual Loan Photovoltaic System</a> J. Appelbaum, NASA Lewis Research Center
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9(a).3	<a href="#">a-Si/a-Si Two-Stacked Solar Cell Efficiency, Reliability and Large Area Fabrication</a> H. Yamagishi, K. Asaoka, W.A. Nevin, T. Fujihara, H. Nishio, T. Endoh, K. Tsuge, Y. Tawada, Kanegafuchi Chemistry Industry, Japan
9(a).4	<a href="#">a-SiGe:H and a-SiC:H Alloys for High Efficiency Solar Cells</a> A. Catalano, R. Arya, L. Yang, M. Bennett, J. Newton, S. Wiedeman, A. Rothwarf, Solarex Thin Film Division. U.S.A., Drexel University, P.A., U.S.A.
9(a).5	<a href="#">Time-of-Flight Measurement of Longitudinal Electron Transport in a-Si:H Base Superlattices</a> R. Hattori, J. Shirafuji, Osaka University, Japan

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9(b).4	<a href="#">Improved Interconnection Method for Enhanced Module Efficiency</a> H. Flodl, K.-D. Rasch, W. Schmidt, K.-H. Tentscher, G. Wahl, Telefunken Electronic GmbH
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10(a).3	<a href="#">Large Area Screen Printed CdS/CdTe Solar Cell</a> N. Ueno, Y. Nishiyama, T. Arti, N. Suyama, Y. Kita, M. Murozono, Matsushita Battery Industrial Co., Ltd.
10(a).4	<a href="#">Electrodeposited r-CdS/p-CdTe Thin Film Solar Cells</a> G.C. Morris, L.E. Lyons, C. Owen, P. Tanner, University of Queensland

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10(b).2 [The NASA Space Solar Cell Advanced Research Program](#)  
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11.3 [A Novel Technique for the Production of Amorphous Silicon for Solar Cell Applications](#)  
(Invited) W. Milne, P.A. Robertson, S.D. Baker,  
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12(a).4	<a href="#">Outdoor Testing of a 21% Efficient Single-Cell Laboratory Concentrator Module, Comprising a Linear Fresnel Lens, Prism Cover and Microgrooved Silicon Cell</a> M.J. O'Neill, A.J. McDanal. Entech, Ltd. (presented by P. Jester, 3M)
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12(b).3	<a href="#">Improved Reflection and Light Trapping Using Tilted Pyramids and Grooves</a> P. Campbell, S.R. Wenham, M.A. Green, University of N.S.W., Australia
12(b).4	<a href="#">Light Emission for Shunt Defect Identification and Analysis</a> C. Honsberg, L.C. Kilmer, A.M. Bamett, J.E. Phillips, University of Delaware and Institute of Energy Conversion
12(b).5	<a href="#">Effective Diffusion Lengths in Polycrystalline Silicon Solar Cells: Comparison of Different Methods</a> J. Metzendorf, V. Bentlage, A. Sperling, F.R. Kessler, Phys.-Techn. Bundesanstalt, Techn. University, Germany

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13(a).2	<a href="#">Roll-to-Roll Preparation of Large Area Amorphous Silicon Solar Cell on Polymer Film Substrate</a> K. Nakatani, K. Suzuki, H. Okaniwa, S. Sobajima, Teijin Ltd., Tokyo, Japan
13(a).3	<a href="#">Production and Application of Large Area and High Efficiency Amorphous Silicon Solar Cells</a> W-Z. Li, J-X. Shen, Harbin-Chronar Solar Energy Electricity Corporation
13(a).4	<a href="#">40 cm x 120 cm Single Substrate a-Si Solar Cells</a> Y. Ichikawa. T. Ihara, T. Yoshida, H. Sato, K. Kawate. S. Fujikake, H. Sakai, Fuji Electric Co. Research and Development, Ltd.. Japan
13(a).5	<a href="#">The Roles of P/I Interface Layer in a-Si P-I-N Solar Cells</a> H. Sakai, T. Yoshida, S. Fujikake, Y. Ichikawa, Fuji Electric Co. Research and Development, Ltd.. Japan
13(a).6	<a href="#">Improving of Fill Factor of Single Amorphous Silicon Solar Cells</a> H. Tanaka, M. Koyama, K. Miyachi, Y. Ashida, Y. Ohashi, N. Fukuda, A Nitta, Mitsui Toatsu Chemicals Inc.. Japan
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13(a).8	<a href="#">An Effective Method to Improve the Thermal Stability of a-Si:H Solar Cells</a> Z. Xu, W. Chen, B. Zhao, X. Zou, Huazhong University of Science and Technology, China
13(a).9	<a href="#">Individual Characterization of Component Cells in Stacked Amorphous Silicon (a-Si) Alloy Solar Cell</a> M. Kaneiwa, K. Nomoto, M. Itoh, Y. Yamamoto, Y. Nakata, T. Inoguchi, Sharp Corporation, Nara, Japan
13(a).10	<a href="#">The Influence of Oxide Growth and Etching Procedures on the Density of Surface States of a-Si:H</a> H. Bemer, G. Kragler, J. Meier, E. Bucher, H. Curtis, A. Shan, University of Konstanz, University of Neuchatel
13(a).11	<a href="#">Measurement of the Energy Band Discontinuities in a-SiC p-i-n Junctions by Internal Photoemission</a> G-P. Wei, D. Kruangam, T. Endo, H. Okamoto, Y. Hamakawa, Shanghai University, Kanegafuchi Chemical Ind. Co., Osaka University, Kanegafuchi Chemical Industry Co.
13(a).12	<a href="#">Device Quality a-SiGe Films for Multijunction Solar Cells</a> AK. Barua, D. Das, S.C. De, S. Ray, AK. Batabyal, Indian Association for the Cultivation of Science
13(a).13	<a href="#">Hydrogenated Amorphous Silicon Prepared by Hydrogen Radical Chemical Vapour Deposition</a> J. Jang, S.K. Lee, J.B. Kim, X.T. Xoon, Kyung Hee University and Korea Advanced Institute of Science
13(a).14	<a href="#">Fabrication of Photovoltaic Module Series Interconnects Between a-Si:H Thin Film Solar Cells Deposited on Flexible Polyimide Substrates</a> D.P. Grimmer, K.R. Paulson, J.R. Gilbert, M. Baykowski, 3M Company, Minnesota
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13(b).1	<a href="#">Improvements in Surface Passivation for High-Efficiency, Crystalline Silicon Solar Cells</a> T. Uematsu, N. Tsumura, T. Saitoh, T. Iwashita, T. Tokuyama, K. Morita, Hitachi, Ltd., Tokyo, Uni Tsukuba Kumamoto Inst. of Tech.
13(b).2	<a href="#">Parameters of Laser Grooved Silicon Solar Cells Determined from Matching Theoretical and Experimental Results</a> A.B. Sproul, M.A. Green, University of N.S.W., Australia
13(b).3	<a href="#">Ion Implanted Solar Cells with Thick Emitters</a> A. Cuevas, M. Balbuena, R. Rizzoli, C. Summonte, IES, Madrid, Cnr-Lamel, Bologna
13(b).4	<a href="#">Effects of Surface Texturing on the Performance of MIS Inversion Layer Solar Cells</a> R. Hezel, L. Hu, K. Jaeger, Institut für Werkstoffwissenschaften, Erlangen
13(b).5	<a href="#">Performance Simulation of High Efficiency Silicon Solar Cells with a Buried Channel Emitter</a> K. Hane, M. Ida, T. Uematsu, T. Saitoh, Y. Hayashi, Keio University, Hitachi, Ltd., Electrotechnical Laboratory

13(b).6	<a href="#">The Levitational Zone Refining (LZR) of Photovoltaic Silicon</a> D.A. Hukin, Crystalox Ltd., England
13(b).7	<a href="#">Towards Industrial Production of Silicon MIS-Inversion Layer Solar Cells</a> W. Hoffmann, K. Jager, R. Hezel, Nukem CmbH, Institut für Werkstoffwissenschaften, Germany
13(b).8	<a href="#">Effect of Encapsulation on HF Treated Thick Film Metallised Solar Cells</a> V.K. Kaul, A. Sharma, B.P. Singh, B. Bhargava, CEL, India
13(b).9	<a href="#">Model Calculations to Improve the Efficiency of Terrestrial Silicon Solar Cells</a> R. Ruckteschler, AEG, Aktiengesellschaft
13(b).10	<a href="#">The Kinetic Theory of Plasma-Hydrogenation in Poly-Si Solar Cell: Critical Temperature and Fluctuation Time Phenomena</a> X. Zou, S. Qiu, M. Qiu, Z. Xu, Huazhong University of Science and Technology, China
13(b).11	<a href="#">Irradiance Level Effect on Epitaxial Silicon Solar Cells</a> R. Kishore, V.D.P. Sastri, S.B. Manamohanam, National Physical Laboratory, India
13(b).12	<a href="#">Integral Optical Matching for Photovoltaic Module Design</a> V. Kumar, B. Bhargava, C.E.L., India
13(b).13	<a href="#">The Improvement of Fabrication of High Efficiency Poly-Crystalline Silicon MINP Solar Cells</a> E. Liu, C. Zhong, Q. Jia, S. Zhang, Xi'an Jiaotong University, China
13(b).14	<a href="#">Investigation of Crystal Defects in Polycrystalline Silicon</a> W. Wang, G. Shu, J. Zhu, Southeast University and Nanjing Research Institute
13(b).15	<a href="#">Optimization of Back Surface Field Technology in Large Area Silicon Solar Cells</a> L. Fornarini, G. Di Franca, R. Peruzzi, G. Ginocchietti, Enea Casaccia and Italsolar S. p. A., Rome
13(b).16	<a href="#">A Novel Design for Very-Thin, High-Efficiency Silicon Solar Cells with a New Light Trapping Structure</a> M. Ida, K. Hane, T. Uematsu, T. Saitoh, Y. Hayashi, Keio University, Hitachi, Ltd., Electrotechnical Laboratory

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#### ■ CRYSTALLINE SOLAR CELLS (ORAL)-LATE NEWS

14(a).1	<a href="#">Recent Advancements in III-V Solar Cells</a> N.R. Kaminar, K.A. Bertness, H.C. Hamaker, M. Ladle Ristow, H.F. MacMillan, G.F. Virshup, B-C. Chung, L. Partain, J.G. Werthen, Varian Research Center
14(a).2	<a href="#">Recent Developments in One-Sun, Point-Contact Solar Cells</a> R.R. King, R.M. Swanson, Stanford Electronics Laboratories
14(a).3	<a href="#">22.6% Efficient Silicon Solar Cells</a> A.W. Blakers, A. Wang, A.M. Milne, J. Zhao, X. Dai, M.A. Green, University of New South Wales
14(a).4	<a href="#">15% Efficient Semicrystalline Silicon Solar Cells Using Hybrid Diffusion Processes</a> H. Somberg, Global Photovoltaic Specialists, Inc.

14(a).5	<a href="#">Electrical Behaviour of Solar-Cell Emitters Formed by Ion Implantation</a> F.J. Bisschop, L.A. Verhoef, W.C. Sinke, FOM-Institute for Atomic-and Molecular Physics
14(a).6	<a href="#">Electron and Proton Displacement Damage in Production Line Quality Silicon and Gallium Arsenide Solar Cells</a> G.A. Herbert, RH. Maurer, J.D. Kinnison, John Hopkins Applied Physics Laboratory

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■ **FUNDAMENTALS, PROGRAMS, SYSTEMS(ORAL)-LATE NEWS**

14(b).1	<a href="#">NEDO's Photovoltaic R &amp; D Activities and Recent Results on the Sunshine Project</a> Y. Nakashima, S. Arnano, S. Ito, H. Sugimoto, T. Kobayashi New Energy and Industrial Technology Development Organization, Sunshine Project Promotion H.Q., AIST.
14(b).2	<a href="#">Measurements of the Defect Density in the Gap of a-SiGe:H Alloys by PDS and Capacitance Techniques</a> U. Besi Vetrella, U. Coscia, P. Menna, E.Sansores, E. Terzini, ENEA Centro Ricerche Fotovoltaiche
14(b).3	<a href="#">Photoluminescence Study of Amorphous Silicon Doping Modulated Multilayers</a> D.H. Zhang, D. Haneman, Z.R. Shi, University of New South Wales
14(b).4	<a href="#">Technical and Socio-Economic Aspects of Solar Energy and Rural Development in Developing Countries</a> Y. Effendi, H Nugroho, T. Sulistiyanto, The Energy and Energy Resources Laboratory-LSDE
14(b).5	<a href="#">A Long-Life Standalone Photovoltaic/Diesel Backup Sealed Lead-Acid Storage System, with Optimum Charging Regimes</a> D.A Atkinson, Atkinson & Associates
14(b).6	<a href="#">A Test and Study of Islanding Phenomenon on Utility Grid with a Number of Dispersed Small Scale PV Systems</a> Y. Takeda, K. Takigawa, H. Kobayashi, T. Morishita, A Kitamura, A Miyoshi, CRIEPI, Kansai Electric Power Co. (KEPCO)

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■ **COMPOUND SEMICONDUCTOR CELLS**

15.1	<a href="#">High Efficiency GaAs and GaAs/Ge Tandem Solar Cells</a> (Invited) S.P. Tobin, S.M. Vemon, Spire Corporation
15.2	<a href="#">GaAs-on-Si Solar Cells</a> (Invited) Y. Kadota, M. Yamaguchi and Y. Ohmachi, NTT Applied Electronics Laboratories and NTT Optoelectronics Laboratories
15.3	<a href="#">Status and Potential of CdTe-Based n-i-p Solar Cells</a> (Invited) P.V. Meyers, R.C.H. Liu, Ametek Applied Materials Laboratory
15.4	<a href="#">Single and Tandem Junction CuInSe<sub>2</sub> Photovoltaic Technology</a> (Invited) K. Mitchell, C. Eberspacher, J. Ermer, K. Pauls, D. Pier, D. Tanner, ARCO Solar, Inc.

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■ **SYSTEMS (POSTER)**

16(a).1	<a href="#">Amorphous Silicon PV Power Stations</a> I.F. Gamer, Chronar Ltd.
16(a).2	<a href="#">Performance Testing of Amorphous Silicon Modules</a>

	B. Bhargava, G. Ravikumar, CEL
16(a).3	<a href="#">Rating PV Systems Using Field Test Data</a> V.V. Risser, Southwest Technology Development Institute, New Mexico
16(a).4	<a href="#">Economics of a Village PV Hybrid System in Rural Alaska</a> Karin Holser, University of Alaska, Anchorage
16(a).5	<a href="#">Improved PV-Based RAPS System Design and Marketing Resulting from Victorian Monitoring Studies</a> T.B. Tregaskis, N. Wardrop, Victorian Solar Energy Council, Melbourne
16(a).6	<a href="#">Tracking PV System in the Field and Related Work in Thailand</a> S. Panyakeow, M. Sawadsaringkam, B. Toprasertpong, K. Chalermtiragool. C. Antarasen, T. Cholpranee, D. Kruangam, Chulalongkorn University, Bangkok
16(a).7	<a href="#">VSEC Photovoltaic Products Development Program</a> N. Wardrop, F. Darby, Victorian Solar Energy Council, Melbourne
16(a).8	<a href="#">A Program Introducing PV Systems into Western China</a> V.V. Risser, A Wang, Southwest Technology Development Institute, New Mexico and Gansu Natural Energy Research Institute, China
16(a).9	<a href="#">Photovoltaic Power System Design Using Available Meteorological Data</a> I.J.Muirhead. D.J. Kuhn, Telecom Research Laboratories. Victoria
16(a).10	<a href="#">Performance of Bifacial Cell Arrays in Prism Coupled Compound Parabolic Concentrators</a> I.R Edmonds, Queensland Institute of Technology, Brisbane
16(a).11	<a href="#">Optimal Reflector Profile and Thermo-Syphon Cooling System for Photovoltaic Cells Under High Solar Concentration</a> T. Wadowski. A. AkbarLadeh. Royal Melbourne Institute of Technology
16(a).12	<a href="#">Electrification of Villages by Solar Photovoltaics</a> J.R Meena. Department of Non-Conventional Energy Sources
16(a).13	<a href="#">How to Meet Peakload Economy with Photovoltaic - A Novel Concept for Office Buildings Comprising Facade Mounted Generator and Advanced Grid Connected BOS Components</a> P. Kremer. D. Stahl. Siemens Solar GmbH (to be presented by H. Aulich. PV. Electric GmbH)
16(a).14	<a href="#">Operation and Characteristic Analysis of 1 MW Centralised PV Power System</a> M. Takahashi. N. Fujimura. K. Kawasaki. Shikoku Research Institute Inc. Japan
16(a).15	<a href="#">Estimation of Operational Characteristics of 30kW Photovoltaic Powered Desalination System</a> K. Miyazaki. I. Sugasawa. K. Kanematsu. T. Abe. Hitachi Zosen Corporation
16(a).16	<a href="#">Microprocessor Control of Centre Tapped Load Inverter for Hybrid Energy System</a> W. Oghanna. D. Woodford. Capricornia Institute
16(a).17	<a href="#">Development of Prototype Redox Flow Battery for Photovoltaic Power Systems</a>

I. Tsuda, Y. Wada, K. Nozaki, H. Sekiguchi, K. Kurokawa.  
Electrotechnical Laboratory and Ebara Corporation

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■ **LATE NEWS (POSTER)**

16(b).1	<a href="#">Operating Experience with Battery Energy Storage System</a> B. Voigt, U. Lorenz, Energie-Analgen Berlin
16(b).2	<a href="#">Solar Insolation in an Equatorial Region (Indonesia)</a> H. Nugroho, Y. Effendi, E. Kantosa, N.R. Iskandar, The Energy and Energy Resources Laboratory -LSDE
16(b).3	<a href="#">Preparation of GaAs by Electroplating from an Aqueous Bath</a> J. Ortega, Instituto de Energias Renovables, CIEMAT
16(b).4	<a href="#">Radiation Effects on Low Resistivity High Efficient Silicon Solar Cells</a> W.J. Chen, E.P. Xue, J.H. Chen, X.L. Lu, F.S. Du, L.B. Song, Tianjin Institute of Power Sources
16(b).5	<a href="#">Social Influence of Research and Development of Photovoltaic Power Generation</a> A Lubis, Directorate of Conversion and Conservation of Energy
16(b).6	<a href="#">An Approach of Increasing Conversion Efficiency of Single Junction Solar Cells Formed on Flexible Metal Substrates</a> H-L. Miao, Y. Peng, X-J. Shi, Shanghai Institute of Ceramics, Academic Sinica
16(b).7	<a href="#">The Design Optimization of a Thermoelectric Refrigerator Using Photovoltaic Cells as a Power Source</a> D.Z. Chen, B.B. Wang, R.Q. Cui, S.Y. Zhan, Xi'an Jiaotong University
16(b).8	<a href="#">Improvement of Conversion Efficiency of a-Si Solar Cells by Heat Treatment under Reverse Bias</a> D. Wu, R. Pang, Z. Cheng, J. Ye, H. Miao, C. Huang, Shanghai Institute of Ceramics, Academia Sinica
16(b).9	<a href="#">The Diamond-like Carbon Films by Arc Discharge Deposition</a> R.Q. Cui, Y.M. Lu, Z.B. Zho, Z.B. Shao, N. Di, Xi'an Jiaotong University
16(b).10	<a href="#">Steady State Photoconductivity and Recombination in Doped Hydrogenated Amorphous Silicon Alloys</a> J-K. Yoon, K-S. Hyun, C. Lee, J. Jang, Korea Advanced Institute of Science and Technology, Kyung Hee University

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■ **CLOSING SESSION**

17.1	<a href="#">Review of the United States National Photovoltaic Program</a> (Invited) M.B. Prince, R.H. Arman, United States Department of Energy
17.2	<a href="#">Future Scope of Japanese Photovoltaic R &amp; D Program Under the Sunshine Project</a> (Invited) T. Kobayashi, S. Sawada, N Hata, Sunshine Project Promotion H.Q.MITI
17.3	<a href="#">Photovoltaic Power Generation R &amp; D Programme in Europe</a> (Invited) W. Palz, R. Van Overstraeten, Commission of the European Communities and IMEC, Belgium
17.4	Summary: Thin Film Cell Progress J. Stone, SERI

17.5	Summary: Crystalline Cell Progress M. Taouk. S. Wenham. CXSW
17.6	Imitation: PVSEC-5 Dr. Matsunami
17.7	Closing Remarks M.A. Green

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