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2 Wafer-Based Silicon Solar Cells and Materials Technology	O = Oral Session	B = Tuesday, 1 October 2013
3 Thin Film Solar Cells	V = Visual Session	C = Wednesday, 2 October 2013
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2CV.4.51	Evaluation of Silicon Solar Cell Separation Techniques for Advanced Module Concepts <i>M. Oswald, M. Turek, J. Schneider, S. Schönfelder</i>	1807
2CV.4.52	Spectrophotometric Monitoring of Iron and Copper Contamination of Cleaning Baths for Solar Cell Processing <i>F. Buchholz, E. Wefringhaus, L. Moron, M. Lukesch, W. Weber</i>	1813
2CV.4.53	High Purity Graphite in Photovoltaic Manufacturing Processes <i>J. Frankhauser, O.K. Hopkins, W. Hambeck</i>	1816

2CV.4.56	Anti-Reflection-Coating Thickness Measurements on Textured Silicon Surfaces: Evaluation and Accuracy of Different Measurement Techniques <i>A. Krieg, J. Greulich, M. Tondorf, S. Rein</i>	1820
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2DV.3.3	The Effect of Emitter Profiles for Plated Ni/Cu Silicon Solar Cells <i>L. Li-Yu, B.-C. Chen, S.-P. Hsu, C.-H. Du, Y.-Y. Wang</i>	1828
2DV.3.4	Silicon Solar Cells with Passivation and Antireflection Coatings Obtained by Atmospheric Pressure PECVD <i>J. Vallade, J. Silva, R. Bazinette, M. Pirot, L. Gaudy, S. Quoizola, F. Massines</i>	1831
2DV.3.5	Industrially Fabricated Bifacial Si Solar Cells with n+-p-p+ Structure <i>L. Kreinin, N. Bordin, N. Eisenberg, P. Grabitz, G. Wahl</i>	1835
2DV.3.6	Evaluation of Fire-through Aluminum Pastes for Local Contact Formation in Silicon Solar Cells <i>E. Navarrete, A. Kimmerle, B. Thaidigsmann, R. Woehl, J.R. Ramos-Barrado, D. Biro</i>	1839
2DV.3.7	Development of High Efficient p-Type Industrial PERC-Solar Cells <i>J. Glatz-Reichenbach, F. Buchholz, P. Díaz-Pérez, P. Preis, J. Theobald, E. Wefringhaus, K. Peter</i>	1842
2DV.3.8	Effects of Intrinsic a-Si:H Layer on the Performance of Silicon Heterojunction Solar Cells <i>M. Chen, Y.-L. Chang, P.-C. Yang, M. Huang, Y.-J. Chien, J.S.Q Liu, J. Chang</i>	1846
2DV.3.9	Improvement of Performance of Crystalline Silicon Solar Cells by the Use of Dry Polishing <i>A. Talla, J.C. Loretz, Y. Cuminal, J. Podlecki</i>	1849
2DV.3.10	R & D Pilot-Line Production of Silicon Heterojunction Solar Cells with the Conversion Efficiency Up to 19% <i>W. Wang, L. Zhao, H. Diao, W. Zhang, C. Zhou, J. Chen, G. Wang, D.P. Chen, S. Zhou</i>	1856
2DV.3.11	Implementation of a Multicrystalline ALD-Al ₂ O ₃ -PERC Technology into an Industrial Pilot Production <i>R. Sastrawan, D. Pysch, M. Bijker, F. Delahaye, B. Dielissen, W. Eipert, X. Gay, R. Gortzen, A. Hoffmann, B. Latzel, M. Lenes, X. Mao, S. Patzig-Klein, X. Qu, B.-U. Sander, C. Schmitt, F.M.M. Souren, A. Träger, K. Weise, S. Yang, H. Nussbaumer</i>	1861
2DV.3.12	Role of Laser Damage in Local Contact Formation <i>A. Li, W.-H. Chen, Y.-M. Lin, C.-W. Lai, L.-T. Wang, T. Fang, P.-T. Hsieh</i>	1867
2DV.3.14	Industrial Advanced Cell Designs by Ion Implantation <i>H. Hieslmair, L. Mandrell, I. Latchford, R. Zhu, T. Heerwagen, A. Argawal, B. Adibi</i>	1870
2DV.3.16	The Influence of Passivation Layer and Rear Reflector for Thin Silicon Solar Cells <i>T. Wang, C.-H. Hon, C.-H. Du, C.-Y. Kung, Y.-Y. Wang</i>	1874
2DV.3.17	TCO Improvements in a-Si:H/c-Si Heterojunction Solar Cell <i>M. Izzi, M. Tucci, L. Serenelli, P. Mangiapane, M. Della Noce, L. Mazzarella, I. Usatii, L.V. Mercaldo, E.M. Esposito, E. Bobeico, P. Delli Veneri</i>	1877
2DV.3.18	Black Silicon for Photovoltaic Cells: Towards a High-Efficiency Silicon Solar Cell <i>T. Sarnet, T.J.-Y. Derrien, R. Torres, P. Delaporte, F. Torregrosa, M.-J. Sher, Y.-T. Lin, B. Franta, G. Deng, E. Mazur</i>	1882

2DV.3.19	Pilot Production of 6"-Heterojunction Cells and Modules at Meyer-Burger and Outdoor Performance <i>J. Zhao, H. Mehlich, J. Hausmann, M. Richter, B. Gruber, M. Weinke, M. Schorch, J. Kowalewski, J. Krause, P. Papet, W. Stein, M. Blanchet, T. Söderström, A. Richter, S. Beyer, J. Ufheil</i>	1887
2DV.3.20	Development of a Metallization Process for a Super Fine Line Printing <i>A. Voltan, W. Tao, D. Tonini, M. Zamuner, M. Martire, O. Borsato, E. Bortoletto, C. Bottosso, X. Wang, Q. Chang, Y. Wang, M. Galiazzo</i>	1890
2DV.3.21	New Thermosetting/Thermosetable One Component Tandem Designed for Photovoltaic Applications <i>M. Miliciani, L. Serenelli, M. Izzi, M. Tucci</i>	1894
2DV.3.23	Potential of Plasma Grown Oxide Films for Surface Passivation of Crystalline Silicon Solar Cells <i>S. Seema Saseendran, A. Kottantharayil</i>	1899
2DV.3.25	Impact of Annealing on the Amorphous Silicon/Crystalline Silicon Heterojunction Solar Cells <i>M. Mikolasek, M. Nemeč, J. Kováč, A. Vincze, M. Foti, C. Gerardi, G. Mannino, L. Valenti, S. Lombardo</i>	1903
2DV.3.26	Passivation Films Prepared by Using TiO ₂ -SiO ₂ Composite Solution <i>S. Yoshida, K. Tanitsu, A. Uzum, M. Dhamrin, Y. Suda, K. Kamisako</i>	1908
2DV.3.28	Homogeneous High Ohmic Phosphorus Doping for Advanced Solar Cell Manufacturing Using Reduced Pressure Diffusion Techniques <i>L. Crampette, E. Picard, B. Damiani, Y. Cuminal, B. Semmache</i>	1911
2DV.3.29	Optimization of Amorphous Silicon Carbide Thin Films for Heterojunction Solar Cells <i>M. Perný, M. Váry, J. Huran, M. Mikolasek, V. Saly, A. Kobzev</i>	1915
2DV.3.30	A-Si:H PECVD by Linear μ w and RF Plasma Sources – A Comparative Study of a-Si:H Layer Properties <i>D. Decker, P. Wolf, S. Pieper, H.-P. Sperlich, H. Schlemm, J. Mai</i>	1919
2DV.3.32	Investigation of AZO as Transparent Conductive Oxide for Heterojunction Solarcells <i>O. Madani Ghahfarokhi, K. Chakanga, O. Sergeev, K. von Maydell, C. Agert</i>	1928
2DV.3.33	The Investigation of Cell Electrical Performance with Different Thermal Budget on Anneal Process <i>M.-C. Gao, Y.-P. Lee, L.-W. Yeh, H.-H. Huang, P.-S. Huang, L.-W. Cheng</i>	1932
2DV.3.35	N ⁺ Regions Formed by Phosphorus Implantation and Solid Phase Epitaxial Regrowth <i>T.J. Ratcliff, K.C. Fong, A. Blakers</i>	1935
2DV.3.38	Interface Property of Low Cost SO ₂ Passivation Using Perhydropolysilazane <i>H. Nagayoshi, H. Sakakibara</i>	1939
2DV.3.39	Surface Preparation and Optimization of Amorphous Silicon Deposition for Silicon Heterojunction Solar Cells <i>S. Herasimenka, B. Dauksher, C. Tracy, K. Ghosh, V. Sharma, M. Bailly, S. Bowden</i>	1943
2DV.3.41	An Innovative Cleaning Solution for Conversion Efficiency Improvement in PV Industry <i>W. Han, W. Li, J. Hu, X. Niu, Q. Jiang, Y. Li, Z. Qiu, H. Treichel, D. Ho, Z. Tang</i>	1947
2DV.3.42	The PROTERRA Project: Advanced Processes Using Alternative Raw Materials for an Economic Production of High Efficiency Solar Cells and Modules <i>N. Le Quang, M. Gauthier, M. Gerard, S. Williatte, A.M. Rambaud, G. Goaer, M. Lemiti, D. Blanc-Pélessier, A. Focsa, E. Fourmond, D. Conte, J. Moyroud, J.-P. Vilcot, M. Pawlik, M. Halbwax, N. Auriac, R. Monna, S. Gall</i>	1952

2DV.3.43	Influence of Emitter Profiles on Electrical Characteristics of Solar Cells <i>L.-W. Yeh, M.-J. Gao, H.-H. Huang, P.-S. Huang, L.-W. Cheng</i>	1957
2DV.3.44	Pyrosol Deposited AlO _x for Crystalline Silicon Solar Cells <i>G.G. Untila, T.N. Kost, A.B. Chebotareva, A.S. Stepanov, M.B. Zaks, A.M. Sitnikov, O.I. Solodukha</i>	1960
2DV.3.46	Front Side Metallization of c-Si Solar Cells - Copper Wire and Conductive Adhesive Approach <i>J. Hladik, M. Kusko, A. Poruba, P. Cech, P. Barinkova, R. Barinka, J. Šenkýr, P. Wostry</i>	1964
2DV.3.49	Investigation of the Mechanism Behind Ablation of Dielectrics from Silicon <i>J. Thorstensen, S.E. Foss</i>	1967
2DV.3.50	Effect of Hydrogen in a-Si:H/c-Si Heterojunction <i>M. Tucci, L. Martini, L. Serenelli, M. Izzi, D. Caputo, R. Asquini, G. de Cesare</i>	1971
2DV.3.51	Heterojunction Solar Cells with Electroplated Ni/Cu Front Electrode <i>P. Papet, J. Hermans, T. Söderström, M. Cucinelli, L. Andreatta, D. Bätzner, W. Frammelsberger, D. Lachenal, J. Meixenberger, B. Legradic, B. Strahm, G. Wahli, W. Brok, J. Geissbühler, A. Tomasi, C. Ballif, E. Vetter, S. Leu</i>	1976
2DV.3.52	Boron-Doped PECVD Silicon Oxides as Diffusion Sources for Simplified High-Efficiency Solar Cell Fabrication <i>N. Wehmeier, G. Schraps, H. Wagner, B. Lim, N.-P. Harder, P.P. Altermatt</i>	1980
2DV.3.53	Front-Side Silver Contacts with Improved Recombination and Fine-Line Performance <i>M.Z. Burrows, A. Meisel, D. Balakrishnan, A. Tran, D. Inns, L. Dellis, E. Kim, A.F. Carroll, K.R. Mikeska</i>	1985
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2DV.4.6	Self-Aligned Front-Side Ni/Cu Metallization for Crystalline Silicon Solar Cells <i>A. Focsa, D. Blanc-Pélissier, M. Gauthier, N. Le Quang, M. Lemiti</i>	2001
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2DV.4.10	Silicon Texturization by Metal-Assisted Etching Using Different Noble Metals <i>C. Lévy-Clément, C. Chartier</i>	2009
2DV.4.11	Boron Emitter of N-Type Solar Cell Made with BBr ₃ and Spin-Coating Boron Sources <i>S.-W. Chiu, P.-T. Hsieh, C.-J. Huang, H.-C. Chang, C.C. Li</i>	2013
2DV.4.12	Light-Induced Plating of Silicon Solar Cell Conductors Using a Novel Low Acid, High Speed Copper Electroplating Process <i>A. Letize, B. Lee, K. Crouse, D. Cullen</i>	2016

2DV.4.13	Using PECVD Large Area System with Electrical Asymmetry Effect for Passivation of Si Wafers <i>D. Hrunski, A. Janssen, T. Fritz, D. Gross, B.-M. Meiners, D. Borchert, G. Grabosch</i>	2020
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Components for PV Systems

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