

# Kristopher O Davis

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

71  
papers

706  
citations

11  
h-index

24  
g-index

93  
ext. papers

969  
ext. citations

5  
avg, IF

4.21  
L-index

#	Paper	IF	Citations
71	Automated Defect Detection and Localization in Photovoltaic Cells Using Semantic Segmentation of Electroluminescence Images. <i>IEEE Journal of Photovoltaics</i> , <b>2022</b> , 12, 53-61	3.7	2
70	Raman Microspectroscopy of a Multi-Crystalline Silicon Solar Cell. <i>IEEE Journal of Photovoltaics</i> , <b>2022</b> , 12, 230-237	3.7	
69	Characterization of front contact degradation in monocrystalline and multicrystalline silicon photovoltaic modules following damp heat exposure. <i>Solar Energy Materials and Solar Cells</i> , <b>2022</b> , 235, 111468	6.4	3
68	Multiscale Characterization of Photovoltaic Modules Case Studies of Contact and Interconnect Degradation. <i>IEEE Journal of Photovoltaics</i> , <b>2021</b> , 1-11	3.7	4
67	Impact of interconnection failure on photovoltaic module performance. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2021</b> , 29, 524-532	6.8	3
66	Raman microspectroscopy of a silicon solar cell <b>2021</b> ,		1
65	Impact of Acetic Acid Exposure on the Screen-Printed Tellurite-Based Silver Contacts <b>2021</b> ,		2
64	Phosphorus-doped polysilicon passivating contacts deposited by atmospheric pressure chemical vapor deposition. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 384003	3	2
63	. <i>IEEE Journal of Photovoltaics</i> , <b>2021</b> , 11, 926-935	3.7	4
62	Improving the Passivation of Molybdenum Oxide Hole-Selective Contacts with 1 nm Hydrogenated Aluminum Oxide Films for Silicon Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2020</b> , 217, 2000093	1.6	7
61	Analytic $I_{sc}$ and $V_{oc}$ Method and Power Loss Modes From Outdoor Time-Series $I-V$ Curves. <i>IEEE Journal of Photovoltaics</i> , <b>2020</b> , 10, 1379-1388	3.7	5
60	Spatial Atomic Layer Deposition of Aluminum Oxide as a Passivating Hole Contact for Silicon Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2020</b> , 217, 2000348	1.6	4
59	The Impact of Cracked Solar Cells on Solar Panel Energy Delivery <b>2020</b> ,		3
58	A copula-based Bayesian method for probabilistic solar power forecasting. <i>Solar Energy</i> , <b>2020</b> , 196, 336-345	3.45	28
57	Spatial Atomic Layer Deposition of Molybdenum Oxide for Industrial Solar Cells. <i>Advanced Materials Interfaces</i> , <b>2020</b> , 7, 2000895	4.6	6
56	. <i>IEEE Journal of Photovoltaics</i> , <b>2020</b> , 10, 1277-1282	3.7	9
55	Recombination and Resistive Losses of Transferred Foil Contacts for Silicon Heterojunction Solar Cells. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2020</b> , 14, 2000368	2.5	4

54	Degradation of copper-plated silicon solar cells with damp heat stress. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2020</b> , 28, 1175-1186	6.8	4
53	TEM Study of MoOx/Ni and MoOx/Al Contacts for Silicon Solar Cells. <i>Microscopy and Microanalysis</i> , <b>2019</b> , 25, 2116-2117	0.5	
52	Incorporation of spatially-resolved current density measurements with photoluminescence for advanced parameter imaging of solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 199, 136-143	6.4	5
51	In Situ Transmission Electron Microscopy Study of Molybdenum Oxide Contacts for Silicon Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2019</b> , 216, 1800998	1.6	3
50	A Comprehensive Methodology to Evaluate Losses and Process Variations in Silicon Solar Cell Manufacturing. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 1350-1359	3.7	7
49	Outdoor Field Testing <b>2019</b> , 279-295		
48	Transmission Electron Microscopy and Electron Energy-Loss Spectroscopy Studies of Hole-Selective Molybdenum Oxide Contacts in Silicon Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 43075-43080	9.5	6
47	Nondestructive Contact Resistivity Measurements on Solar Cells Using the Circular Transmission Line Method. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 1800-1805	3.7	6
46	A Combined Mechanochemical and Calcination Route to Mixed Cobalt Oxides for the Selective Catalytic Reduction of Nitrophenols. <i>Molecules</i> , <b>2019</b> , 25,	4.8	9
45	Solder Bond Degradation of Fielded PV Modules: Correlation between Performance, Series Resistance and Electroluminescence Imaging <b>2019</b> ,		3
44	Contact Resistivity and Sheet Resistance Measurements of Cells Extracted from Field-aged Modules <b>2019</b> ,		3
43	Solder Bond Degradation of Fielded PV Modules: Climate Dependence of Intermetallic Compound Growth <b>2019</b> ,		2
42	<b>2019</b> ,		2
41	Characterization of the Metallization Induced Recombination Losses in Industrial Silicon Solar Cells <b>2019</b> ,		2
40	Engineered Interfaces Using Surface and Contact Passivation in Silicon Solar Cells. <i>Electrochemical Society Interface</i> , <b>2018</b> , 27, 63-66	3.6	2
39	Silicon Heterojunction System Field Performance. <i>IEEE Journal of Photovoltaics</i> , <b>2018</b> , 8, 177-182	3.7	26
38	Thermal Stability of Hole-Selective Tungsten Oxide: In Situ Transmission Electron Microscopy Study. <i>Scientific Reports</i> , <b>2018</b> , 8, 12651	4.9	10
37	TEM studies of hole-selective molybdenum oxide contacts in silicon heterojunction solar cells. <i>Microscopy and Microanalysis</i> , <b>2018</b> , 24, 1508-1509	0.5	3

36	Evaluation of Photovoltaic Module Performance Using Novel Data-driven I-V Feature Extraction and Suns-VOC Determined from Outdoor Time-Series I-V Curves <b>2018</b> ,		4
35	Electroluminescence Based Metrics to Assess the Impact of Cracks on Photovoltaic Module Performance <b>2018</b> ,		3
34	Thermally Stable Molybdenum Oxide Hole-Selective Contacts Deposited using Spatial Atomic Layer Deposition <b>2018</b> ,		3
33	EL and I-V Correlation for Degradation of PERC vs. Al-BSF Commercial Modules in Accelerated Exposures <b>2018</b> ,		2
32	Simple and versatile UV-ozone oxide for silicon solar cell applications. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 185, 505-510	6.4	12
31	Detailed investigation of TLM contact resistance measurements on crystalline silicon solar cells. <i>Solar Energy</i> , <b>2017</b> , 151, 163-172	6.8	39
30	Non-Destructive Contact Resistivity Measurements on Solar Cells Using the Circular Transmission Line Method <b>2017</b> ,		7
29	Electroluminescence Excitation Spectroscopy: A Novel Approach to Non-Contact Quantum Efficiency Measurements <b>2017</b> ,		2
28	Improving Silicon Surface Passivation with a Silicon Oxide Layer Grown via Ozonated Deionized Water <b>2017</b> ,		1
27	ALD Aluminum Oxide as a Hole Selective Tunneling Contact for Crystalline Silicon Solar Cells <b>2017</b> ,		1
26	Transmission Electron Microscopy Studies of Electron-Selective Titanium Oxide Contacts in Silicon Solar Cells. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 900-904	0.5	15
25	Influence of surface preparation and cleaning on the passivation of boron diffused silicon surfaces for high efficiency photovoltaics. <i>Thin Solid Films</i> , <b>2017</b> , 636, 412-418	2.2	5
24	Transmission electron microscopy based interface analysis of the origin of the variation in surface recombination of silicon for different surface preparation methods and passivation materials. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2017</b> , 214, 1700286	1.6	6
23	Effective Antireflection and Surface Passivation of Silicon Using a SiO <sub>2</sub> /a-T iOx Film Stack. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 1603-1610	3.7	7
22	Integration of spatially resolved ideality factor into local cell efficiency analysis with photoluminescence. <i>Solar Energy</i> , <b>2017</b> , 158, 869-874	6.8	4
21	Crystalline Silicon Device Loss Analysis Through Spatially Resolved Quantum Efficiency Measurements. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 957-965	3.7	11
20	Detecting loss mechanisms of c-Si PV modules in-situ I-V measurement <b>2016</b> ,		4
19	Manufacturing metrology for c-Si module reliability and durability Part II: Cell manufacturing. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 59, 225-252	16.2	25

18	Manufacturing metrology for c-Si photovoltaic module reliability and durability, Part I: Feedstock, crystallization and wafering. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 59, 84-106	16.2	23
17	Manufacturing metrology for c-Si module reliability and durability Part III: Module manufacturing. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 59, 992-1016	16.2	38
16	High-Performance TiO <sub>2</sub> -Based Electron-Selective Contacts for Crystalline Silicon Solar Cells. <i>Advanced Materials</i> , <b>2016</b> , 28, 5891-7	24	225
15	Interfacial structure and passivation properties of Al <sub>2</sub> O <sub>3</sub> on Silicon <b>2016</b> ,		1
14	Quantitative analysis of crystalline silicon wafer PV modules by electroluminescence imaging <b>2016</b> ,		7
13	TEM studies of TiO <sub>2</sub> -based passivated contacts in c-Si solar cells. <i>Microscopy and Microanalysis</i> , <b>2016</b> , 22, 1600-1601	0.5	2
12	Dependence of solar cell contact resistivity measurements on sample preparation methods <b>2016</b> ,		6
11	Calculating the costs and benefits of metrology: A case study <b>2016</b> ,		1
10	Tailoring the Optical Properties of APCVD Titanium Oxide Films for All-Oxide Multilayer Antireflection Coatings. <i>IEEE Journal of Photovoltaics</i> , <b>2015</b> , 5, 1265-1270	3.7	18
9	A thorough way of mapping efficiency with photoluminescence <b>2015</b> ,		2
8	STEM-EELS Studies of the Local Structure and Coordination of Al <sub>2</sub> O <sub>3</sub> /Si interfaces in Si Solar Cells. <i>Microscopy and Microanalysis</i> , <b>2014</b> , 20, 396-397	0.5	2
7	Investigation of the Internal Back Reflectance of Rear-Side Dielectric Stacks for c-Si Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2013</b> , 3, 641-648	3.7	14
6	Influence of precursor gas ratio and firing on silicon surface passivation by APCVD aluminium oxide. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 942-945	2.5	11
5	Improved control of the phosphorous surface concentration during in-line diffusion of c-Si solar cells by APCVD. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 319-321	2.5	4
4	Effect of UV-Ozone Exposure on PCBM. <i>IEEE Journal of Photovoltaics</i> , <b>2012</b> , 2, 148-153	3.7	8
3	Effects of solar resource variability on the future Florida transmission and distribution system <b>2012</b> ,		4
2	Effects of module performance and long-term degradation on economics and energy payback: case study of two different photovoltaic technologies <b>2009</b> ,		1
1	Process-Structure-Properties Relationships of Passivating, Electron-Selective Contacts Formed by Atmospheric Pressure Chemical Vapor Deposition of Phosphorus-Doped Polysilicon. <i>Physica Status Solidi - Rapid Research Letters</i> , 2100639	2.5	2

