

# Miro Zeman

## List of Publications by Citations

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365  
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8,488  
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#	Paper	IF	Citations
322	Efficient solar water splitting by enhanced charge separation in a bismuth vanadate-silicon tandem photoelectrode. <i>Nature Communications</i> , <b>2013</b> , 4, 2195	17.4	977
321	Plasmonic light trapping in thin-film silicon solar cells with improved self-assembled silver nanoparticles. <i>Nano Letters</i> , <b>2012</b> , 12, 4070-6	11.5	347
320	System design for a solar powered electric vehicle charging station for workplaces. <i>Applied Energy</i> , <b>2016</b> , 168, 434-443	10.7	204
319	Optical modeling of a-Si:H solar cells with rough interfaces: Effect of back contact and interface roughness. <i>Journal of Applied Physics</i> , <b>2000</b> , 88, 6436-6443	2.5	199
318	Effect of surface roughness of ZnO:Al films on light scattering in hydrogenated amorphous silicon solar cells. <i>Thin Solid Films</i> , <b>2003</b> , 426, 296-304	2.2	188
317	Amorphous and Microcrystalline Silicon Solar Cells: Modeling, Materials and Device Technology <b>1998</b> ,		156
316	Efficient water-splitting device based on a bismuth vanadate photoanode and thin-film silicon solar cells. <i>ChemSusChem</i> , <b>2014</b> , 7, 2832-8	8.3	130
315	Modulated surface textures for enhanced light trapping in thin-film silicon solar cells. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 101106	3.4	106
314	Optical modeling of a-Si:H solar cells deposited on textured glass/SnO <sub>2</sub> substrates. <i>Journal of Applied Physics</i> , <b>2002</b> , 92, 749-755	2.5	91
313	Computer modelling of current matching in a-Si : H/a-Si : H tandem solar cells on textured TCO substrates. <i>Solar Energy Materials and Solar Cells</i> , <b>1997</b> , 46, 81-99	6.4	88
312	Minimizing optical losses in monolithic perovskite/c-Si tandem solar cells with a flat top cell. <i>Optics Express</i> , <b>2016</b> , 24, A1288-99	3.3	83
311	ZnO:Al films prepared by rf magnetron sputtering applied as back reflectors in thin-film silicon solar cells. <i>Thin Solid Films</i> , <b>2008</b> , 516, 7844-7850	2.2	78
310	Experimental Demonstration of 4n <sup>2</sup> Classical Absorption Limit in Nanotextured Ultrathin Solar Cells with Dielectric Omnidirectional Back Reflector. <i>ACS Photonics</i> , <b>2014</b> , 1, 270-278	6.3	76
309	Optical and electrical modeling of thin-film silicon solar cells. <i>Journal of Materials Research</i> , <b>2008</b> , 23, 889-898	2.5	73
308	Modelling of thin-film silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2013</b> , 119, 94-111	6.4	71
307	Extracting large photovoltages from a-SiC photocathodes with an amorphous TiO <sub>2</sub> front surface field layer for solar hydrogen evolution. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 1585-1593	35.4	68
306	Nano-cones on micro-pyramids: modulated surface textures for maximal spectral response and high-efficiency solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2015</b> , 23, 1649-1659	6.8	67

305	Wide bandgap p-type nanocrystalline silicon oxide as window layer for high performance thin-film silicon multi-junction solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2015</b> , 132, 597-605	6.4	66
304	A scattering model for nano-textured interfaces and its application in opto-electrical simulations of thin-film silicon solar cells. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 083108	2.5	64
303	Influence of ITO deposition and post annealing on HIT solar cell structures. <i>Energy Procedia</i> , <b>2011</b> , 8, 207-213	2.3	64
302	IBC c-Si solar cells based on ion-implanted poly-silicon passivating contacts. <i>Solar Energy Materials and Solar Cells</i> , <b>2016</b> , 158, 84-90	6.4	64
301	Design and fabrication of a SiO <sub>x</sub> /ITO double-layer anti-reflective coating for heterojunction silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2013</b> , 117, 132-138	6.4	59
300	GenPro4 Optical Model for Solar Cell Simulation and Its Application to Multijunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 919-926	3.7	58
299	Micro-textures for efficient light trapping and improved electrical performance in thin-film nanocrystalline silicon solar cells. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 173905	3.4	58
298	3-D optical modeling of thin-film silicon solar cells on diffraction gratings. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2013</b> , 21, 94-108	6.8	56
297	Optical model for multilayer structures with coherent, partly coherent and incoherent layers. <i>Optics Express</i> , <b>2013</b> , 21 Suppl 2, A262-7	3.3	56
296	Performance of spray-deposited ZnO:In layers as front electrodes in thin-film silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2008</b> , 92, 884-890	6.4	55
295	Application of plasmonic silver island films in thin-film silicon solar cells. <i>Journal of Optics (United Kingdom)</i> , <b>2012</b> , 14, 024010	1.7	54
294	Microstructure of hydrogenated silicon thin films prepared from silane diluted with hydrogen. <i>Applied Surface Science</i> , <b>2008</b> , 254, 3690-3695	6.7	53
293	Thin-film silicon-based quadruple junction solar cells approaching 20% conversion efficiency. <i>Solar Energy Materials and Solar Cells</i> , <b>2014</b> , 129, 82-89	6.4	50
292	Influence of interface morphologies on amorphous silicon thin film solar cells prepared on randomly textured substrates. <i>Solar Energy Materials and Solar Cells</i> , <b>2013</b> , 112, 182-189	6.4	50
291	Improved light trapping in microcrystalline silicon solar cells by plasmonic back reflector with broad angular scattering and low parasitic absorption. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 153902	3.4	50
290	Determination of the mobility gap of intrinsic $\mu$ -Si:H in p-i-n solar cells. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 044502	2.5	50
289	First-principles study of hydrogenated amorphous silicon. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	49
288	Modulated surface textures using zinc-oxide films for solar cells applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2010</b> , 207, 642-646	1.6	46

287	A scattering model for surface-textured thin films. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 171108	3.4	44
286	A simplified skyline-based method for estimating the annual solar energy potential in urban environments. <i>Nature Energy</i> , <b>2019</b> , 4, 206-215	62.3	43
285	The impact of alkali elements on the degradation of CIGS solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2015</b> , 23, 537-545	6.8	43
284	. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , <b>2017</b> , 5, 610-623	5.6	43
283	Estimating battery lifetimes in Solar Home System design using a practical modelling methodology. <i>Applied Energy</i> , <b>2018</b> , 228, 1629-1639	10.7	41
282	Accurate generation rate profiles in a-Si:H solar cells with textured TCO substrates. <i>Solar Energy Materials and Solar Cells</i> , <b>1994</b> , 34, 359-366	6.4	41
281	Highly transparent modulated surface textured front electrodes for high-efficiency multijunction thin-film silicon solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2015</b> , 23, 949-963	6.8	40
280	Optimal design of periodic surface texture for thin-film a-Si:H solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2010</b> , 18, 160-167	6.8	40
279	Optimization of amorphous silicon double junction solar cells for an efficient photoelectrochemical water splitting device based on a bismuth vanadate photoanode. <i>Physical Chemistry Chemical Physics</i> , <b>2014</b> , 16, 4220-9	3.6	39
278	Quadruple-junction thin-film silicon-based solar cells with high open-circuit voltage. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 063902	3.4	39
277	Modulated photonic-crystal structures as broadband back reflectors in thin-film solar cells. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 153501	3.4	39
276	Theoretical evaluation of contact stack for high efficiency IBC-SHJ solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 186, 66-77	6.4	38
275	Design and application of ion-implanted polySi passivating contacts for interdigitated back contact c-Si solar cells. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 033903	3.4	37
274	Physical and chemical degradation behavior of sputtered aluminum doped zinc oxide layers for Cu(In,Ga)Se <sub>2</sub> solar cells. <i>Thin Solid Films</i> , <b>2014</b> , 550, 530-540	2.2	36
273	Influence of transparent conductive oxides on passivation of a-Si:H/c-Si heterojunctions as studied by atomic layer deposited Al-doped ZnO. <i>Semiconductor Science and Technology</i> , <b>2014</b> , 29, 122001	1.8	35
272	Highly Efficient Hybrid Polymer and Amorphous Silicon Multijunction Solar Cells with Effective Optical Management. <i>Advanced Materials</i> , <b>2016</b> , 28, 2170-7	24	34
271	New Insights in the Nanostructure and Defect States of Hydrogenated Amorphous Silicon Obtained by Annealing. <i>IEEE Journal of Photovoltaics</i> , <b>2013</b> , 3, 65-71	3.7	33
270	Raman study of laser-induced heating effects in free-standing silicon nanocrystals. <i>Nanoscale</i> , <b>2015</b> , 7, 8389-97	7.7	32

269	Gradient dopant profiling and spectral utilization of monolithic thin-film silicon photoelectrochemical tandem devices for solar water splitting. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 4155-4162	13	31
268	Advanced Light Management Approaches for Thin-Film Silicon Solar Cells. <i>Energy Procedia</i> , <b>2012</b> , 15, 189-199	2.3	31
267	The effect of composition on the bond structure and refractive index of silicon nitride deposited by HWCVD and PECVD. <i>Thin Solid Films</i> , <b>2009</b> , 517, 3499-3502	2.2	31
266	Harvesting Roadway Solar Energy Performance of the Installed Infrastructure Integrated PV Bike Path. <i>IEEE Journal of Photovoltaics</i> , <b>2018</b> , 8, 1066-1073	3.7	30
265	Growth of ZnO :Al by high-throughput CVD at atmospheric pressure. <i>Journal of Crystal Growth</i> , <b>2012</b> , 347, 56-61	1.6	30
264	Advanced light trapping scheme in decoupled front and rear textured thin-film silicon solar cells. <i>Solar Energy</i> , <b>2018</b> , 162, 344-356	6.8	29
263	Full-wave optoelectrical modeling of optimized flattened light-scattering substrate for high efficiency thin-film silicon solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2014</b> , 22, 671-689	6.8	29
262	Advanced Numerical Simulation Tool for Solar Cells - ASA5 <b>2006</b> ,		29
261	Origin of charged gap states in a-Si:H and their evolution during light soaking. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	29
260	Optical modelling of thin-film silicon solar cells deposited on textured substrates. <i>Thin Solid Films</i> , <b>2004</b> , 451-452, 298-302	2.2	29
259	Advanced light management based on periodic textures for Cu(In,Ga)Se <sub>2</sub> thin-film solar cells. <i>Optics Express</i> , <b>2016</b> , 24, A693-707	3.3	28
258	Formation of thin-film crystalline silicon on glass observed by in-situ XRD. <i>Energy Procedia</i> , <b>2010</b> , 2, 235-241	2.5	28
257	Analysis of hydrogenated amorphous silicon thin films and solar cells by means of Fourier Transform Photocurrent Spectroscopy. <i>Thin Solid Films</i> , <b>2008</b> , 516, 6877-6881	2.2	28
256	Opto-electrical modelling and optimization study of a novel IBC c-Si solar cell. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2017</b> , 25, 452-469	6.8	27
255	Modeling and optimization of white paint back reflectors for thin-film silicon solar cells. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 103115	2.5	27
254	Design and application of dielectric distributed Bragg back reflector in thin-film silicon solar cells. <i>Journal of Non-Crystalline Solids</i> , <b>2012</b> , 358, 2295-2298	3.9	26
253	Structural properties of amorphous silicon prepared from hydrogen-diluted silane. <i>Philosophical Magazine</i> , <b>2009</b> , 89, 2435-2448	1.6	26
252	The AM1.5 absorption factor of thin-film solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2010</b> , 94, 715-723	2.3	26

251	Relation between the open-circuit voltage and the band gap of absorber and buffer layers in a-Si:H solar cells. <i>Thin Solid Films</i> , <b>2008</b> , 516, 6873-6876	2.2	26
250	A thin-film silicon based photocathode with a hydrogen doped TiO <sub>2</sub> protection layer for solar hydrogen evolution. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 16841-16848	13	26
249	The Relation Between the Bandgap and the Anisotropic Nature of Hydrogenated Amorphous Silicon. <i>IEEE Journal of Photovoltaics</i> , <b>2012</b> , 2, 94-98	3.7	25
248	Plasmonic silicon solar cells: impact of material quality and geometry. <i>Optics Express</i> , <b>2013</b> , 21 Suppl 5, A786-97	3.3	25
247	The role of oxide interlayers in back reflector configurations for amorphous silicon solar cells. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 064508	2.5	25
246	Exploring the boundaries of Solar Home Systems (SHS) for off-grid electrification: Optimal SHS sizing for the multi-tier framework for household electricity access. <i>Applied Energy</i> , <b>2019</b> , 240, 907-917	10.7	24
245	Comparison of system architecture and converter topology for a solar powered electric vehicle charging station <b>2015</b> ,		24
244	Implementation of dynamic charging and V2G using Chademo and CCS/Combo DC charging standard <b>2016</b> ,		24
243	The Nature and the Kinetics of Light-Induced Defect Creation in Hydrogenated Amorphous Silicon Films and Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2014</b> , 4, 1331-1336	3.7	23
242	Combined Optical and Electrical Design of Plasmonic Back Reflector for High-Efficiency Thin-Film Silicon Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2013</b> , 3, 53-58	3.7	23
241	The Staebler-Wronski Effect: New Physical Approaches and Insights as a Route to Reveal its Origin. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1245, 1		23
240	Angular resolved scattering measurements of nano-textured substrates in a broad wavelength range. <i>Measurement Science and Technology</i> , <b>2011</b> , 22, 105601	2	23
239	Analysis of structure and defects in thin silicon films deposited from hydrogen diluted silane. <i>Thin Solid Films</i> , <b>2006</b> , 511-512, 252-257	2.2	23
238	Simplified process for high efficiency, self-aligned IBC c-Si solar cells combining ion implantation and epitaxial growth: Design and fabrication. <i>Solar Energy Materials and Solar Cells</i> , <b>2016</b> , 157, 354-365	6.4	22
237	In situ manipulation of the sub gap states in hydrogenated amorphous silicon monitored by advanced application of Fourier transform photocurrent spectroscopy. <i>Solar Energy Materials and Solar Cells</i> , <b>2014</b> , 129, 70-81	6.4	22
236	Plasmonic Nanoparticle Films for Solar Cell Applications Fabricated by Size-selective Aerosol Deposition. <i>Energy Procedia</i> , <b>2014</b> , 60, 3-12	2.3	22
235	Designing optimized nano textures for thin-film silicon solar cells. <i>Optics Express</i> , <b>2013</b> , 21 Suppl 4, A6563-68	3.3	22
234	Angular resolved scattering by a nano-textured ZnO/silicon interface. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 111107	3.4	22

233	New developments in amorphous thin-film silicon solar cells. <i>IEEE Transactions on Electron Devices</i> , <b>1999</b> , 46, 2086-2092	2.9	22
232	Poly-crystalline silicon-oxide films as carrier-selective passivating contacts for c-Si solar cells. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 193904	3.4	22
231	Doped hydrogenated nanocrystalline silicon oxide layers for high-efficiency c-Si heterojunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2020</b> , 28, 425-435	6.8	21
230	Accurate opto-electrical modeling of multi-crystalline silicon wafer-based solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2014</b> , 123, 17-29	6.4	21
229	Optical modeling of thin-film silicon solar cells with submicron periodic gratings and nonconformal layers. <i>Energy Procedia</i> , <b>2011</b> , 10, 308-312	2.3	21
228	Modelling and optimization of a-Si:H solar cells with ZnO:Al back reflector. <i>Solar Energy Materials and Solar Cells</i> , <b>2010</b> , 94, 2119-2123	6.4	21
227	Fabrication of double- and triple-junction solar cells with hydrogenated amorphous silicon oxide (a-SiO <sub>x</sub> :H) top cell. <i>Solar Energy Materials and Solar Cells</i> , <b>2015</b> , 141, 148-153	6.4	20
226	Development of a-SiO <sub>x</sub> :H solar cells with very high Voc JFF product. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2015</b> , 23, 671-684	6.8	20
225	Optical Enhancement of Silicon Heterojunction Solar Cells With Hydrogenated Amorphous Silicon Carbide Emitter. <i>IEEE Journal of Photovoltaics</i> , <b>2014</b> , 4, 1326-1330	3.7	20
224	Atomistic models of hydrogenated amorphous silicon nitride from first principles. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	20
223	Optimization of Three-Terminal Perovskite/Silicon Tandem Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 446-451	3.7	20
222	Modulated surface textured glass as substrate for high efficiency microcrystalline silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2015</b> , 133, 156-162	6.4	19
221	The role of heterointerfaces and subgap energy states on transport mechanisms in silicon heterojunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2020</b> , 28, 935-945	6.8	19
220	Quantification of Shading Tolerability for Photovoltaic Modules. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 1390-1399	3.7	19
219	Back-contacted BaSi <sub>2</sub> solar cells: an optical study. <i>Optics Express</i> , <b>2017</b> , 25, A402-A408	3.3	19
218	Enhancing the driving field for plasmonic nanoparticles in thin-film solar cells. <i>Optics Express</i> , <b>2014</b> , 22 Suppl 4, A1023-8	3.3	19
217	Influence of the atmospheric species water, oxygen, nitrogen and carbon dioxide on the degradation of aluminum doped zinc oxide layers. <i>Thin Solid Films</i> , <b>2014</b> , 565, 149-154	2.2	19
216	The nanostructural analysis of hydrogenated silicon films based on positron annihilation studies. <i>Journal of Non-Crystalline Solids</i> , <b>2012</b> , 358, 2015-2018	3.9	19

215	Thin-Film Silicon PV Technology. <i>Journal of Electrical Engineering</i> , <b>2010</b> , 61, 271-276	0.6	19
214	Extraction of amorphous silicon solar cell parameters by inverse modelling. <i>Solar Energy Materials and Solar Cells</i> , <b>1994</b> , 34, 557-563	6.4	19
213	Structural and electrical properties of metastable defects in hydrogenated amorphous silicon. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	18
212	High pressure processing of hydrogenated amorphous silicon solar cells: Relation between nanostructure and high open-circuit voltage. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 043905	3.4	18
211	Optical optimization of a multi-layer wideband anti-reflection coating using porous MgF2 for sub-micron-thick CIGS solar cells. <i>Solar Energy</i> , <b>2019</b> , 177, 59-67	6.8	18
210	Stochastic load profile construction for the multi-tier framework for household electricity access using off-grid DC appliances. <i>Energy Efficiency</i> , <b>2020</b> , 13, 197-215	3	18
209	Surface passivation of c-Si for silicon heterojunction solar cells using high-pressure hydrogen diluted plasmas. <i>AIP Advances</i> , <b>2015</b> , 5, 097165	1.5	17
208	Effect of substrate morphology slope distributions on light scattering, nc-Si:H film growth, and solar cell performance. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 22061-8	9.5	17
207	Advanced Light Trapping in Thin-film Silicon Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1245, 1		17
206	Determination of the temperature dependency of the electrical parameters of CIGS solar cells. <i>Journal of Renewable and Sustainable Energy</i> , <b>2017</b> , 9, 021205	2.5	16
205	Front and rear contact Si solar cells combining high and low thermal budget Si passivating contacts. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 194, 28-35	6.4	16
204	High-efficiency black IBC c-Si solar cells with poly-Si as carrier-selective passivating contacts. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 186, 9-13	6.4	16
203	Wet-chemical Treatment for Improved Surface Passivation of Textured Silicon Heterojunction Solar Cells. <i>Energy Procedia</i> , <b>2014</b> , 55, 197-202	2.3	16
202	Extraction of optical properties of flat and surface-textured transparent conductive oxide films in a broad wavelength range. <i>Thin Solid Films</i> , <b>2011</b> , 520, 1096-1101	2.2	16
201	Thin-film amorphous silicon germanium solar cells with p- and n-type hydrogenated silicon oxide layers. <i>Solar Energy Materials and Solar Cells</i> , <b>2017</b> , 163, 9-14	6.4	15
200	Influence of deposition pressure and selenisation on damp heat degradation of the Cu(In,Ga)Se2 back contact molybdenum. <i>Surface and Coatings Technology</i> , <b>2014</b> , 252, 157-167	4.4	15
199	The impact of atmospheric species on the degradation of CIGS solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2015</b> , 141, 49-56	6.4	15
198	A thin-film silicon/silicon hetero-junction hybrid solar cell for photoelectrochemical water-reduction applications. <i>Solar Energy Materials and Solar Cells</i> , <b>2016</b> , 150, 82-87	6.4	15



197	Migration of Open Volume Deficiencies in Hydrogenated Amorphous Silicon During Annealing. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 421-429	3.7	14
196	Decoupled front/back dielectric textures for flat ultra-thin c-Si solar cells. <i>Optics Express</i> , <b>2016</b> , 24, A708-719	3.9	14
195	The Optical Spectra of a-Si:H and a-SiC:H Thin Films Measured by the Absolute Photothermal Deflection Spectroscopy (PDS). <i>Solid State Phenomena</i> , <b>2014</b> , 213, 19-28	0.4	14
194	Thin-Film Silicon Solar Cells on 1-D Periodic Gratings With Nonconformal Layers: Optical Analysis. <i>IEEE Journal of Photovoltaics</i> , <b>2013</b> , 3, 46-52	3.7	14
193	Dangling-bond defect in a-Si:H: Characterization of network and strain effects by first-principles calculation of the EPR parameters. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	14
192	Hydrogenated amorphous silicon deposited under accurately controlled ion bombardment using pulse-shaped substrate biasing. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 103304	2.5	14
191	A-Si:H solar cells with embedded silver nanoparticles <b>2010</b> ,		14
190	Light scattering properties of surface-textured substrates. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA		14
189	A quick-scan method to assess photovoltaic rooftop potential based on aerial imagery and LiDAR. <i>Solar Energy</i> , <b>2020</b> , 209, 96-107	6.8	14
188	Poly-Si(O) <sub>x</sub> passivating contacts for high-efficiency c-Si IBC solar cells. <i>Energy Procedia</i> , <b>2017</b> , 124, 392-399	3.3	13
187	Quantifying the Benefits of a Solar Home System-Based DC Microgrid for Rural Electrification. <i>Energies</i> , <b>2019</b> , 12, 938	3.1	13
186	Oxidation-Induced Structure Transformation: Thin-Film Synthesis and Interface Investigations of Barium Disilicide toward Potential Photovoltaic Applications. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 3267-3276	6.1	13
185	Silicon Solar Cell Architecture with Front Selective and Rear Full Area Ion-Implanted Passivating Contacts. <i>Solar Rrl</i> , <b>2017</b> , 1, 1700040	7.1	13
184	Thermal ideality factor of hydrogenated amorphous silicon p-i-n solar cells. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 104512	2.5	13
183	Novel approaches of light management in thin-film silicon solar cells. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 910, 1		13
182	Electrical and Optical Modelling of Thin-Film Silicon Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 989, 1		13
181	Advanced Amorphous Silicon Solar Cell Technologies <b>2006</b> , 173-236		13
180	Device Modeling of a-Si:H Alloy Solar Cells: Calibration Procedure for Determination of Model Input Parameters. <i>Materials Research Society Symposia Proceedings</i> , <b>1998</b> , 507, 409		13

179	Numerical Simulations of IBC Solar Cells Based on Poly-Si Carrier-Selective Passivating Contacts. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 374-384	3.7	13
178	High-Mobility Hydrogenated Fluorine-Doped Indium Oxide Film for Passivating Contacts c-Si Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 45586-45595	9.5	13
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176	A comprehensive albedo model for solar energy applications: Geometric spectral albedo. <i>Applied Energy</i> , <b>2019</b> , 255, 113867	10.7	12
175	Transparent silicon carbide/tunnel SiO <sub>2</sub> passivation for c-Si solar cell front side: Enabling J <sub>sc</sub> > 42 mA/cm <sup>2</sup> and iV <sub>oc</sub> of 742 mV. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2020</b> , 28, 321-327	6.8	12
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171	Organometallic halide perovskite/barium di-silicide thin-film double-junction solar cells <b>2016</b> ,		12
170	A low-temperature synthesis of electrochemical active Pt nanoparticles and thin films by atomic layer deposition on Si(111) and glassy carbon surfaces. <i>Thin Solid Films</i> , <b>2015</b> , 586, 28-34	2.2	11
169	Ambiguities in optical simulations of nanotextured thin-film solar cells using the finite-element method. <i>Optics Express</i> , <b>2015</b> , 23, A1060-71	3.3	11
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164	Optimization of a-SiGe:H solar cells with graded intrinsic layers using integrated optical and electrical modeling. <i>Thin Solid Films</i> , <b>2004</b> , 451-452, 294-297	2.2	10
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162	Advanced light management techniques for two-terminal hybrid tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 181, 77-82	6.4	9

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160	Degradation of CIGS solar cells due to the migration of alkali-elements <b>2015</b> ,		9
159	Optical and Electrical Simulation of $\mu$ -Si:H Solar Cells: Effect of Substrate Morphology and Crystalline Fraction. <i>IEEE Journal of Photovoltaics</i> , <b>2014</b> , 4, 22-27	3.7	9
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133	Designing a hybrid thin-film/wafer silicon triple photovoltaic junction for solar water splitting. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2019</b> , 27, 245-254	6.8	7
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105	Optimized back Reflectors for Rear Diffused c-Si Solar Cells. <i>Energy Procedia</i> , <b>2014</b> , 55, 94-100	2.3	4
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103	Quantum confinement and band offsets in amorphous silicon quantum wells. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	4
102	Microstructure analysis of n-doped $\mu$ -SiO <sub>x</sub> :H reflector layers and their implementation in stable a-Si:H p-i-n junctions <b>2012</b> ,		4
101	Thin-Film Silicon PV Technology <b>2012</b> , 389-398		4
100	Recombination efficacy in a-Si:H p-i-n devices. <i>Journal of Non-Crystalline Solids</i> , <b>2012</b> , 358, 2190-2193	3.9	4
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98	Standing waves in fiber-optic interferometers. <i>Applied Optics</i> , <b>2011</b> , 50, 5674-87	0.2	4
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66	Towards Lambertian internal light scattering in solar cells using coupled plasmonic and dielectric nanoparticles as back reflector <b>2013</b> ,		2
65	In-situ monitoring of the accelerated performance degradation of thin film solar cells <b>2015</b> ,		2
64	Optical modeling of an efficient water splitting device based on bismuth vanadate photoanode and micromorph silicon solar cells <b>2014</b> ,		2
63	Front/Rear Decoupled Texturing in Refractive and Diffractive Regimes for Ultra-Thin Silicon-Based Solar Cells <b>2013</b> ,		2
62	Opto-electronic evaluation of thin double-textured crystalline silicon wafers <b>2013</b> ,		2
61	Thin-Film Silicon Solar Cells Using Back Reflector with Embedded Metal Nanoparticles. <i>Advances in Science and Technology</i> , <b>2010</b> , 74, 182-187	0.1	2
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41	High temperature oxidation pre-treatment of textured c-Si wafers passivated by a-Si:H. <i>Materials Science in Semiconductor Processing</i> , <b>2019</b> , 97, 67-70	4.3	1
40	Quantification of Valleys of Randomly Textured Substrates as a Function of Opening Angle: Correlation to the Defect Density in Intrinsic nc-Si:H. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 20660-6	9.5	1
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36	The influence of atmospheric species on the degradation of aluminum doped zinc oxide and Cu(In,Ga)Se <sub>2</sub> solar cells <b>2014</b> ,		1

35	Thin-film silicon technology for highly-efficient solar cells <b>2012</b> ,		1
34	In-situ analysis of the degradation of Cu(In, Ga)Se <sub>2</sub> solar cells <b>2013</b> ,		1
33	Effective Medium Analysis of Plasmonic Silver Nanoparticle Films. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1322, 33		1
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