

Jakub Holovsk

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54
papers

3,152
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57
ext. papers

3,612
ext. citations

4.8
avg, IF

4.94
L-index

#	Paper	IF	Citations
54	Organometallic Halide Perovskites: Sharp Optical Absorption Edge and Its Relation to Photovoltaic Performance. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 1035-9	6.4	1699
53	Improved amorphous/crystalline silicon interface passivation by hydrogen plasma treatment. <i>Applied Physics Letters</i> , 2011 , 99, 123506	3.4	197
52	Raman Spectroscopy of Organic-Inorganic Halide Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 401-6	6.4	182
51	Diamond/carbon nanotube composites: Raman, FTIR and XPS spectroscopic studies. <i>Carbon</i> , 2017 , 111, 54-61	10.4	170
50	Temperature Dependence of the Urbach Energy in Lead Iodide Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 1368-1373	6.4	116
49	Organic-Inorganic Halide Perovskites: Perspectives for Silicon-Based Tandem Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2014 , 4, 1545-1551	3.7	100
48	Low-Temperature High-Mobility Amorphous IZO for Silicon Heterojunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2015 , 5, 1340-1347	3.7	85
47	Nanostructured three-dimensional thin film silicon solar cells with very high efficiency potential. <i>Applied Physics Letters</i> , 2011 , 98, 163503	3.4	81
46	A New View of Microcrystalline Silicon: The Role of Plasma Processing in Achieving a Dense and Stable Absorber Material for Photovoltaic Applications. <i>Advanced Functional Materials</i> , 2012 , 22, 3665-3671	15.6	69
45	Radiative Efficiency Limit with Band Tailing Exceeds 30% for Quantum Dot Solar Cells. <i>ACS Energy Letters</i> , 2017 , 2, 2616-2624	20.1	64
44	Experimental quantification of useful and parasitic absorption of light in plasmon-enhanced thin silicon films for solar cells application. <i>Scientific Reports</i> , 2016 , 6, 22481	4.9	37
43	Highly Conductive and Broadband Transparent Zr-Doped In ₂ O ₃ as Front Electrode for Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2018 , 8, 1202-1207	3.7	30
42	Lead Halide Residue as a Source of Light-Induced Reversible Defects in Hybrid Perovskite Layers and Solar Cells. <i>ACS Energy Letters</i> , 2019 , 4, 3011-3017	20.1	29
41	Concentration-Dependent Impact of Alkali Li Metal Doped Mesoporous TiO ₂ Electron Transport Layer on the Performance of CH ₃ NH ₃ PbI ₃ Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 19376-19384	3.8	24
40	Enhancing the optoelectronic properties of amorphous zinc tin oxide by subgap defect passivation: A theoretical and experimental demonstration. <i>Physical Review B</i> , 2017 , 95,	3.3	23
39	Fabrication of double- and triple-junction solar cells with hydrogenated amorphous silicon oxide (a-SiOx:H) top cell. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 141, 148-153	6.4	20
38	Is light-induced degradation of a-Si:H/c-Si interfaces reversible?. <i>Applied Physics Letters</i> , 2014 , 104, 252108	6.4	18

37	Time evolution of surface defect states in hydrogenated amorphous silicon studied by photothermal and photocurrent spectroscopy and optical simulation. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2035-2038	3.9	15
36	Comparison of photocurrent spectra measured by FTPS and CPM for amorphous silicon layers and solar cells. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2167-2170	3.9	15
35	Photocurrent Spectroscopy of Perovskite Layers and Solar Cells: A Sensitive Probe of Material Degradation. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 838-843	6.4	13
34	Ultrasharp Si nanowires produced by plasma-enhanced chemical vapor deposition. <i>Physica Status Solidi - Rapid Research Letters</i> , 2010 , 4, 37-39	2.5	13
33	High efficiency high rate microcrystalline silicon thin-film solar cells deposited at plasma excitation frequencies larger than 100 MHz. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 143, 347-353	6.4	12
32	Variable light biasing method to measure component I_{sc} characteristics of multi-junction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 103, 128-133	6.4	12
31	Arrays of ZnO nanocolumns for 3-dimensional very thin amorphous and microcrystalline silicon solar cells. <i>Thin Solid Films</i> , 2013 , 543, 110-113	2.2	12
30	Effect of the thin-film limit on the measurable optical properties of graphene. <i>Scientific Reports</i> , 2015 , 5, 15684	4.9	10
29	Attenuated total reflectance Fourier-transform infrared spectroscopic investigation of silicon heterojunction solar cells. <i>Review of Scientific Instruments</i> , 2015 , 86, 073108	1.7	10
28	Optical characterization of low temperature amorphous MoO _x , WO _x , and VO _x prepared by pulsed laser deposition. <i>Thin Solid Films</i> , 2020 , 693, 137690	2.2	8
27	Controlled Growth of Large Grains in CH ₃ NH ₃ PbI ₃ Perovskite Films Mediated by an Intermediate Liquid Phase without an Antisolvent for Efficient Solar Cells. <i>ACS Applied Energy Materials</i> , 2020 , 3, 12484-12493	6.1	8
26	Combining ray tracing with device modeling to evaluate experiments for an optical analysis of crystalline Si solar cells and modules. <i>Energy Procedia</i> , 2017 , 124, 240-249	2.3	7
25	Impact of Cation Multiplicity on Halide Perovskite Defect Densities and Solar Cell Voltages. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 27333-27339	3.8	7
24	Fourier transform photocurrent measurement of thin silicon films on rough, conductive and opaque substrates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010 , 207, 578-581	1.6	7
23	Substrate and p-layer effects on polymorphous silicon solar cells. <i>EPJ Photovoltaics</i> , 2014 , 5, 55206	0.7	6
22	Light management in large area thin-film silicon solar modules. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 143, 375-385	6.4	5
21	Thin-film limit formalism applied to surface defect absorption. <i>Optics Express</i> , 2014 , 22, 31466-72	3.3	5
20	Si-related color centers in nanocrystalline diamond thin films. <i>Physica Status Solidi (B): Basic Research</i> , 2014 , 251, 2603-2606	1.3	5

19	Unveiling the Effect of Potassium Treatment on the Mesoporous TiO ₂ / Perovskite Interface in Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2021 , 4, 11488-11495	6.1	5
18	Origins of infrared transparency in highly conductive perovskite stannate BaSnO ₃ . <i>APL Materials</i> , 2020 , 8, 061108	5.7	4
17	Shunt Quenching and Concept of Independent Global Shunt in Multijunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2018 , 8, 1005-1010	3.7	4
16	. <i>IEEE Journal of Photovoltaics</i> , 2012 , 2, 164-168	3.7	4
15	Advanced optical characterization of disordered semiconductors by Fourier transform photocurrent spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2421-2425	3.9	4
14	Elucidating the role of TiCl ₄ post-treatment on percolation of TiO ₂ electron transport layer in perovskite solar cells. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 385501	3	3
13	Surface and Ultrathin-layer Absorbance Spectroscopy for Solar Cells. <i>Energy Procedia</i> , 2014 , 60, 57-62	2.3	3
12	Fourier Transform Photocurrent Spectroscopy on Non-Crystalline Semiconductors		3
11	Towards Quantitative Interpretation of Fourier-Transform Photocurrent Spectroscopy on Thin-Film Solar Cells. <i>Coatings</i> , 2020 , 10, 820	2.9	2
10	Amorphous/Crystalline Silicon Interface Stability: Correlation between Infrared Spectroscopy and Electronic Passivation Properties. <i>Advanced Materials Interfaces</i> , 2020 , 7, 2000957	4.6	2
9	Comparison of Silicon Nanocrystals Prepared by Two Fundamentally Different Methods. <i>Nanoscale Research Letters</i> , 2016 , 11, 445	5	1
8	High rate deposition of microcrystalline silicon with silicon oxide doped layers: Highlighting the competing roles of both intrinsic and extrinsic defects on the cells performances 2011 ,		1
7	Optical absorption losses in metal layers used in thin film solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010 , 207, 2170-2173	1.6	1
6	Experimental Limits of Light Capture in Thin Film Silicon Devices. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1101, 1		1
5	Illumination-Dependent Requirements for Heterojunctions and Carrier-Selective Contacts on Silicon. <i>IEEE Journal of Photovoltaics</i> , 2020 , 10, 1214-1225	3.7	0
4	FTIR Measurement of the Hydrogenated Si(100) Surface: The Structure-Vibrational Interpretation by Means of Periodic DFT Calculation. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 9219-9228	3.8	0
3	Measurement of doping profiles by a contactless method of IR reflectance under grazing incidence. <i>Review of Scientific Instruments</i> , 2018 , 89, 063114	1.7	
2	Corrections to Highly Conductive and Broadband Transparent Zr-Doped In ₂ O ₃ as Front Electrode for Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2019 , 9, 1155-1155	3.7	

- 1 Pulsed laser deposition of high-transparency molybdenum oxide thin films. *Vacuum*, **2021**, 194, 110613 3.7