Jakub HolovskÃ½

List of Publications by Year
in descending order

57 papers	4,088 citations	430843 18 h-index	189881 50 g-index
57 all docs	57 docs citations	57 times ranked	6804 citing authors

#	ARTICLE	IF	CITATIONS
1	Organometallic Halide Perovskites: Sharp Optical Absorption Edge and Its Relation to Photovoltaic Performance. Journal of Physical Chemistry Letters, 2014, 5, 1035-1039.	4.6	2,153
2	Diamond/carbon nanotube composites: Raman, FTIR and XPS spectroscopic studies. Carbon, 2017, 111, 54-61.	10.3	247
3	Improved amorphous/crystalline silicon interface passivation by hydrogen plasma treatment. Applied Physics Letters, 2011, 99, .	3.3	238
4	Raman Spectroscopy of Organicâ€“Inorganic Halide Perovskites. Journal of Physical Chemistry Letters, 2015, 6, 401-406.	4.6	206
5	Temperature Dependence of the Urbach Energy in Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 1368-1373.	4.6	191
6	Organicâ€“Inorganic Halide Perovskites: Perspectives for Silicon-Based Tandem Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1545-1551.	2.5	123
7	Low-Temperature High-Mobility Amorphous IZO for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1340-1347.	2.5	113
8	Nanostructured three-dimensional thin film silicon solar cells with very high efficiency potential. Applied Physics Letters, 2011, 98, .	3.3	92
9	Radiative Efficiency Limit with Band Tailing Exceeds 30% for Quantum Dot Solar Cells. ACS Energy Letters, 2017, 2, 2616-2624.	17.4	92
10	A New View of Microcrystalline Silicon: The Role of Plasma Processing in Achieving a Dense and Stable Absorber Material for Photovoltaic Applications. Advanced Functional Materials, 2012, 22, 3665-3671.	14.9	74
11	Lead Halide Residue as a Source of Light-Induced Reversible Defects in Hybrid Perovskite Layers and Solar Cells. ACS Energy Letters, 2019, 4, 3011-3017.	17.4	57
12	Experimental quantification of useful and parasitic absorption of light in plasmon-enhanced thin silicon films for solar cells application. Scientific Reports, 2016, 6, 22481.	3.3	50
13	Highly Conductive and Broadband Transparent Zr-Doped In₂O₃ as Front Electrode for Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1202-1207.	2.5	46
14	Concentration-Dependent Impact of Alkali Li Metal Doped Mesoporous TiO₂ Electron Transport Layer on the Performance of CH₃NH₃PbI₃ Perovskite Solar Cells. Journal of Physical Chemistry C, 2019, 123, 19376-19384.	3.1	32
15	Enhancing the optoelectronic properties of amorphous zinc tin oxide by subgap defect passivation: A theoretical and experimental demonstration. Physical Review B, 2017, 95, .	3.2	31
16	Fabrication of double- and triple-junction solar cells with hydrogenated amorphous silicon oxide (a-SiOx:H) top cell. Solar Energy Materials and Solar Cells, 2015, 141, 148-153.	6.2	25
17	Is light-induced degradation of <i>a-</i>Si:H/<i>c</i>-Si interfaces reversible?. Applied Physics Letters, 2014, 104, .	3.3	24
18	Comparison of photocurrent spectra measured by FTPS and CPM for amorphous silicon layers and solar cells. Journal of Non-Crystalline Solids, 2008, 354, 2167-2170.	3.1	18

#	Article	IF	Citations
19	Arrays of ZnO nanocolumns for 3-dimensional very thin amorphous and microcrystalline silicon solar cells. Thin Solid Films, 2013, 543, 110-113.	1.8	18
20	Photocurrent Spectroscopy of Perovskite Layers and Solar Cells: A Sensitive Probe of Material Degradation. Journal of Physical Chemistry Letters, 2017, 8, 838-843.	4.6	18
21	Impact of Cation Multiplicity on Halide Perovskite Defect Densities and Solar Cell Voltages. Journal of Physical Chemistry C, 2020, 124, 27333-27339.	3.1	18
22	Time evolution of surface defect states in hydrogenated amorphous silicon studied by photothermal and photocurrent spectroscopy and optical simulation. Journal of Non-Crystalline Solids, 2012, 358, 2035-2038.	3.1	17
23	Variable light biasing method to measure component Iâ€“V characteristics of multi-junction solar cells. Solar Energy Materials and Solar Cells, 2012, 103, 128-133.	6.2	15
24	High efficiency high rate microcrystalline silicon thin-film solar cells deposited at plasma excitation frequencies larger than 100 MHz. Solar Energy Materials and Solar Cells, 2015, 143, 347-353.	6.2	15
25	Ultrasharp Si nanowires produced by plasmaâ€enhanced chemical vapor deposition. Physica Status Solidi - Rapid Research Letters, 2010, 4, 37-39.	2.4	14
26	Effect of the thin-film limit on the measurable optical properties of graphene. Scientific Reports, 2015, 5, 15684.	3.3	13
27	Controlled Growth of Large Grains in CH₃NH₃PbI₃ Perovskite Films Mediated by an Intermediate Liquid Phase without an Antisolvent for Efficient Solar Cells. ACS Applied Energy Materials, 2020, 3, 12484-12493.	5.1	13
28	Unveiling the Effect of Potassium Treatment on the Mesoporous TiO₂/ Perovskite Interface in Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 11488-11495.	5.1	13
29	Attenuated total reflectance Fourier-transform infrared spectroscopic investigation of silicon heterojunction solar cells. Review of Scientific Instruments, 2015, 86, 073108.	1.3	12
30	Optical characterization of low temperature amorphous MoOx, WOX, and VOx prepared by pulsed laser deposition. Thin Solid Films, 2020, 693, 137690.	1.8	11
31	Fourier transform photocurrent measurement of thin silicon films on rough, conductive and opaque substrates. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 578-581.	1.8	9
32	Combining ray tracing with device modeling to evaluate experiments for an optical analysis of crystalline Si solar cells and modules. Energy Procedia, 2017, 124, 240-249.	1.8	9
33	Origins of infrared transparency in highly conductive perovskite stannate BaSnO3. APL Materials, 2020, 8, 061108.	5.1	9
34	Amorphous/Crystalline Silicon Interface Stability: Correlation between Infrared Spectroscopy and Electronic Passivation Properties. Advanced Materials Interfaces, 2020, 7, 2000957.	3.7	7
35	Substrate and p-layer effects on polymorphous silicon solar cells. EPJ Photovoltaics, 2014, 5, 55206.	1.6	7
36	Siâ€related color centers in nanocrystalline diamond thin films. Physica Status Solidi (B): Basic Research, 2014, 251, 2603-2606.	1.5	6

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37	Elucidating the role of TiCl₄ post-treatment on percolation of TiO₂ electron transport layer in perovskite solar cells. Journal Physics D: Applied Physics, 2020, 53, 385501.	2.8	6
38	Advanced optical characterization of disordered semiconductors by Fourier transform photocurrent spectroscopy. Journal of Non-Crystalline Solids, 2008, 354, 2421-2425.	3.1	5
39	Measurement of the Open-Circuit Voltage of Individual Subcells in a Dual-Junction Solar Cell. IEEE Journal of Photovoltaics, 2012, 2, 164-168.	2.5	5
40	Thin-film limit formalism applied to surface defect absorption. Optics Express, 2014, 22, 31466.	3.4	5
41	Light management in large area thin-film silicon solar modules. Solar Energy Materials and Solar Cells, 2015, 143, 375-385.	6.2	5
42	Shunt Quenching and Concept of Independent Global Shunt in Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1005-1010.	2.5	4
43	Towards Quantitative Interpretation of Fourier-Transform Photocurrent Spectroscopy on Thin-Film Solar Cells. Coatings, 2020, 10, 820.	2.6	4
44	Pulsed laser deposition of high-transparency molybdenum oxide thin films. Vacuum, 2021, 194, 110613.	3.5	4
45	Fourier Transform Photocurrent Spectroscopy on Non-Crystalline Semiconductors. , 0, , .		4
46	Surface and Ultrathin-layer Absorptance Spectroscopy for Solar Cells. Energy Procedia, 2014, 60, 57-62.	1.8	3
47	FTIR Measurement of the Hydrogenated Si(100) Surface: The Structure-Vibrational Interpretation by Means of Periodic DFT Calculation. Journal of Physical Chemistry C, 2021, 125, 9219-9228.	3.1	2
48	Experimental Limits of Light Capture in Thin Film Silicon Devices. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	1
49	Optical absorption losses in metal layers used in thin film solar cells. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2170-2173.	1.8	1
50	High rate deposition of microcrystalline silicon with silicon oxide doped layers: Highlighting the competing roles of both intrinsic and extrinsinc defects on the cells performances. , 2011, , .		1
51	Comparison of Silicon Nanocrystals Prepared by Two Fundamentally Different Methods. Nanoscale Research Letters, 2016, 11, 445.	5.7	1
52	Illumination-Dependent Requirements for Heterojunctions and Carrier-Selective Contacts on Silicon. IEEE Journal of Photovoltaics, 2020, 10, 1214-1225.	2.5	1
53	Fast Quantum Efficiency Measurement and Characterization of Different Thin Film Solar Cells by Fourier Transform Photocurrent Spectroscopy. , 2006, , .		0
54	Measurement of doping profiles by a contactless method of IR reflectance under grazing incidence. Review of Scientific Instruments, 2018, 89, 063114.	1.3	0

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55	Corrections to â€œHighly Conductive and Broadband Transparent Zr-Doped In2O3 as Front Electrode for Solar Cellsâ€•[Sep 18 1202-1207]. IEEE Journal of Photovoltaics, 2019, 9, 1155-1155.	2.5	0
56	Effect of a-Si on CH3NH3PbI3 Films and Applications in Perovskite Solar Cells. , 2019, , .		0
57	Quantitative Analysis of Nanorough Hydrogenated Si(111) Surfaces through Vibrational Spectral Assignment by Periodic DFT Calculations. Journal of Physical Chemistry C, 2022, 126, 8278-8286.	3.1	0