Jacob J Krich

List of Publications by Year
in descending order

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47	803	567281 15	526287 27
papers	citations	h-index	g-index

49	49	49	926
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	InGaN Quantum Dot Superlattices as Ratchet Band Solar Cells. IEEE Journal of Photovoltaics, 2022, 12, 474-482.	2.5	3
2	Erratum to â€œInGaN Quantum Dot Superlattices as Ratchet Band Solar Cellsâ€•[Mar 22 474-482]. IEEE Journal of Photovoltaics, 2022, 12, 1094-1095.	2.5	1
3	Lossless plasmons in highly mismatched alloys. Applied Physics Letters, 2022, 120, 252102.	3.3	2
4	Light management in ultra-thin photonic power converters for 1310â€…nm laser illumination. Optics Express, 2022, 30, 23417.	3.4	1
5	Plasma frequency in doped highly mismatched alloys. Physical Review B, 2021, 103, .	3.2	2
6	Automatic Feynman diagram generation for nonlinear optical spectroscopies and application to fifth-order spectroscopy with pulse overlaps. Journal of Chemical Physics, 2021, 154, 034109.	3.0	12
7	High current density tunnel diodes for multi-junction photovoltaic devices on InP substrates. Applied Physics Letters, 2021, 118, .	3.3	13
8	InGaN quantum dot superlattices as ratchet band solar cells. , 2021, , .		1
9	Efficient Fourier space quantum dot kâ€‰â‹…â€‰p for wurtzite systems including smooth alloy profile and spatially varying elastic and dielectric constants. Journal of Applied Physics, 2021, 129, .	2.5	2
10	Reduced material quality requirements for electronically coupled upconverters compared to intermediate band solar cells. , 2021, , .		0
11	Efficient numerical method for predicting nonlinear optical spectroscopies of open systems. Journal of Chemical Physics, 2021, 154, 034108.	3.0	10
12	Simudo: a device model for intermediate band materials. Journal of Computational Electronics, 2020, 19, 111-127.	2.5	13
13	Efficiency increase in multijunction monochromatic photovoltaic devices due to luminescent coupling. Journal of Applied Physics, 2020, 128, .	2.5	16
14	Two-photon photocurrent in InGaN/GaN nanowire intermediate band solar cells. Communications Materials, 2020, 1, .	6.9	18
15	Efficiency limits of electronically coupled upconverter and quantum ratchet solar cells using detailed balance. Journal of Applied Physics, 2020, 127, .	2.5	3
16	Material Quality Requirements for Intermediate Band Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 467-474.	2.5	10
17	Optimal Band Gaps for Non-Ideal Intermediate Band Solar Cells. , 2020, , .		0
18	Device model for intermediate band materials. , 2019, , .		0

#	Article	IF	Citations
19	Wurtzite InGaN/GaN Quantum Dots for Intermediate Band Solar Cells. , 2019, , .		1
20	Numerical method for nonlinear optical spectroscopies: Ultrafast ultrafast spectroscopy. Journal of Chemical Physics, 2019, 150, 214105.	3.0	8
21	Minimum material quality threshold for intermediate band solar cells using a multi-band device simulator with fully coupled optics. , 2019, , .		2
22	Device model for intermediate band materials. , 2019, , .		1
23	Opportunities for High Efficiency Monochromatic Photovoltaic Power Conversion at 1310 nm. , 2019, , .		4
24	InGaN Quantum Dots for Intermediate Band Solar Cells. , 2019, , .		1
25	Detailed Balance Efficiency of 1310 nm Multijunction Photonic Power Converters. , 2019, , .		0
26	Efficient wave optics modeling of nanowire solar cells using rigorous coupled-wave analysis. Optics Express, 2019, 27, A133.	3.4	14
27	Opportunities for Increased Efficiency in Monochromatic Photovoltaic Light Conversion. , 2018, , .		4
28	Optical Optimization of Passivated GaAs Nanowire Solar Cells. , 2017, , .		1
29	Optimizations of GaAs Nanowire Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1494-1501.	2.5	21
30	Increasing efficiency in intermediate band solar cells with overlapping absorptions. Journal of Optics (United Kingdom), 2016, 18, 074010.	2.2	17
31	Optimization of GaAs nanowire solar cell efficiency via optoelectronic modeling. , 2015, , .		2
32	Targeted Search for Effective Intermediate Band Solar Cell Materials. IEEE Journal of Photovoltaics, 2015, 5, 212-218.	2.5	44
33	Picosecond carrier recombination dynamics in chalcogen-hyperdoped silicon. Applied Physics Letters, 2014, 105, .	3.3	42
34	Modeling intermediate band solar cells: a roadmap to high efficiency. Proceedings of SPIE, 2014, , .	0.8	5
35	Coherent Exciton Dynamics in Supramolecular Light-Harvesting Nanotubes Revealed by Ultrafast Quantum Process Tomography. ACS Nano, 2014, 8, 5527-5534.	14.6	46
36	Practical witness for electronic coherences. Journal of Chemical Physics, 2014, 141, 244109.	3.0	14

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37	Emergent Percolation Length and Localization in Random Elastic Networks. Physical Review X, 2013, 3, .	8.9	20
38	Nonradiative trapping and localization in intermediate band solar cells. , 2013, , .		0
39	Methodology for vetting heavily doped semiconductors for intermediate band photovoltaics: A case study in sulfur-hyperdoped silicon. Journal of Applied Physics, 2013, 114, .	2.5	46
40	Deactivation of metastable single-crystal silicon hyperdoped with sulfur. Journal of Applied Physics, 2013, 114, .	2.5	41
41	A witness for coherent electronic vs vibronic-only oscillations in ultrafast spectroscopy. Journal of Chemical Physics, 2012, 136, 234501.	3.0	41
42	Nonradiative lifetimes in intermediate band photovoltaicsâ€"Absence of lifetime recovery. Journal of Applied Physics, 2012, 112, .	2.5	56
43	Scaling and Localization Lengths of a Topologically Disordered System. Physical Review Letters, 2011, 106, 156405.	7.8	13
44	Quantum state and process tomography of energy transfer systems via ultrafast spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17615-17620.	7.1	62
45	Dynamic Nuclear Polarization in Double Quantum Dots. Physical Review Letters, 2010, 104, 226807.	7.8	47
46	Cubic Dresselhaus Spin-Orbit Coupling in 2D Electron Quantum Dots. Physical Review Letters, 2007, 98, 226802.	7.8	65
47	Helix inversion in the chiral nematic and isotropic phases of a liquid crystal. Physical Review E, 2000, 61, 5372-5378.	2.1	27