James P Connolly

List of Publications by Year
in descending order

63	1,726	331670 21	289244 40
papers	citations	h-index	g-index

65	65	65	1269
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Strain-balanced GaAsP/InGaAs quantum well solar cells. Applied Physics Letters, 1999, 75, 4195-4197.	3.3	258
2	Quantum well solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 27-36.	2.7	136
3	Modeling the spectral response of the quantum well solar cell. Journal of Applied Physics, 1993, 74, 614-621.	2.5	122
4	Strained and strain-balanced quantum well devices for high-efficiency tandem solar cells. Solar Energy Materials and Solar Cells, 2001, 68, 71-87.	6.2	106
5	Cu(In,Ga)(S,Se)2 solar cells and modules by electrodeposition. Thin Solid Films, 2005, 480-481, 526-531.	1.8	89
6	Designing III-V multijunction solar cells on silicon. Progress in Photovoltaics: Research and Applications, 2014, 22, 810-820.	8.1	79
7	Voltage enhancement in quantum well solar cells. Journal of Applied Physics, 1996, 80, 1201-1206.	2.5	73
8	Effect of well number on the performance of quantum-well solar cells. Journal of Applied Physics, 2005, 97, 124908.	2.5	70
9	Recent results for singleâ€junction and tandem quantum well solar cells. Progress in Photovoltaics: Research and Applications, 2011, 19, 865-877.	8.1	66
10	A Statistical Analysis of the Temperature Coefficients of Industrial Silicon Solar Cells. Energy Procedia, 2014, 55, 578-588.	1.8	50
11	Observation of photon recycling in strain-balanced quantum well solar cells. Applied Physics Letters, 2007, 90, 213505.	3.3	49
12	Advances in Bragg stack quantum well solar cells. Solar Energy Materials and Solar Cells, 2005, 87, 169-179.	6.2	44
13	Effect of quantum well location on single quantum well p-i-n photodiode dark currents. Journal of Applied Physics, 1999, 86, 5898-5905.	2.5	42
14	Short-circuit current enhancement in Bragg stack multi-quantum-well solar cells for multi-junction space cell applications. Solar Energy Materials and Solar Cells, 2003, 75, 299-305.	6.2	41
15	Demonstration of Photon Coupling in Dual Multiple-Quantum-Well Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 68-74.	2.5	40
16	Spectral response and I-V characteristics of large well number multi quantum well solar cells. Journal of Materials Science, 2005, 40, 1445-1449.	3.7	39
17	Conversion efficiency enhancement of AlGaAs quantum well solar cells. Microelectronics Journal, 2007, 38, 513-518.	2.0	39
18	Threeâ€terminal perovskite/integrated back contact silicon tandem solar cells under low light intensity conditions. , 2022, 1, 148-156.		36

#	Article	IF	Citations
19	Strain-balanced quantum well solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 132-135.	2.7	27
20	Quantum and conversion efficiency calculation of AlGaAs/GaAs multiple quantum well solar cells. Physica Status Solidi (B): Basic Research, 2005, 242, 1842-1845.	1.5	27
21	Effect of Ag nanoparticles integrated within antireflection coatings for solar cells. Journal of Renewable and Sustainable Energy, 2013, 5, 033116.	2.0	26
22	Modelling of GaAsP/InGaAs/GaAs strain-balanced multiple-quantum well solar cells. Journal of Applied Physics, 2013, 113, 024512.	2.5	24
23	Controlling radiative loss in quantum well solar cells. Journal Physics D: Applied Physics, 2013, 46, 264007.	2.8	20
24	InGaAs/InGaAs strain-compensated quantum well cells for thermophotovoltaic applications. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 158-161.	2.7	17
25	Theory of random nanoparticle layers in photovoltaic devices applied to self-aggregated metal samples. Solar Energy Materials and Solar Cells, 2013, 109, 294-299.	6.2	16
26	Simulating multiple quantum well solar cells. , 0, , .		13
27	Quantum well cells for thermophotovoltaics. Semiconductor Science and Technology, 2003, 18, S216-S220.	2.0	13
28	InP-based lattice-matched InGaAsP and strain-compensated InGaAsâˆ•InGaAs quantum well cells for thermophotovoltaic applications. Journal of Applied Physics, 2006, 100, 114510.	2.5	13
29	Ferroelectric photovoltaic characteristics of pulsed laser deposited 0.5Ba(Zr0.2Ti0.8)O3-0.5(Ba0.7Ca0.3)TiO3/ZnO heterostructures. Solar Energy, 2018, 167, 18-23.	6.1	13
30	Morphological, optical and photovoltaic characteristics of MoSe2/SiOx/Si heterojunctions. Scientific Reports, 2020, 10, 1215.	3.3	13
31	Solution Processing Route to High Efficiency CuIn(S,Se)₂ Solar Cells. Journal of Nano Research, 2009, 4, 79-89.	0.8	12
32	Comparison of optical and electrical gap of electrodeposited CuIn(S,Se)2 determined by spectral photo response and Iâ€“Vâ€“T measurements. Thin Solid Films, 2007, 515, 6233-6237.	1.8	10
33	Quantum Well Solar Cells and Quantum Dot Concentrators. , 2006, , 517-537.		9
34	Two step wet surface treatment influence on the electronic properties of Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2009, 517, 2550-2553.	1.8	9
35	Analysis of electronic transport properties of thin film CuIn(S,Se)2 solar cells based on electrodeposition. Thin Solid Films, 2008, 516, 6999-7003.	1.8	7
36	Tandem quantum well solar cells. , 2008, , .		7

#	Article	IF	Citations
37	High current density GaAs/Si rectifying heterojunction by defect free Epitaxial Lateral overgrowth on Tunnel Oxide from nano-seed. Scientific Reports, 2016, 6, 25328.	3.3	7
38	Complex Investigation of High Efficiency and Reliable Heterojunction Solar Cell Based on an Improved Cu2O Absorber Layer. Energies, 2020, 13, 4667.	3.1	7
39	Physics of quantum well solar cells. Proceedings of SPIE, 2009, , .	0.8	6
40	A new approach to modelling Kelvin probe force microscopy of hetero-structures in the dark and under illumination. Optical and Quantum Electronics, 2018, 50, 1.	3.3	6
41	Multiscale in modelling and validation for solar photovoltaics. EPJ Photovoltaics, 2018, 9, 10.	1.6	6
42	Characterisation Of Strain-Compensated InGaAs/InGaAs Quantum Well Cells For TPV Applications. AIP Conference Proceedings, 2003, , .	0.4	5
43	Optimisation of InGaAsP quantum well cells for hybrid solar-thermophotovoltaic applications. , 1999, , .		3
44	Strain-balanced In/sub 0.62/Ga/sub 0.38/As/In/sub 0.47/Ga/sub 0.53/As(InP) quantum well cell for thermophotovoltaics. , 0, , .		3
45	Hot carriers in strain balanced quantum well solar cells. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	3
46	Anisotropic emission and photon-recycling in strain-balanced quantum well solar cells. Journal of Applied Physics, 2014, 115, 164502.	2.5	3
47	Multiscale approaches to high efficiency photovoltaics. Renewable Energy and Environmental Sustainability, 2016, 1, 6.	1.4	3
48	Admittance spectroscopy defect density of electrodeposited CuIn(S,Se)₂ and its correlation with solar cells performances. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3449-3452.	0.8	2
49	Observation of reduced radiative recombination in low-well-number strain-balanced quantum well solar cells. Journal of Applied Physics, 2010, 107, 044502.	2.5	2
50	Cost model for LIMA device. Energy Procedia, 2011, 8, 443-448.	1.8	2
51	Cost Model Developed in European Project LIMA. Energy Procedia, 2012, 27, 646-651.	1.8	2
52	IIIâ€“V Solar Cells. RSC Energy and Environment Series, 2014, , 209-246.	0.5	2
53	Realistic Simulation of Metal Nanoparticles on Solar Cells. Energy Procedia, 2015, 84, 204-213.	1.8	2
54	KPFM surface photovoltage measurement and numerical simulation. EPJ Photovoltaics, 2019, 10, 3.	1.6	2

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55	Analytical Models of Bulk and Quantum Well Solar Cells and Relevance of the Radiative Limit. Advances in Chemical and Materials Engineering Book Series, 0, , 59-77.	0.3	2
56	Strain-balanced quantum well concentrator cells from multiwafer production. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	1
57	GaAs microcrystals selectively grown on silicon: Intrinsic carbon doping during chemical beam epitaxy with trimethylgallium. Journal of Applied Physics, 2017, 121, 035704.	2.5	1
58	Strain Balanced Quantum Well Monolithic Tandem Solar Cells. , 2006, , .		0
59	Modelling the Confined States in Multi Quantum Well Solar Cells. , 2006, , .		0
60	Towards 50% Efficiency in Solar Cells. , 0, , .		0
61	Introducing novel light management to design a hybrid high concentration photovoltaic/water splitting system. , 2015, , .		0
62	The observation of thermal photon gain in quantum well solar cells. , 2019, , .		0
63	Analytical Models of Bulk and Quantum Well Solar Cells and Relevance of the Radiative Limit. , 0, , 1195-1212.		0