John Moseley

List of Publications by Year
in descending order

53 papers	1,018 citations	516710 16 h-index	434195 31 g-index
53 all docs	53 docs citations	53 times ranked	853 citing authors

#	Article	IF	Citations
1	Exceeding 20% efficiency with in situ group V doping in polycrystalline CdTe solar cells. Nature Energy, 2019, 4, 837-845.	39.5	243
2	Thin-Film Solar Cells with 19% Efficiency by Thermal Evaporation of CdSe and CdTe. ACS Energy Letters, 2020, 5, 892-896.	17.4	105
3	Overcoming Carrier Concentration Limits in Polycrystalline CdTe Thin Films with In Situ Doping. Scientific Reports, 2018, 8, 14519.	3.3	84
4	Recombination and bandgap engineering in CdSeTe/CdTe solar cells. APL Materials, 2019, 7, .	5.1	70
5	Obtaining Large Columnar CdTe Grains and Long Lifetime on Nanocrystalline CdSe, MgZnO, or CdS Layers. Advanced Energy Materials, 2018, 8, 1702666.	19.5	49
6	Recombination velocity less than 100â€‰cm/s at polycrystalline Al2O3/CdSeTe interfaces. Applied Physics Letters, 2018, 112, .	3.3	47
7	Long carrier lifetimes in large-grain polycrystalline CdTe without CdCl2. Applied Physics Letters, 2016, 108, .	3.3	30
8	Quantitative Determination of Grain-Boundary Recombination Velocity in CdTe by Cathodoluminescence Measurements and Numerical Simulations. IEEE Journal of Photovoltaics, 2015, 5, 1722-1726.	2.5	27
9	Investigating PID shunting in polycrystalline silicon modules via multiscale, multitechnique characterization. Progress in Photovoltaics: Research and Applications, 2018, 26, 377-384.	8.1	26
10	Radiative Efficiency and Chargeâ€Carrier Lifetimes and Diffusion Length in Polycrystalline CdSeTe Heterostructures. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900606.	2.4	26
11	A Review and Perspective on Cathodoluminescence Analysis of Halide Perovskites. Advanced Energy Materials, 2020, 10, 1903840.	19.5	26
12	Cathodoluminescence Analysis of Grain Boundaries and Grain Interiors in Thin-Film CdTe. IEEE Journal of Photovoltaics, 2014, 4, 1671-1679.	2.5	25
13	Luminescence methodology to determine grain-boundary, grain-interior, and surface recombination in thin-film solar cells. Journal of Applied Physics, 2018, 124, .	2.5	25
14	Impact of dopant-induced optoelectronic tails on open-circuit voltage in arsenic-doped Cd(Se)Te solar cells. Journal of Applied Physics, 2020, 128, .	2.5	25
15	Enhanced p-Type Doping in Polycrystalline CdTe Films: Deposition and Activation. IEEE Journal of Photovoltaics, 2019, 9, 912-917.	2.5	23
16	Roles of bandgrading, lifetime, band alignment, and carrier concentration in high-efficiency CdSeTe solar cells. Journal of Applied Physics, 2020, 128, .	2.5	22
17	Understanding arsenic incorporation in CdTe with atom probe tomography. Solar Energy Materials and Solar Cells, 2018, 182, 68-75.	6.2	17
18	Identification of Recombination Losses in CdSe/CdTe Solar Cells from Spectroscopic and Microscopic Timeâ€Resolved Photoluminescence. Solar Rrl, 2021, 5, 2000775.	5.8	17

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19	Explanation of red spectral shifts at CdTe grain boundaries. Applied Physics Letters, 2013, 103, .	3.3	13
20	Mechanisms for long carrier lifetime in Cd(Se)Te double heterostructures. Applied Physics Letters, 2021, 118, .	3.3	12
21	Diverse simulations of time-resolved photoluminescence in thin-film solar cells: A SnO2/CdSeyTe1â^'y case study. Journal of Applied Physics, 2021, 130, .	2.5	11
22	Exceeding 200â€‰ns Lifetimes in Polycrystalline CdTe Solar Cells. Solar Rrl, 2021, 5, 2100173.	5.8	10
23	Grain boundary character and recombination properties in CdTe thin films. , 2013, , .		9
24	Artifact-Free Coring Procedures for Removing Samples from Photovoltaic Modules for Microscopic Analysis. , 2018, , .		8
25	Characterization and modeling of reverseâ€bias breakdown in Cu(In,Ga)Se‹sub›2‹/sub› photovoltaic devices. Progress in Photovoltaics: Research and Applications, 2019, 27, 812-823.	8.1	8
26	Imaging hole-density inhomogeneity in arsenic-doped CdTe thin films by scanning capacitance microscopy. Solar Energy Materials and Solar Cells, 2020, 209, 110468.	6.2	8
27	Colossal grain growth in Cd(Se,Te) thin films and their subsequent use in CdTe epitaxy by close-spaced sublimation. JPhys Energy, 2021, 3, 024003.	5.3	8
28	Voltage Loss Comparison in CdSe/CdTe Solar Cells and Polycrystalline CdSeTe Heterostructures. IEEE Journal of Photovoltaics, 2022, 12, 6-10.	2.5	8
29	Module degradation mechanisms studied by a multi-scale approach. , 2016, , .		7
30	Spatial luminescence imaging of dopant incorporation in CdTe Films. Journal of Applied Physics, 2017, 121, 045304.	2.5	5
31	Imaging ‹mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"›‹mml:msub›‹mml:mi mathvariant="normal"›CdCl‹/mml:mi›‹mml:mn›2‹/mml:mn›‹/mml:msub›‹/mml:math› defect passivation and formation in polycrystalline CdTe films by cathodoluminescence. Physical Review Materials, 2021, 5, .	2.4	5
32	Carrier-Transport Study of Gallium Arsenide Hillock Defects. Microscopy and Microanalysis, 2019, 25, 1160-1166.	0.4	4
33	Development of CdTe on Si Heteroepilayers for Controlled PV Material and Device Studies. Materials Research Society Symposia Proceedings, 2013, 1538, 243-248.	0.1	3
34	Investigating PID Shunting in Polycrystalline Silicon Modules via Multi-Scale, Multi-Technique Characterization. , 2017, , .		3
35	Quantitative determination of grain boundary recombination velocity in CdTe by combination of cathodoluminescence measurements and numerical simulations. , 2015, , .		2
36	Identification of Recombination Losses in CdSe/CdTe Solar Cells from Spectroscopic and Microscopic Timeâ€Resolved Photoluminescence. Solar Rrl, 2021, 5, 2170042.	5.8	2

#	Article	IF	Citations
37	Opto-electronic characterization of CdTe solar cells from TCO to back contact with nano-scale CL probe. , 2015, , .		1
38	Spectrum-per-pixel cathodoluminescence imaging of CdTe thin-film bevels. , 2016, , .		1
39	Numerical Simulation of EBIC for Analysis of Extended Defects. , 2017, , .		1
40	Analytical (S)TEM Studies of Defects Associated with PID in Stressed Si PV Modules. , 2017, , .		1
41	Simulation App for Time-Resolved Photoluminescence in Thin-Film Solar Cells. , 2021, , .		1
42	Structural and Electro-Optical Properties of CdTe Films Used in CdTe/CdS Solar Cells Grown with Substrate Configuration. Materials Research Society Symposia Proceedings, 2013, 1493, 183-188.	0.1	0
43	Electron microscopy study of individual grain boundaries in Cu<inf>2</inf>ZnSnSe<inf>4</inf> thin films. , 2013, , .		0
44	Cathodoluminescence study of carrier transport across grain boundaries in CdTe. , 2014, , .		0
45	Spatial distribution of dopant incorporation in CdTe. , 2016, , .		0
46	Near-field transport imaging application of photovoltaic materials. , 2017, , .		0
47	Enhancing P-Type Doping in Polycrystalline CdTe Films. , 2017, , .		0
48	Carrier-Transport Imaging of Cadmium Telluride Intra- and Inter-Grains. , 2018, , .		0
49	Numerical simulations of cathodoluminescence measurements in thin-film solar cells. , 2019, , .		0
50	Synthesis of CdSeCdSe_xTe_{1-x}/CdTe for graded solar cells. , 2019, , .		0
51	Evidence of Buried Junction in CdSeTe Absorbers. , 2020, , .		0
52	High Efficiency Evaporated CdSeTe/CdTe Solar Cells with and without MgZnO Buffer Layer. , 2020, , .		0
53	Correlative nm-Scale Nonuniformity of Active Charge Carriers and Electrical Potential along both the Plane-View and Depth Directions in Group-V-Doped CdTe Thin Films. , 2020, , .		0