

# Matthew R Young

## List of Publications by Year in descending order

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46  
papers

1,289  
citations

471509

17  
h-index

414414

32  
g-index

48  
all docs

48  
docs citations

48  
times ranked

1974  
citing authors

#	ARTICLE	IF	CITATIONS
1	Six-junction III-V solar cells with 47.1% conversion efficiency under 143-suns concentration. <i>Nature Energy</i> , 2020, 5, 326-335.	39.5	408
2	Effects of sodium incorporation in Co-evaporated Cu <sub>2</sub> ZnSnSe <sub>4</sub> thin-film solar cells. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	125
3	Phase identification and control of thin films deposited by co-evaporation of elemental Cu, Zn, Sn, and Se. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2012, 30, .	2.1	62
4	Effects of Hydrogen on Acceptor Activation in Ternary Nitride Semiconductors. <i>Advanced Electronic Materials</i> , 2017, 3, 1600544.	5.1	56
5	Transparent conducting zinc oxide thin films doped with aluminum and molybdenum. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007, 25, 955-960.	2.1	52
6	Investigation of combinatorial coevaporated thin film Cu <sub>2</sub> ZnSnS <sub>4</sub> . I. Temperature effect, crystalline phases, morphology, and photoluminescence. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	44
7	Exploration of Metal Chloride Uptake for Improved Performance Characteristics of PbSe Quantum Dot Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 2892-2899.	4.6	43
8	Post-deposition processing options for high-efficiency sputtered CdS/CdTe solar cells. <i>Journal of Applied Physics</i> , 2014, 115, 064502.	2.5	38
9	Hydrogen diffusion in silicon from plasma-enhanced chemical vapor deposited silicon nitride film at high temperature. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	37
10	Charge carrier dynamics and recombination in graded band gap CuIn <sub>1-x</sub> Ga <sub>x</sub> Se <sub>2</sub> polycrystalline thin-film photovoltaic solar cell absorbers. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	37
11	Upright and Inverted Single-Junction GaAs Solar Cells Grown by Hydride Vapor Phase Epitaxy. <i>IEEE Journal of Photovoltaics</i> , 2017, 7, 157-161.	2.5	36
12	Spectrally and time resolved photoluminescence analysis of the CdS/CdTe interface in thin-film photovoltaic solar cells. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	35
13	Electrical Characterization of Cu Composition Effects in CdS/CdTe Thin-Film Solar Cells With a ZnTe:Cu Back Contact. <i>IEEE Journal of Photovoltaics</i> , 2013, 3, 1095-1099.	2.5	28
14	Combinatorial In Situ Photoelectron Spectroscopy Investigation of Sb <sub>2</sub> Se <sub>3</sub> /ZnS Heterointerfaces. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600755.	3.7	28
15	Potential-Induced Degradation of Cu(In,Ga)Se <sub>2</sub> Solar Cells: Alkali Metal Drift and Diffusion Effects. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 1337-1342.	2.5	25
16	The impact of sodium contamination in tin sulfide thin-film solar cells. <i>APL Materials</i> , 2016, 4, .	5.1	23
17	Optical-fiber-based, time-resolved photoluminescence spectrometer for thin-film absorber characterization and analysis of TRPL data for CdS/CdTe interface. , 2012, , .		21
18	Six-junction concentrator solar cells. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	21

#	ARTICLE	IF	CITATIONS
19	Sodium-doped molybdenum targets for controllable sodium incorporation in CIGS solar cells. , 2011, , .		15
20	Effects of back-contacting method and temperature on CdTe/CdS solar cells. , 2010, , .		14
21	Internal Resistive Barriers Related to Zinc Diffusion During the Growth of Inverted Metamorphic Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 167-173.	2.5	14
22	Electron scattering mechanisms in polycrystalline sputtered zinc tin oxynitride thin films. Journal of Applied Physics, 2019, 126, 035701.	2.5	13
23	Hydrogenation Mechanisms of Poly- $\text{Si/SiO}_2$ Passivating Contacts by Different Capping Layers. Solar Rrl, 2020, 4, 1900476.	5.8	13
24	Tetrahedrally coordinated disordered $\text{Cu}_2\text{SnS}_3$ - $\text{Cu}_2\text{ZnSnS}_4$ -ZnS alloys with tunable optical and electronic properties. Solar Energy Materials and Solar Cells, 2014, 129, 124-131.	6.2	12
25	Hydrogen-Assisted Defect Engineering of Doped Poly-Si Films for Passivating Contact Solar Cells. ACS Applied Energy Materials, 2019, 2, 8783-8791.	5.1	12
26	Potential-Induced Degradation Depends on Leakage Current and Light/Electrical Bias in $\text{Cu}(\text{In,Ga})\text{Se}_2$ Devices. IEEE Journal of Photovoltaics, 2019, 9, 1852-1856.	2.5	10
27	Hydrogenation Mechanisms of Poly- $\text{Si/SiO}_2$ Passivating Contacts by Different Capping Layers. Solar Rrl, 2020, 4, 2070033.	5.8	10
28	Improvement of Short-Circuit Current Density in GaInP Solar Cells Grown by Dynamic Hydride Vapor Phase Epitaxy. IEEE Journal of Photovoltaics, 2018, 8, 1616-1620.	2.5	8
29	Templated Growth of Metastable Polymorphs on Amorphous Substrates with Seed Layers. Physical Review Applied, 2020, 13, .	3.8	7
30	Conduction band position tuning and Ga-doping in (Cd,Zn)S alloy thin films. Materials Chemistry Frontiers, 2017, 1, 1342-1348.	5.9	6
31	GaAs solar cells grown on intentionally contaminated GaAs substrates. Journal of Crystal Growth, 2020, 541, 125668.	1.5	6
32	Improvement of front-junction GaInP by point-defect injection and annealing. , 2021, , .		5
33	Inverted metamorphic GaInAs solar cell grown by dynamic hydride vapor phase epitaxy. Applied Physics Letters, 2021, 119, .	3.3	4
34	Potential-induced degradation of $\text{Cu}(\text{In,Ga})\text{Se}_2$ can occur by shunting the front $\text{i-ZnO}$ and by damaging the p-n junction. Solar Energy, 2022, 232, 298-303.	6.1	4
35	Density profiles in sputtered molybdenum thin films and their effects on sodium diffusion in $\text{Cu}(\text{In,Ga})\text{Se}_2$ photovoltaics. , 2011, , .		3
36	Dopant Diffusion Control for Improved Tandem Cells Grown by D-HVPE. IEEE Journal of Photovoltaics, 2021, 11, 1251-1255.	2.5	3

#	ARTICLE	IF	CITATIONS
37	Electrical characterization of Cu composition effects in CdS/CdTe thin-film solar cells with a ZnTe:Cu back contact. , 2012, , .		2
38	Rapid fabrication of Cu(In, Ga)Se <sub>2</sub> thin films from Se-containing precursors by the two-step selenization process. , 2013, , .		1
39	Heteroepitaxial growth of CZTS. , 2014, , .		1
40	Plasma immersion ion implantation for interdigitated back passivated contact (IBPC) solar cells. , 2016, , .		1
41	Notice of Removal Upright and inverted single junction GaAs solar cells grown by hydride vapor phase epitaxy. , 2017, , .		1
42	Rapid fabrication of Cu(In,Ga)Se <sub>2</sub> thin films by the two-step selenization process. , 2012, , .		0
43	Electrical characterization of Cu composition effects in CdS/CdTe thin-film solar cells with a ZnTe:Cu back contact. , 2013, , .		0
44	Rapid fabrication of Cu(In,Ga)Se <sub>2</sub> thin films by the two-step selenization process. , 2013, , .		0
45	Investigation of Sb-containing precursors for Cu(In, Ga)Se <sub>2</sub> thin films through design of experiments. , 2016, , .		0
46	GaAs solar cells grown on intentionally contaminated GaAs substrates. , 2020, , .		0