

Adele C Tamboli

List of Publications by Year in descending order

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80
papers

2,560
citations

236925

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h-index

197818

49
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85
all docs

85
docs citations

85
times ranked

2336
citing authors

#	ARTICLE	IF	CITATIONS
1	Reactive phosphine combinatorial co-sputtering of cation disordered ZnGeP ₂ films. Journal of Materials Chemistry C, 2022, 10, 870-879.	5.5	8
2	Heteroepitaxial ZnGeN ₂ on AlN: Growth, Structure, and Optical Properties. Crystal Growth and Design, 2022, 22, 1270-1275.	3.0	4
3	Deep level transient spectroscopy and photoluminescence studies of hole and electron traps in ZnSnP ₂ bulk crystals. Japanese Journal of Applied Physics, 2022, 61, 020905.	1.5	1
4	Bandgap analysis and carrier localization in cation-disordered ZnGeN ₂ . APL Materials, 2022, 10, .	5.1	13
5	Progress in three-terminal heterojunction bipolar transistor solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 843-850.	8.1	6
6	Boron Phosphide Films by Reactive Sputtering: Searching for a p-type Transparent Conductor. Advanced Materials Interfaces, 2022, 9, .	3.7	8
7	Composition dependent electrochemical properties of earth-abundant ternary nitride anodes. APL Materials, 2022, 10, 041109.	5.1	2
8	Short-Range Order Tunes Optical Properties in Long-Range Disordered ZnSnN ₂ –ZnO Alloy. Chemistry of Materials, 2022, 34, 3910-3919.	6.7	6
9	Simulation and characterization of cation disorder in ZnGeP_2 . Journal of Materials Research, 2022, 37, 1986-1996.	2.6	1
10	Exploring the phase space of Zn ₂ SbN ₃ , a novel semiconducting nitride. Journal of Materials Chemistry C, 2021, 9, 13904-13913.	5.5	7
11	Probing configurational disorder in ZnGeN_2 using cluster-based Monte Carlo. Physical Review Materials, 2021, 5, .	2.6	1
12	Lamination of transparent conductive adhesives for tandem solar cell applications. Journal Physics D: Applied Physics, 2021, 54, 184002.	2.8	6
13	III-V-on-Si Tandem Solar Cells. Joule, 2021, 5, 514-518.	24.0	15
14	Optimization of four terminal rear heterojunction GaAs on Si interdigitated back contact tandem solar cells. Applied Physics Letters, 2021, 118, .	3.3	13
15	Compensated contacts for three-terminal transistor solar cells. , 2021, , .		1
16	Fabrication, Measurement, and Modeling of GaInP/GaAs Three-Terminal Cells and Strings. , 2021, , .		4
17	Homogenous Voltage-Matched Strings Using Three-Terminal Tandem Solar Cells: Fundamentals and End Losses. IEEE Journal of Photovoltaics, 2021, 11, 1078-1086.	2.5	12
18	Ternary Nitride Materials: Fundamentals and Emerging Device Applications. Annual Review of Materials Research, 2021, 51, 591-618.	9.3	34

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19	Design principles of tandem cascade photoelectrochemical devices. <i>Sustainable Energy and Fuels</i> , 2021, 5, 6361-6371.	4.9	6
20	Characterization of multiterminal tandem photovoltaic devices and their subcell coupling. <i>Cell Reports Physical Science</i> , 2021, 2, 100677.	5.6	8
21	Three-terminal III-V/Si tandem solar cells enabled by a transparent conductive adhesive. <i>Sustainable Energy and Fuels</i> , 2020, 4, 549-558.	4.9	46
22	Perfect short-range ordered alloy with line-compound-like properties in the ZnSnN ₂ :ZnO system. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	20
23	High-Efficiency Silicon Heterojunction Solar Cells: Materials, Devices and Applications. <i>Materials Science and Engineering Reports</i> , 2020, 142, 100579.	31.8	139
24	Investigation of Off-stoichiometry in Ternary Nitrides by EDS and HRTEM. <i>Microscopy and Microanalysis</i> , 2020, 26, 1406-1407.	0.4	0
25	Combinatorial investigation of structural and optical properties of cation-disordered ZnGeN ₂ . <i>Journal of Materials Chemistry C</i> , 2020, 8, 8736-8746.	5.5	28
26	The 2020 photovoltaic technologies roadmap. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 493001.	2.8	274
27	A Taxonomy for Three-Terminal Tandem Solar Cells. <i>ACS Energy Letters</i> , 2020, 5, 1233-1242.	17.4	51
28	Using resonant energy X-ray diffraction to extract chemical order parameters in ternary semiconductors. <i>Journal of Materials Chemistry C</i> , 2020, 8, 4350-4356.	5.5	13
29	Heteroepitaxial Integration of ZnGeN ₂ on GaN Buffers Using Molecular Beam Epitaxy. <i>Crystal Growth and Design</i> , 2020, 20, 1868-1875.	3.0	24
30	Utilizing Site Disorder in the Development of New Energy-Relevant Semiconductors. <i>ACS Energy Letters</i> , 2020, 5, 2027-2041.	17.4	46
31	Combinatorial Synthesis of Magnesium Tin Nitride Semiconductors. <i>Journal of the American Chemical Society</i> , 2020, 142, 8421-8430.	13.7	42
32	Inverted GaInP/GaAs Three-Terminal Heterojunction Bipolar Transistor Solar Cell. , 2020, , .		4
33	Ternary nitride semiconductors in the rocksalt crystal structure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 14829-14834.	7.1	52
34	Interplay between Composition, Electronic Structure, Disorder, and Doping due to Dual Sublattice Mixing in Nonequilibrium Synthesis of ZnSnN ₂ :O. <i>Advanced Materials</i> , 2019, 31, e1807406.	21.0	35
35	Zn ₂ SbN ₃ : growth and characterization of a metastable photoactive semiconductor. <i>Materials Horizons</i> , 2019, 6, 1669-1674.	12.2	32
36	Toward Low-Cost 4-Terminal GaAs//Si Tandem Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 2375-2380.	5.1	17

#	ARTICLE	IF	CITATIONS
37	Computational Materials Design: Interplay between Composition, Electronic Structure, Disorder, and Doping due to Dual Sublattice Mixing in Nonequilibrium Synthesis of ZnSnN ₂ :O (Adv.) Tj ETQq1 1 0.784.014 rgBT /Overlo	11.4	14
38	Back-contacted bottom cells with three terminals: Maximizing power extraction from current-mismatched tandem cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 410-423.	8.1	31
39	Disorder-tunable ZnGeP ₂ for epitaxial top cells on Si. , 2019, , .		5
40	Demonstrating the GaInP/GaAs Three-Terminal Heterojunction Bipolar Transistor Solar Cell. , 2019, , .		7
41	A simple physical model for three-terminal tandem cell operation. , 2019, , .		1
42	Enabling ultrathin III-V solar cells using dual photonic crystals. , 2019, , .		3
43	Blue-green emission from epitaxial yet cation-disordered ZnGeN_2O Physical Review Materials, 2019, 3, .	2.4	23
44	III-V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2019, , .		2
45	Transparent Conductive Adhesives for Tandem Solar Cells Using Polymer-Particle Composites. ACS Applied Materials & Interfaces, 2018, 10, 8086-8091.	8.0	25
46	Maximizing tandem solar cell power extraction using a three-terminal design. Sustainable Energy and Fuels, 2018, 2, 1141-1147.	4.9	67
47	Growth of amorphous and epitaxial ZnSiP ₂ -Si alloys on Si. Journal of Materials Chemistry C, 2018, 6, 2696-2703.	5.5	18
48	Band Edge Positions and Their Impact on the Simulated Device Performance of ZnSnN ₂ -Based Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 110-117.	2.5	25
49	Enabling low-cost III-V/Si integration through nucleation of GaP on v-grooved Si substrates. , 2018, , .		6
50	Perspective: Fundamentals of coalescence-related dislocations, applied to selective-area growth and other epitaxial films. APL Materials, 2018, 6, .	5.1	18
51	Operating principles of three-terminal solar cells. , 2018, , .		4
52	GaAs Solar Cells on Nanopatterned Si Substrates. IEEE Journal of Photovoltaics, 2018, 8, 1635-1640.	2.5	23
53	Equivalent Performance in Three-Terminal and Four-Terminal Tandem Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1584-1589.	2.5	31
54	Exciton photoluminescence and benign defect complex formation in zinc tin nitride. Materials Horizons, 2018, 5, 823-830.	12.2	41

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55	String-Level Modeling of Two, Three, and Four Terminal Si-Based Tandem Modules. IEEE Journal of Photovoltaics, 2018, 8, 1370-1375.	2.5	26
56	Energy Yield Analysis of Multiterminal Si-Based Tandem Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1376-1383.	2.5	26
57	Nitride layer screening as carrier-selective contacts for silicon heterojunction solar cells. AIP Conference Proceedings, 2018, , .	0.4	8
58	Yield analysis and comparison of GaInP/Si and GaInP/GaAs multi-terminal tandem solar cells. AIP Conference Proceedings, 2018, , .	0.4	2
59	Synthesis, structure, and optoelectronic properties of II-V ₂ materials. Journal of Materials Chemistry A, 2017, 5, 11418-11435.	10.3	145
60	Effects of Hydrogen on Acceptor Activation in Ternary Nitride Semiconductors. Advanced Electronic Materials, 2017, 3, 1600544.	5.1	56
61	Raising the one-sun conversion efficiency of III-V/Si solar cells to 32.8% for two junctions and 35.9% for three junctions. Nature Energy, 2017, 2, .	39.5	424
62	Low-Cost CdTe/Silicon Tandem Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 1767-1772.	2.5	26
63	Large Area Atomically Flat Surfaces via Exfoliation of Bulk Bi ₂ Se ₃ Single Crystals. Chemistry of Materials, 2017, 29, 8472-8477.	6.7	8
64	III-V/Si tandem cell to module interconnection - comparison between different operation modes. , 2017, , .		1
65	Modeling three-terminal III-V/Si tandem solar cells. , 2017, , .		1
66	Transparent Conductive Adhesives for Tandem Solar Cells. , 2017, , .		5
67	Monte Carlo simulations of disorder in $ZnSnN_2$ and the effects on the electronic structure. Physical Review Materials, 2017, 1, .	2.4	79
68	Selective area growth of GaAs on Si patterned using nanoimprint lithography. , 2016, , .		6
69	Energy conversion properties of ZnSiP ₂ , a lattice-matched material for silicon-based tandem photovoltaics. , 2016, , .		2
70	Understanding and control of bipolar self-doping in copper nitride. Journal of Applied Physics, 2016, 119, .	2.5	30
71	Solar energy conversion properties and defect physics of ZnSiP ₂ . Energy and Environmental Science, 2016, 9, 1031-1041.	30.8	49
72	Single crystal growth and phase stability of photovoltaic grade ZnSiP ₂ by flux technique. , 2015, , .		5

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73	Effects of low temperature annealing on the transport properties of zinc tin nitride. , 2015, , .		4
74	Indium zinc oxide mediated wafer bonding for IIIâ€“V/Si tandem solar cells. , 2015, , .		8
75	Development of ZnSiP\$_{2}\$ for Si-Based Tandem Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 17-21.	2.5	19
76	Combinatorial insights into doping control and transport properties of zinc tin nitride. Journal of Materials Chemistry C, 2015, 3, 11017-11028.	5.5	128
77	Synthesis and optical band gaps of alloyed Siâ€“Ge type II clathrates. Journal of Materials Chemistry C, 2014, 2, 3231-3237.	5.5	55
78	Efficient route to phase selective synthesis of type II silicon clathrates with low sodium occupancy. CrystEngComm, 2014, 16, 3940-3949.	2.6	39
79	Synthesis of Group IV Clathrates for Photovoltaics. IEEE Journal of Photovoltaics, 2013, 3, 1305-1310.	2.5	62
80	Wafer-Scale Growth of Silicon Microwire Arrays for Photovoltaics and Solar Fuel Generation. IEEE Journal of Photovoltaics, 2012, 2, 294-297.	2.5	15