Andriy Zakutayev

List of Publications by Year
in descending order

190 papers	8,074 citations	41344 49 h-index	60623 81 g-index
199 all docs	199 docs citations	199 times ranked	8721 citing authors

#	Article	IF	Citations
1	Reactive phosphine combinatorial co-sputtering of cation disordered ZnGeP₂ films. Journal of Materials Chemistry C, 2022, 10, 870-879.	5.5	8
2	Discovering exceptionally hard and wear-resistant metallic glasses by combining machine-learning with high throughput experimentation. Applied Physics Reviews, 2022, 9, .	11.3	12
3	Reduced synthesis temperatures of SrNbO2N perovskite films for photoelectrochemical fuel production. Journal of Materials Research, 2022, 37, 424-435.	2.6	1
4	Predicting Oxygen Off-Stoichiometry and Hydrogen Incorporation in Complex Perovskite Oxides. Chemistry of Materials, 2022, 34, 510-518.	6.7	7
5	Experimental Synthesis of Theoretically Predicted Multivalent Ternary Nitride Materials. Chemistry of Materials, 2022, 34, 1418-1438.	6.7	30
6	Boron Phosphide Films by Reactive Sputtering: Searching for a Pâ€Type Transparent Conductor. Advanced Materials Interfaces, 2022, 9, .	3.7	8
7	Molecular Coatings Improve the Selectivity and Durability of CO₂ Reduction Chalcogenide Photocathodes. ACS Energy Letters, 2022, 7, 1195-1201.	17.4	6
8	Lithium nitride coatings deposited by magnetron sputtering on sulfide electrolytes for solid-state batteries. MRS Communications, 2022, 12, 352-357.	1.8	2
9	Prediction and realisation of high mobility and degenerate p-type conductivity in CaCuP thin films. Chemical Science, 2022, 13, 5872-5883.	7.4	12
10	Role of disorder in the synthesis of metastable zinc zirconium nitrides. Physical Review Materials, 2022, 6, .	2.4	14
11	High-Temperature Ferroelectric Behavior of Al0.7Sc0.3N. Micromachines, 2022, 13, 887.	2.9	24
12	Crystallize It before It Diffuses: Kinetic Stabilization of Thin-Film Phosphorus-Rich Semiconductor CuP₂. Journal of the American Chemical Society, 2022, 144, 13334-13343.	13.7	5
13	Projected Cost of Gallium Oxide Wafers from Edge-Defined Film-Fed Crystal Growth. Crystal Growth and Design, 2022, 22, 4854-4863.	3.0	17
14	Phase formation of manganese oxide thin films using pulsed laser deposition. Materials Advances, 2021, 2, 303-309.	5.4	9
15	Triple ionicâ€“electronic conducting oxides for next-generation electrochemical devices. Nature Materials, 2021, 20, 301-313.	27.5	160
16	A Review on Lithium Phosphorus Oxynitride. Journal of Physical Chemistry C, 2021, 125, 3651-3667.	3.1	34
17	SnS Homojunction Solar Cell with nâ€Type Single Crystal and pâ€Type Thin Film. Solar Rrl, 2021, 5, 2000708.	5.8	29
18	Emerging inorganic solar cell efficiency tables (version 2). JPhys Energy, 2021, 3, 032003.	5.3	40

#	Article	IF	Citations
19	Reduced coercive field in epitaxial thin film of ferroelectric wurtzite Al0.7Sc0.3N. Applied Physics Letters, 2021, 118, .	3.3	35
20	Understanding Reproducibility of Sputterâ€Deposited Metastable Ferroelectric Wurtzite Al_{0.6}Sc_{0.4}N Films Using In Situ Optical Emission Spectrometry. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100043.	2.4	20
21	An Open Combinatorial Diffraction Dataset Including Consensus Human and Machine Learning Labels with Quantified Uncertainty for Training New Machine Learning Models. Integrating Materials and Manufacturing Innovation, 2021, 10, 311-318.	2.6	5
22	Instrument for spatially resolved, temperature-dependent electrochemical impedance spectroscopy of thin films under locally controlled atmosphere. Review of Scientific Instruments, 2021, 92, 065105.	1.3	4
23	Influence of Protection Layers on Thermal Stability of Nitride Thin Films. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100178.	2.4	9
24	Computational Fermi level engineering and doping-type conversion of Mg:Ga2O3 via three-step synthesis process. Journal of Applied Physics, 2021, 129, .	2.5	14
25	Metal chalcogenides for neuromorphic computing: emerging materials and mechanisms. Nanotechnology, 2021, 32, 372001.	2.6	16
26	Synthesis of Zn₂NbN₃ ternary nitride semiconductor with wurtzite-derived crystal structure. Journal of Physics Condensed Matter, 2021, 33, 354003.	1.8	9
27	Performance and reliability of Î²-Ga2O3 Schottky barrier diodes at high temperature. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	19
28	Microstructures in Newly-Realized LnMN3 Phases. Microscopy and Microanalysis, 2021, 27, 3300-3301.	0.4	0
29	Double-Site Substitution of Ce into (Ba, Sr)MnO₃ Perovskites for Solar Thermochemical Hydrogen Production. ACS Energy Letters, 2021, 6, 3037-3043.	17.4	14
30	Combinatorial screening of the crystal structure in Baâ€“Srâ€“Mnâ€“Ce perovskite oxides with ABO₃stoichiometry. Journal of Materials Chemistry A, 2021, 9, 21032-21043.	10.3	7
31	Mg _x Zn_{1â^'x}O contact to CuGa₃Se₅ absorber for photovoltaic and photoelectrochemical devices. JPhys Energy, 2021, 3, 024001.	5.3	10
32	Tailoring SnO₂, (Mg,Zn)O, and Ga:(Mg,Zn)O electro-optical properties and stability for solar cells. Journal Physics D: Applied Physics, 2021, 54, 034002.	2.8	9
33	Two-Step Solid-State Synthesis of Ternary Nitride Materials. , 2021, 3, 1677-1683.		7
34	Research data infrastructure for high-throughput experimental materials science. Patterns, 2021, 2, 100373.	5.9	19
35	Synthesis of LaWN ₃ nitride perovskite with polar symmetry. Science, 2021, 374, 1488-1491.	12.6	43
36	Theoretical Insights for Improving the Schottky-Barrier Height at the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>Ga</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub><mml:mrow><mml:mo>/</mml:mo><mml:mi>Pt Interface. Physical Review Applied, 2021, 16, .	3.8	5

#	Article	IF	Citations
37	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -type electrical conduction in SnS thin films. Physical Review Materials, 2021, 5, .	2.4	8
38	Investigation of carrier recombination of Na-doped Cu2SnS3 solar cell for its improved conversion efficiency of 5.1%. Solar Energy Materials and Solar Cells, 2020, 206, 110261.	6.2	46
39	Probing the Evolution of Surface Chemistry at the Siliconâ€“Electrolyte Interphase via In Situ Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry Letters, 2020, 11, 286-291.	4.6	23
40	Templated Growth of Metastable Polymorphs on Amorphous Substrates with Seed Layers. Physical Review Applied, 2020, 13, .	3.8	7
41	Superstrate-type flexible and bifacial Cu(In,Ga)Se2 thin-film solar cells with In2O3:SnO2 back contact. Solar Energy, 2020, 211, 725-731.	6.1	17
42	Perfect short-range ordered alloy with line-compound-like properties in the ZnSnN2:ZnO system. Npj Computational Materials, 2020, 6, .	8.7	20
43	Improving Interface Stability of Si Anodes by Mg Coating in Li-Ion Batteries. ACS Applied Energy Materials, 2020, 3, 11534-11539.	5.1	10
44	Investigating the Effects of Lithium Phosphorous Oxynitride Coating on Blended Solid Polymer Electrolytes. ACS Applied Materials & Interfaces, 2020, 12, 40749-40758.	8.0	6
45	Three-Dimensional Mapping of Resistivity and Microstructure of Composite Electrodes for Lithium-Ion Batteries. Nano Letters, 2020, 20, 8081-8088.	9.1	7
46	Synthesis of Tunable SnS-TaS₂ Nanoscale Superlattices. Nano Letters, 2020, 20, 7059-7067.	9.1	7
47	Transient Evolution of the Built-in Field at Junctions of GaAs. ACS Applied Materials & Interfaces, 2020, 12, 40339-40346.	8.0	10
48	Back-contact barrier analysis to develop flexible and bifacial Cu(In,Ga)Se2 solar cells using transparent conductive In2O3: SnO2 thin films. Solar Energy, 2020, 211, 1311-1317.	6.1	18
49	Sputtered p-Type Cu_xZn_{1â€“x}S Back Contact to CdTe Solar Cells. ACS Applied Energy Materials, 2020, 3, 5427-5438.	5.1	11
50	Combined Spatially Resolved Characterization of Antireflection and Antisoiling Coatings for PV Module Glass. ACS Combinatorial Science, 2020, 22, 197-203.	3.8	4
51	Epitaxial growth of rock salt MgZrN2 semiconductors on MgO and GaN. Applied Physics Letters, 2020, 116, 102102.	3.3	12
52	X-ray photoelectron spectroscopy and rotating disk electrode measurements of smooth sputtered Fe-N-C films. Applied Surface Science, 2020, 515, 146012.	6.1	11
53	A review of Sb2Se3 photovoltaic absorber materials and thin-film solar cells. Solar Energy, 2020, 201, 227-246.	6.1	243
54	High-throughput fabrication and semi-automated characterization of oxide thin film transistors. Chinese Physics B, 2020, 29, 018502.	1.4	1

#	Article	IF	Citations
55	Wurtzite materials in alloys of rock salt compounds. Journal of Materials Research, 2020, 35, 972-980.	2.6	2
56	Wide Band Gap Chalcogenide Semiconductors. Chemical Reviews, 2020, 120, 4007-4055.	47.7	246
57	Influence of hydrogen and oxygen on the structure and properties of sputtered magnesium zirconium oxynitride thin films. Journal of Materials Chemistry A, 2020, 8, 9364-9372.	10.3	11
58	Combinatorial Synthesis of Magnesium Tin Nitride Semiconductors. Journal of the American Chemical Society, 2020, 142, 8421-8430.	13.7	42
59	Review of ZnSnN₂ semiconductor material. JPhys Energy, 2020, 2, 032007.	5.3	31
60	Growth and characterization of homoepitaxial Î²-Ga₂O₃ layers. Journal Physics D: Applied Physics, 2020, 53, 484002.	2.8	7
61	Electro-optical stability in gallium magnesium zinc oxide layers for CdTe solar cells. , 2020, , .		0
62	The 2019 materials by design roadmap. Journal Physics D: Applied Physics, 2019, 52, 013001.	2.8	236
63	Electron scattering mechanisms in polycrystalline sputtered zinc tin oxynitride thin films. Journal of Applied Physics, 2019, 126, 035701.	2.5	13
64	Ternary nitride semiconductors in the rocksalt crystal structure. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14829-14834.	7.1	52
65	A computational survey of semiconductors for power electronics. Energy and Environmental Science, 2019, 12, 3338-3347.	30.8	26
66	Amorphous sulfide heterostructure precursors prepared by radio frequency sputtering. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 051201.	1.2	2
67	Review of high-throughput approaches to search for piezoelectric nitrides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	14
68	Combinatorial Tuning of Structural and Optoelectronic Properties in Cu Zn1â^'S. Matter, 2019, 1, 862-880.	10.0	26
69	Application of Al-Doped (Zn, Mg)O on pure-sulfide Cu(In, Ga)S2 solar cells for enhancement of open-circuit voltage. Solar Energy Materials and Solar Cells, 2019, 202, 110157.	6.2	19
70	Thin Film Synthesis of Semiconductors in the Mgâ€“Sbâ€“N Materials System. Chemistry of Materials, 2019, 31, 8717-8724.	6.7	46
71	Interplay between Composition, Electronic Structure, Disorder, and Doping due to Dual Sublattice Mixing in Nonequilibrium Synthesis of ZnSnN₂:O. Advanced Materials, 2019, 31, e1807406.	21.0	35
72	COMBIgor: Data-Analysis Package for Combinatorial Materials Science. ACS Combinatorial Science, 2019, 21, 537-547.	3.8	52

#	Article	IF	Citations
73	A map of the inorganic ternary metal nitrides. Nature Materials, 2019, 18, 732-739.	27.5	274
74	Synthesis of Lanthanum Tungsten Oxynitride Perovskite Thin Films. Advanced Electronic Materials, 2019, 5, 1900214.	5.1	15
75	Emerging inorganic solar cell efficiency tables (Version 1). JPhys Energy, 2019, 1, 032001.	5.3	54
76	Chemistry of Electrolyte Reduction on Lithium Silicide. Journal of Physical Chemistry C, 2019, 123, 13219-13224.	3.1	29
77	High-Throughput Experimental Study of Wurtzite Mn1â€“xZnxO Alloys for Water Splitting Applications. ACS Omega, 2019, 4, 7436-7447.	3.5	5
78	Characteristics of Zn1â^'xMgxO:B and its application as transparent conductive oxide layer in Cu(In,Ga)(S,Se)2 solar cells with and without CdS buffer layer. Solar Energy, 2019, 184, 553-560.	6.1	24
79	Zn₂SbN₃: growth and characterization of a metastable photoactive semiconductor. Materials Horizons, 2019, 6, 1669-1674.	12.2	32
80	Composition, structure, and semiconducting properties of Mg _x Zr_{2â^'x}N₂ thin films. Japanese Journal of Applied Physics, 2019, 58, SC1015.	1.5	22
81	Modeling and Analysis of Gallium Oxide Vertical Transistors. ECS Journal of Solid State Science and Technology, 2019, 8, Q3202-Q3205.	1.8	21
82	An Inter-Laboratory Study of Znâ€“Snâ€“Tiâ€“O Thin Films using High-Throughput Experimental Methods. ACS Combinatorial Science, 2019, 21, 350-361.	3.8	11
83	Computational Materials Design: Interplay between Composition, Electronic Structure, Disorder, and Doping due to Dual Sublattice Mixing in Nonequilibrium Synthesis of ZnSnN₂:O (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock	24.0	
84	How Much Will Gallium Oxide Power Electronics Cost?. Joule, 2019, 3, 903-907.	24.0	96
85	Combinatorial study of MZO emitters for CdTe-based solar cells. , 2019, , .		2
86	Why Wideband Gap Needs Techno-economics. , 2019, , .		1
87	Intrinsic Properties of Individual Inorganic Siliconâ€“Electrolyte Interphase Constituents. ACS Applied Materials & Interfaces, 2019, 11, 46993-47002.	8.0	21
88	Electrothermal Modeling and Analysis of Gallium Oxide Power Switching Devices. , 2019, , .		2
89	Redox-Mediated Stabilization in Zinc Molybdenum Nitrides. Journal of the American Chemical Society, 2018, 140, 4293-4301.	13.7	53
90	Negative-pressure polymorphs made by heterostructural alloying. Science Advances, 2018, 4, eaaq1442.	10.3	34

#	Article	IF	Citations
91	An open experimental database for exploring inorganic materials. Scientific Data, 2018, 5, 180053.	5.3	121
92	Band Edge Positions and Their Impact on the Simulated Device Performance of ZnSnN2-Based Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 110-117.	2.5	25
93	Enhanced Piezoelectric Response of AlN via CrN Alloying. Physical Review Applied, 2018, 9, .	3.8	57
94	Characterization of Elastic Modulus Across the (Al_{1â€“<italic>x</italic>}Sc_{<italic>x</italic>})N System Using DFT and Substrate-Effect-Corrected Nanoindentation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 2167-2175.	3.0	22
95	Thermal and Thermomechanical Modeling to Design a Gallium Oxide Power Electronics Package. , 2018, , .		8
96	Bi-Containing n-FeWO4 Thin Films Provide the Largest Photovoltage and Highest Stability for a Sub-2 eV Band Gap Photoanode. ACS Energy Letters, 2018, 3, 2769-2774.	17.4	20
97	Mechanical Properties and Chemical Reactivity of Li_xSiO_y Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 38558-38564.	8.0	21
98	Combinatorial Nitrogen Gradients in Sputtered Thin Films. ACS Combinatorial Science, 2018, 20, 436-442.	3.8	13
99	Stabilization of wide band-gap p-type wurtzite MnTe thin films on amorphous substrates. Journal of Materials Chemistry C, 2018, 6, 6297-6304.	5.5	21
100	Exciton photoluminescence and benign defect complex formation in zinc tin nitride. Materials Horizons, 2018, 5, 823-830.	12.2	41
101	Zinc-Stabilized Manganese Telluride with Wurtzite Crystal Structure. Journal of Physical Chemistry C, 2018, 122, 18769-18775.	3.1	13
102	Band gap temperature-dependence and exciton-like state in copper antimony sulphide, CuSbS2. APL Materials, 2018, 6, .	5.1	14
103	Nitride layer screening as carrier-selective contacts for silicon heterojunction solar cells. AIP Conference Proceedings, 2018, , .	0.4	8
104	Research Update: Emerging chalcostibite absorbers for thin-film solar cells. APL Materials, 2018, 6, .	5.1	31
105	Implications of heterostructural alloying for enhanced piezoelectric performance of (Al,Sc)N. Physical Review Materials, 2018, 2, .	2.4	47
106	Perovskite-Inspired Photovoltaic Materials: Toward Best Practices in Materials Characterization and Calculations. Chemistry of Materials, 2017, 29, 1964-1988.	6.7	116
107	Tradeâ€Offs in Thin Film Solar Cells with Layered Chalcostibite Photovoltaic Absorbers. Advanced Energy Materials, 2017, 7, 1601935.	19.5	58
108	Conduction band position tuning and Ga-doping in (Cd,Zn)S alloy thin films. Materials Chemistry Frontiers, 2017, 1, 1342-1348.	5.9	6

#	Article	IF	Citations
109	Atypically small temperature-dependence of the direct band gap in the metastable semiconductor copper nitride<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mi mathvariant="normal">N</mml:mi></mml:mrow></mml:math>. Physical Review B, 2017, 95, .	3.2	35
110	Effects of Hydrogen on Acceptor Activation in Ternary Nitride Semiconductors. Advanced Electronic Materials, 2017, 3, 1600544.	5.1	56
111	Brief review of emerging photovoltaic absorbers. Current Opinion in Green and Sustainable Chemistry, 2017, 4, 8-15.	5.9	64
112	Solar Cells: Tradeâ€Offs in Thin Film Solar Cells with Layered Chalcostibite Photovoltaic Absorbers (Adv. Energy Mater. 11/2017). Advanced Energy Materials, 2017, 7, .	19.5	0
113	Solubility limits in quaternary SnTe-based alloys. RSC Advances, 2017, 7, 24747-24753.	3.6	14
114	Novel phase diagram behavior and materials design in heterostructural semiconductor alloys. Science Advances, 2017, 3, e1700270.	10.3	46
115	Optoelectronic Properties of Strontium and Barium Copper Sulfides Prepared by Combinatorial Sputtering. Chemistry of Materials, 2017, 29, 8239-8248.	6.7	28
116	Characterization of defects in copper antimony disulfide. Journal of Materials Chemistry A, 2017, 5, 21986-21993.	10.3	33
117	Using heterostructural alloying to tune the structure and properties of the thermoelectric Sn_{1â^'x}Ca_xSe. Journal of Materials Chemistry A, 2017, 5, 16873-16882.	10.3	19
118	Thermodynamic Routes to Novel Metastable Nitrogen-Rich Nitrides. Chemistry of Materials, 2017, 29, 6936-6946.	6.7	121
119	Core Levels, Band Alignments, and Valence-Band States in CuSbS₂ for Solar Cell Applications. ACS Applied Materials & Interfaces, 2017, 9, 41916-41926.	8.0	67
120	Design of Metastable Tin Titanium Nitride Semiconductor Alloys. Chemistry of Materials, 2017, 29, 6511-6517.	6.7	27
121	Combinatorial sputtering of Ga-doped (Zn,Mg)O for contact applications in solar cells. Solar Energy Materials and Solar Cells, 2017, 159, 219-226.	6.2	34
122	Automated algorithms for band gap analysis from optical absorption spectra. Materials Discovery, 2017, 10, 43-52.	3.3	17
123	Monte Carlo simulations of disorder in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>ZnSn</mml:mi><mml:msub><mml:mi mathvariant="normal">N</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> and the effects on the electronic structure. Physical Review Materials, 2017, 1, .	2.4	79
124	Wild band edges: The role of bandgap grading and band-edge fluctuations in high-efficiency chalcogenide devices. , 2016, , .		11
125	Tuning the physical properties of amorphous In-Zn-Sn-O thin films using combinatorial sputtering. MRS Communications, 2016, 6, 360-366.	1.8	13
126	A review of defects and disorder in multinary tetrahedrally bonded semiconductors. Semiconductor Science and Technology, 2016, 31, 123004.	2.0	74

#	Article	IF	Citations
127	Structure property relationships in gallium oxide thin films grown by pulsed laser deposition. MRS Communications, 2016, 6, 348-353.	1.8	17
128	Synthesis of a mixed-valent tin nitride and considerations of its possible crystal structures. Journal of Chemical Physics, 2016, 144, 144201.	3.0	29
129	Understanding and control of bipolar self-doping in copper nitride. Journal of Applied Physics, 2016, 119, .	2.5	30
130	Pathway to oxide photovoltaics via band-structure engineering of SnO. APL Materials, 2016, 4, 106103.	5.1	28
131	Combinatorial Reactive Sputtering of In₂S₃ as an Alternative Contact Layer for Thin Film Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 14004-14011.	8.0	67
132	Synthesis and Characterization of (Sn,Zn)O Alloys. Chemistry of Materials, 2016, 28, 7765-7772.	6.7	16
133	Combinatorial Chemical Bath Deposition of CdS Contacts for Chalcogenide Photovoltaics. ACS Combinatorial Science, 2016, 18, 583-589.	3.8	23
134	Effects of Thermochemical Treatment on CuSbS₂ Photovoltaic Absorber Quality and Solar Cell Reproducibility. Journal of Physical Chemistry C, 2016, 120, 18377-18385.	3.1	67
135	Combinatorial In Situ Photoelectron Spectroscopy Investigation of Sb₂Se₃/ZnS Heterointerfaces. Advanced Materials Interfaces, 2016, 3, 1600755.	3.7	28
136	Accelerated development of CuSbS₂ thin film photovoltaic device prototypes. Progress in Photovoltaics: Research and Applications, 2016, 24, 929-939.	8.1	74
137	Roadmap on optical energy conversion. Journal of Optics (United Kingdom), 2016, 18, 073004.	2.2	85
138	Design of nitride semiconductors for solar energy conversion. Journal of Materials Chemistry A, 2016, 4, 6742-6754.	10.3	145
139	Entropy-Driven Clustering in Tetrahedrally Bonded Multinary Materials. Physical Review Applied, 2015, 3, .	3.8	61
140	Effects of Disorder on Carrier Transport in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mrow><mml:msub><mml:mrow><mml:mi>Cu</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:mrow></mml:math>Physical Review Applied, 2015, 4, .	3.8	73
141	Thermal treatment improvement of CuSbS2 absorbers. , 2015, , .		4
142	Effects of low temperature annealing on the transport properties of zinc tin nitride. , 2015, , .		4
143	Extended antisite defects in tetrahedrally bonded semiconductors. Physical Review B, 2015, 92, .	3.2	17
144	Copper antimony chalcogenide thin film PV device development. , 2015, , .		1

#	Article	IF	Citations
145	CuSbSe₂photovoltaic devices with 3% efficiency. Applied Physics Express, 2015, 8, 082301.	2.4	81
146	Semiconducting properties of spinel tin nitride and other IV₃N₄ polymorphs. Journal of Materials Chemistry C, 2015, 3, 1389-1396.	5.5	49
147	Non-equilibrium synthesis, structure, and opto-electronic properties of Cu2â^'2x Zn x O alloys. Journal of Materials Science, 2015, 50, 1350-1357.	3.7	17
148	Design of Semiconducting Tetrahedral<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Mn</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn><mn mathvariant="normal">O</mml:mi></mml:mrow></mml:math>Alloys and Their Application to Solar Water Splitting. Physical Review X, 2015, 5, .	8.9	34
149	Non-equilibrium alloying controls optoelectronic properties in Cu2O thin films for photovoltaic absorber applications. Applied Physics Letters, 2015, 106, 123903.	3.3	26
150	Combinatorial insights into doping control and transport properties of zinc tin nitride. Journal of Materials Chemistry C, 2015, 3, 11017-11028.	5.5	128
151	Self-regulated growth and tunable properties of CuSbS2 solar absorbers. Solar Energy Materials and Solar Cells, 2015, 132, 499-506.	6.2	119
152	Composition Dependence of the Band Gap and Doping in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Cu</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">O</mml:mi></mml:mrow></mml:math>-Based Alloys as Predicted by an Extension of the Dilute-Defect Model. Physical Review Applied, 2014, 2, .	3.8	18
153	Control of the Electrical Properties in Spinel Oxides by Manipulating the Cation Disorder. Advanced Functional Materials, 2014, 24, 610-618.	14.9	109
154	Enhanced Electron Mobility Due to Dopantâ€Defect Pairing in Conductive ZnMgO. Advanced Functional Materials, 2014, 24, 2875-2882.	14.9	49
155	Sensitized Zincâ€“Cobaltâ€“Oxide Spinel p-Type Photoelectrode. Journal of Physical Chemistry C, 2014, 118, 25340-25349.	3.1	16
156	Non-equilibrium deposition of phase pure Cu2O thin films at reduced growth temperature. APL Materials, 2014, 2, .	5.1	55
157	Comparison of Cu<inf>2</inf>SnS<inf>3</inf> and CuSbS<inf>2</inf> as potential solar cell absorbers. , 2014, , .		5
158	Defect Tolerant Semiconductors for Solar Energy Conversion. Journal of Physical Chemistry Letters, 2014, 5, 1117-1125.	4.6	304
159	Thin film synthesis and properties of copper nitride, a metastable semiconductor. Materials Horizons, 2014, 1, 424-430.	12.2	116
160	A High-temperature, High-efficiency Solar Thermoelectric Generator Prototype. Energy Procedia, 2014, 49, 1460-1469.	1.8	60
161	Control of Doping in Cu₂SnS₃ through Defects and Alloying. Chemistry of Materials, 2014, 26, 4951-4959.	6.7	136
162	Experimental Synthesis and Properties of Metastable CuNbN₂ and Theoretical Extension to Other Ternary Copper Nitrides. Chemistry of Materials, 2014, 26, 4970-4977.	6.7	55

#	Article	IF	Citations
163	Evaluation of photovoltaic materials within the Cu-Sn-S family. Applied Physics Letters, 2013, 103, .	3.3	117
164	Strong optical absorption in CuTaN2 nitride delafossite. Energy and Environmental Science, 2013, 6, 2994.	30.8	42
165	Liâ€Doped Cr₂MnO₄: A New pâ€Type Transparent Conducting Oxide by Computational Materials Design. Advanced Functional Materials, 2013, 23, 5267-5276.	14.9	57
166	Development and application of an instrument for spatially resolved Seebeck coefficient measurements. Review of Scientific Instruments, 2013, 84, 053905.	1.3	34
167	Theoretical Prediction and Experimental Realization of New Stable Inorganic Materials Using the Inverse Design Approach. Journal of the American Chemical Society, 2013, 135, 10048-10054.	13.7	111
168	Combinatorial approach to correlations of properties in copper nitride. , 2013, , .		2
169	Non-equilibrium origin of high electrical conductivity in gallium zinc oxide thin films. Applied Physics Letters, 2013, 103, .	3.3	51
170	Cation off-stoichiometry leads to high<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-type conductivity and enhanced transparency in Co<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>ZnO<mml:math	3.2	73
171	Surface origin of high conductivities in undoped In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>In</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Thin Films. Physical Review Letters, 2012, 108, 016802.	7.8	111
172	Band-structure, optical properties, and defect physics of the photovoltaic semiconductor SnS. Applied Physics Letters, 2012, 100, .	3.3	382
173	Structural, Optical, and Transport Properties of Î±- and Î²-Ag₃VO₄. Chemistry of Materials, 2012, 24, 3346-3354.	6.7	29
174	Sorting Stable versus Unstable Hypothetical Compounds: The Case of Multiâ€Functional ABX Halfâ€Heusler Filled Tetrahedral Structures. Advanced Functional Materials, 2012, 22, 1425-1435.	14.9	107
175	Synthesis, structure, and optical properties of BiCuOCh (Ch=S, Se, and Te). Journal of Solid State Chemistry, 2012, 187, 15-19.	2.9	44
176	Sputtered nickel oxide thin film for efficient hole transport layer in polymerâ€“fullerene bulk-heterojunction organic solar cell. Thin Solid Films, 2012, 520, 3813-3818.	1.8	40
177	The origin of electrical property deterioration with increasing Mg concentration in ZnMgO:Ga. Thin Solid Films, 2012, 520, 3697-3702.	1.8	38
178	Inverse design approach to hole doping in ternary oxides: Enhancing<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-type conductivity in cobalt oxide spinels. Physical Review B, 2011, 84, .	3.2	81
179	Interdiffusion at the BaCuSeF/ZnTe interface. Thin Solid Films, 2011, 519, 7369-7373.	1.8	3
180	Pulsed laser deposition of BiCuOSe thin films. Applied Physics A: Materials Science and Processing, 2011, 102, 485-492.	2.3	23

#	Article	IF	Citations
181	Doping Rules and Doping Prototypes in A₂BO₄ Spinel Oxides. Advanced Functional Materials, 2011, 21, 4493-4501.	14.9	176
182	Tunable properties of wide-band gap p-type BaCu(Ch1â^'xChxâ€²)F (Ch = S, Se, Te) thin-film solid solutions. Thin Solid Films, 2010, 518, 5494-5500.	1.8	21
183	Band alignment at the BaCuSeF/ZnTe interface. Applied Physics Letters, 2010, 96, 162110.	3.3	9
184	Defect physics of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>BaCu</mml:mtext><mml:mi>C</mml:mi><mml:mi>h</mml:mi><mml:mtext>F</mml:mtext> ... -type. Physical Review B, 2010, 82, .	3.2	23
185	Electronic structure and excitonic absorption in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>BaCu</mml:mtext><mml:mi>C</mml:mi><mml:mi>h</mml:mi><mml:mtext>F</mml:mte	3.2	21
186	Electronic properties of BaCuChF (Ch=S,Se,Te) surfaces and BaCuSeF/ZnPc interfaces. Journal of Applied Physics, 2010, 107, .	2.5	12
187	Low-temperature, solution processing of TiO2 thin films and fabrication of multilayer dielectric optical elements. Solid State Sciences, 2009, 11, 1692-1699.	3.2	54
188	Thin film preparation and characterization of wide band gap Cu3TaQ4 (Q = S or Se) p-type semiconductors. Thin Solid Films, 2009, 517, 2473-2476.	1.8	35
189	Origin of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-type conduction in single-crystal<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>CuAlO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mm ... Physical Review B, 2009, 80, .	3.2	158
190	Study of Barrier Structures on the Base of Nickel Phthalocyanine Thin Films During the Interaction with the Ammonia Medium. Molecular Crystals and Liquid Crystals, 2008, 496, 131-137.	0.9	6