Zhubing He

List of Publications by Year
in descending order

124 papers	7,545 citations	57631 44 h-index	56606 83 g-index
126 all docs	126 docs citations	126 times ranked	9344 citing authors

#	Article	IF	Citations
1	Incorporation of Graphenes in Nanostructured TiO₂ Films <i>via</i> Molecular Grafting for Dye-Sensitized Solar Cell Application. ACS Nano, 2010, 4, 3482-3488.	7.3	471
2	Cesium Doped NiO<i>_x</i> as an Efficient Hole Extraction Layer for Inverted Planar Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700722.	10.2	353
3	Heterogeneous 2D/3D Tinâ€Halides Perovskite Solar Cells with Certified Conversion Efficiency Breaking 14%. Advanced Materials, 2021, 33, e2102055.	11.1	321
4	Moleculeâ€Doped Nickel Oxide: Verified Charge Transfer and Planar Inverted Mixed Cation Perovskite Solar Cell. Advanced Materials, 2018, 30, e1800515.	11.1	287
5	Understanding the Doping Effect on NiO: Toward Highâ€Performance Inverted Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1703519.	10.2	286
6	Dopantâ€Free Smallâ€Molecule Holeâ€Transporting Material for Inverted Perovskite Solar Cells with Efficiency Exceeding 21%. Advanced Materials, 2019, 31, e1902781.	11.1	268
7	Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803872.	10.2	236
8	Black Phosphorus Quantum Dots for Hole Extraction of Typical Planar Hybrid Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2017, 8, 591-598.	2.1	191
9	Metal Acetylacetonate Series in Interface Engineering for Full Lowâ€Temperatureâ€Processed, Highâ€Performance, and Stable Planar Perovskite Solar Cells with Conversion Efficiency over 16% on 1 cm² Scale. Advanced Materials, 2017, 29, 1603923.	11.1	190
10	Teaching an Old Anchoring Group New Tricks: Enabling Low-Cost, Eco-Friendly Hole-Transporting Materials for Efficient and Stable Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 16632-16643.	6.6	154
11	Novel Molecular Doping Mechanism for nâ€Doping of SnO₂ via Triphenylphosphine Oxide and Its Effect on Perovskite Solar Cells. Advanced Materials, 2019, 31, e1805944.	11.1	152
12	Printable Fabrication of a Fully Integrated and Selfâ€Powered Sensor System on Plastic Substrates. Advanced Materials, 2019, 31, e1804285.	11.1	148
13	Tin-Based Defects and Passivation Strategies in Tin-Related Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3752-3772.	8.8	143
14	Monolithic perovskite/organic tandem solar cells with 23.6% efficiency enabled by reduced voltage losses and optimized interconnecting layer. Nature Energy, 2022, 7, 229-237.	19.8	137
15	Large Stokes Shift and High Efficiency Luminescent Solar Concentrator Incorporated with CuInS2/ZnS Quantum Dots. Scientific Reports, 2016, 5, 17777.	1.6	136
16	Conjugated Polymerâ€"Assisted Grain Boundary Passivation for Efficient Inverted Planar Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1808855.	7.8	133
17	Perovskite solar cells - An overview of critical issues. Progress in Quantum Electronics, 2017, 53, 1-37.	3.5	132
18	Graphene sheets via microwave chemical vapor deposition. Chemical Physics Letters, 2009, 467, 361-364.	1.2	131

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19	A critical review on bismuth and antimony halide based perovskites and their derivatives for photovoltaic applications: recent advances and challenges. Journal of Materials Chemistry A, 2020, 8, 16166-16188.	5.2	130
20	Efficient planar antimony sulfide thin film photovoltaics with large grain and preferential growth. Solar Energy Materials and Solar Cells, 2016, 157, 887-893.	3.0	129
21	Magnetic-Field-Induced Phase-SelectiveÂSynthesis of Ferrosulfide Microrods by a Hydrothermal Process: Microstructure Control and Magnetic Properties. Advanced Functional Materials, 2006, 16, 1105-1111.	7.8	121
22	Efficient and Stable FASnI₃ Perovskite Solar Cells with Effective Interface Modulation by Lowâ€Dimensional Perovskite Layer. ChemSusChem, 2019, 12, 5007-5014.	3.6	111
23	Photoconductivity of a Single Smallâ€Molecule Organic Nanowire. Advanced Materials, 2008, 20, 2427-2432.	11.1	108
24	Self-Powered and Broadband Lead-Free Inorganic Perovskite Photodetector with High Stability. ACS Applied Materials & Interfaces, 2020, 12, 30530-30537.	4.0	101
25	ZnO nanowires array p-n homojunction and its application as a visible-blind ultraviolet photodetector. Applied Physics Letters, 2010, 96, .	1.5	93
26	High-Quality Graphenes via a Facile Quenching Method for Field-Effect Transistors. Nano Letters, 2009, 9, 1374-1377.	4.5	92
27	Improving Efficiency and Stability of Perovskite Solar Cells Enabled by A Near-Infrared-Absorbing Moisture Barrier. Joule, 2020, 4, 1575-1593.	11.7	88
28	Alloy-induced phase transition and enhanced photovoltaic performance: the case of Cs₃Bi₂I_{9âˆ’x}Br_x perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 8818-8825.	5.2	87
29	Silicon nanowire sensors for Hg2+ and Cd2+ ions. Applied Physics Letters, 2009, 94, .	1.5	83
30	Impact and Origin of Interface States in MOS Capacitor with Monolayer MoS2 and HfO2 High-k Dielectric. Scientific Reports, 2017, 7, 40669.	1.6	83
31	Efficient and stable TiO2/Sb2S3 planar solar cells from absorber crystallization and Se-atmosphere annealing. Materials Today Energy, 2017, 3, 15-23.	2.5	80
32	Tuning Electrical and Photoelectrical Properties of CdSe Nanowires via Indium Doping. Small, 2009, 5, 345-350.	5.2	78
33	Amino Acids Controlled Growth of Shuttle-Like Scrolled Tellurium Nanotubes and Nanowires with Sharp Tips. Chemistry of Materials, 2005, 17, 2785-2788.	3.2	72
34	Tunable Electrical Properties of Silicon Nanowires via Surface-Ambient Chemistry. ACS Nano, 2010, 4, 3045-3052.	7.3	72
35	Oriented Crystallization of Mixedâ€Cation Tin Halides for Highly Efficient and Stable Leadâ€Free Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2002230.	7.8	64
36	N-type conjugated polymer as efficient electron transport layer for planar inverted perovskite solar cells with power conversion efficiency of 20.86%. Nano Energy, 2020, 68, 104363.	8.2	58

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37	Large-scale planar and spherical light-emitting diodes based on arrays of perovskite quantum wires. Nature Photonics, 2022, 16, 284-290.	15.6	56
38	Engineering of dendritic dopant-free hole transport molecules: enabling ultrahigh fill factor in perovskite solar cells with optimized dendron construction. Science China Chemistry, 2021, 64, 41-51.	4.2	55
39	Synthesis of Hierarchical Porous ZnO Disklike Nanostructures for Improved Photovoltaic Properties of Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 13157-13161.	1.5	53
40	Side-Chain Engineering of Donorâ€“Acceptor Conjugated Small Molecules As Dopant-Free Hole-Transport Materials for Efficient Normal Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 48556-48563.	4.0	49
41	Enhanced efficiency and stability in Sn-based perovskite solar cells with secondary crystallization growth. Journal of Energy Chemistry, 2021, 54, 414-421.	7.1	49
42	Monolayer W<i>_x</i>Mo_{1âˆ’}<i>_x</i>S₂ Grown by Atmospheric Pressure Chemical Vapor Deposition: Bandgap Engineering and Field Effect Transistors. Advanced Functional Materials, 2017, 27, 1606469.	7.8	48
43	Formamidiniumâ€Based Lead Halide Perovskites: Structure, Properties, and Fabrication Methodologies. Small Methods, 2018, 2, 1700387.	4.6	48
44	High Short-Circuit Current Density via Integrating the Perovskite and Ternary Organic Bulk Heterojunction. ACS Energy Letters, 2019, 4, 2535-2536.	8.8	47
45	High-performance, fully transparent, and flexible zinc-doped indium oxide nanowire transistors. Applied Physics Letters, 2009, 94, .	1.5	46
46	Selective growth of catalyst-free ZnO nanowire arrays on Al:ZnO for device application. Applied Physics Letters, 2007, 91, .	1.5	45
47	Low Cost and Solution Processed Interfacial Layer Based on Poly(2-ethyl-2-oxazoline) Nanodots for Inverted Perovskite Solar Cells. Chemistry of Materials, 2016, 28, 4879-4883.	3.2	45
48	Synergy Effect of Both 2,2,2â€Trifluoroethylamine Hydrochloride and SnF₂ for Highly Stable FASnI_{3âˆ’x}Cl_x Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800290.	3.1	45
49	Interfacial stabilization for inverted perovskite solar cells with long-term stability. Science Bulletin, 2021, 66, 991-1002.	4.3	45
50	A low-temperature-annealed and UV-ozone-enhanced combustion derived nickel oxide hole injection layer for flexible quantum dot light-emitting diodes. Nanoscale, 2019, 11, 1021-1028.	2.8	42
51	Mixed Spacer Cation Stabilization of Blueâ€Emitting <i>n</i> = 2 Ruddlesdenâ€“Popper Organicâ€“Inorganic Halide Perovskite Films. Advanced Optical Materials, 2020, 8, 1901679.	3.6	41
52	p-type conduction in arsenic-doped ZnSe nanowires. Applied Physics Letters, 2009, 95, 033117.	1.5	40
53	Tungsten-based highly selective solar absorber using simple nanodisk array. Optics Express, 2017, 25, A1072.	1.7	40
54	Stabilizing n-type hetero-junctions for NiO_x based inverted planar perovskite solar cells with an efficiency of 21.6%. Journal of Materials Chemistry A, 2020, 8, 1865-1874.	5.2	40

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55	Wideâ€Range Tunable Fluorescence Lifetime and Ultrabright Luminescence of Euâ€Grafted Plasmonic Coreâ€“Shell Nanoparticles for Multiplexing. Small, 2016, 12, 397-404.	5.2	39
56	Surface-Enhanced Raman Scattering from Uniform Gold and Silver Nanoparticle-Coated Substrates. Journal of Physical Chemistry C, 2009, 113, 9191-9196.	1.5	38
57	Lanthanide-Induced Photoluminescence in Lead-Free Cs₂AgBiBr₆ Bulk Perovskite: Insights from Optical and Theoretical Investigations. Journal of Physical Chemistry Letters, 2020, 11, 8893-8900.	2.1	38
58	Coupling halide perovskites with different materials: From doping to nanocomposites, beyond photovoltaics. Progress in Materials Science, 2020, 110, 100639.	16.0	38
59	Complex PbTe hopper (skeletal) crystals with high hierarchy. Chemical Communications, 2005, , 5802.	2.2	36
60	Black Phosphorus Based Field Effect Transistors with Simultaneously Achieved Near Ideal Subthreshold Swing and High Hole Mobility at Room Temperature. Scientific Reports, 2016, 6, 24920.	1.6	35
61	Large Scale Synthesis of Tellurium Nanoribbons in Tetraethylene Pentamine Aqueous Solution and the Stability of Tellurium Nanoribbons in Ethanol and Water. Journal of Physical Chemistry B, 2005, 109, 22740-22745.	1.2	34
62	Photon-generated carriers excite superoxide species inducing long-term photoluminescence enhancement of MAPbI₃ perovskite single crystals. Journal of Materials Chemistry A, 2017, 5, 12048-12053.	5.2	34
63	Close-loop recycling of perovskite solar cells through dissolution-recrystallization of perovskite by butylamine. Cell Reports Physical Science, 2021, 2, 100341.	2.8	32
64	Low temperature processed, high-performance and stable NiOx based inverted planar perovskite solar cells via a poly(2-ethyl-2-oxazoline) nanodots cathode electron-extraction layer. Materials Today Energy, 2016, 1-2, 1-10.	2.5	30
65	The Impact of Hybrid Compositional Film/Structure on Organicâ€“Inorganic Perovskite Solar Cells. Nanomaterials, 2018, 8, 356.	1.9	30
66	Single zinc-doped indium oxide nanowire as driving transistor for organic light-emitting diode. Applied Physics Letters, 2008, 92, .	1.5	29
67	Charge-transfer induced multifunctional BCP:Ag complexes for semi-transparent perovskite solar cells with a record fill factor of 80.1%. Journal of Materials Chemistry A, 2021, 9, 12009-12018.	5.2	29
68	Perovskite Solar Cells: Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells (Adv. Energy Mater. 19/2019). Advanced Energy Materials, 2019, 9, 1970068.	10.2	28
69	Imide-functionalized acceptorâ€“acceptor copolymers as efficient electron transport layers for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 13754-13762.	5.2	28
70	Moth eyeâ€inspired highly efficient, robust, and neutralâ€colored semitransparent perovskite solar cells for buildingâ€integrated photovoltaics. EcoMat, 2021, 3, e12117.	6.8	28
71	An Efficient and Effective Design of InP Nanowires for Maximal Solar Energy Harvesting. Nanoscale Research Letters, 2017, 12, 604.	3.1	27
72	Promising ITO-free perovskite solar cells with WO₃â€“Agâ€“SnO₂as transparent conductive oxide. Journal of Materials Chemistry A, 2018, 6, 19330-19337.	5.2	27

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73	Defining the composition and electronic structure of large-scale and single-crystalline like Cs2AgBiBr6 films fabricated by capillary-assisted dip-coating method. Materials Today Energy, 2019, 12, 186-197.	2.5	27
74	Photoconductive Properties of Selenium Nanowire Photodetectors. Journal of Nanoscience and Nanotechnology, 2009, 9, 6292-6298.	0.9	26
75	Highâ€Performance Semitransparent and Bifacial Perovskite Solar Cells with MoO<i>_x</i>/Ag/WO<i>_x</i> as the Rear Transparent Electrode. Advanced Materials Interfaces, 2020, 7, 2000591.	1.9	26
76	System performance and economic assessment of a thermal energy storage based air-conditioning unit for transport applications. Applied Energy, 2019, 251, 113254.	5.1	25
77	Band alignment of HfO2/multilayer MoS2 interface determined by <i>x</i>-ray photoelectron spectroscopy: Effect of CHF3 treatment. Applied Physics Letters, 2015, 107, .	1.5	24
78	High-Performance CdSe:In Nanowire Field-Effect Transistors Based on Top-Gate Configuration with High-Îº Non-Oxide Dielectrics. Journal of Physical Chemistry C, 2010, 114, 4663-4668.	1.5	21
79	Band alignment of atomic layer deposited high-k Al2O3/multilayer MoS2 interface determined by X-ray photoelectron spectroscopy. Journal of Alloys and Compounds, 2015, 650, 502-507.	2.8	21
80	Coaxial nanocables of p-type zinc telluride nanowires sheathed with silicon oxide: synthesis, characterization and properties. Nanotechnology, 2009, 20, 455702.	1.3	20
81	Dopantâ€Free Hole Transporting Molecules for Highly Efficient Perovskite Photovoltaic with Strong Interfacial Interaction. Solar Rrl, 2019, 3, 1900319.	3.1	20
82	Low temperature carrier transport study of monolayer MoS2 field effect transistors prepared by chemical vapor deposition under an atmospheric pressure. Journal of Applied Physics, 2015, 118, .	1.1	19
83	High-temperature magnetism and crystallography of a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>YCrO</mml:mi><mml:mn>3</mml:mn></mml:msub></m single crystal. Physical Review B, 2020, 101, .	1.1	19
84	Backbone Coplanarity Tuning of 1,4-Di(3-alkoxy-2-thienyl)-2,5-difluorophenylene-Based Wide Bandgap Polymers for Efficient Organic Solar Cells Processed from Nonhalogenated Solvent. ACS Applied Materials & Interfaces, 2019, 11, 31119-31128.	4.0	18
85	A novel volumetric absorber integrated with low-cost D-Mannitol and acetylene-black nanoparticles for solar-thermal-electricity generation. Solar Energy Materials and Solar Cells, 2020, 207, 110366.	3.0	18
86	The Nonâ€Innocent Role of Holeâ€Transporting Materials in Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100514.	3.1	18
87	Vertical Heterogeneous Integration of Metal Halide Perovskite Quantum-Wires/Nanowires for Flexible Narrowband Photodetectors. Nano Letters, 2022, 22, 3062-3070.	4.5	18
88	Enhanced DSSCs performance of TiO2 nanostructure by surface passivation layers. Materials Research Bulletin, 2018, 99, 491-495.	2.7	17
89	Ruthenium acetylacetonate in interface engineering for high performance planar hybrid perovskite solar cells. Optics Express, 2017, 25, A253.	1.7	16
90	Inverted planar organic-inorganic hybrid perovskite solar cells with NiO x hole-transport layers as light-in window. Applied Surface Science, 2018, 451, 325-332.	3.1	15

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91	General Method To Define the Type of Carrier Transport Materials for Perovskite Solar Cells via Kelvin Probes Microscopy. ACS Applied Energy Materials, 2018, 1, 3984-3991.	2.5	15
92	Sputtered Indiumâ€Zinc Oxide for Buffer Layer Free Semitransparent Perovskite Photovoltaic Devices in Perovskite/Silicon 4Tâ€Tandem Solar Cells. Advanced Materials Interfaces, 2021, 8, 2001604.	1.9	15
93	Dialkylamines Driven Two-Step Recovery of NiO_{<i>x</i>}/ITO Substrates for High-Reproducibility Recycling of Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 4735-4741.	2.1	15
94	Efficient Perovskite Solar Cells with a Novel Aggregationâ€Induced Emission Molecule as Holeâ€Transport Material. Solar Rrl, 2020, 4, 1900189.	3.1	14
95	Hysteresis in In2O3:Zn nanowire field-effect transistor and its application as a nonvolatile memory device. Applied Physics Letters, 2008, 93, 183111.	1.5	13
96	Synthesis of Lead-Free Perovskite Films by Combinatorial Evaporation: Fast Processes for Screening Different Precursor Combinations. Chemistry of Materials, 2017, 29, 9946-9953.	3.2	13
97	Supersmooth Ta₂O₅/Ag/Polyetherimide Film as the Rear Transparent Electrode for High Performance Semitransparent Perovskite Solar Cells. Advanced Optical Materials, 2019, 7, 1801409.	3.6	13
98	Crossbar heterojunction field effect transistors of CdSe:In nanowires and Si nanoribbons. Applied Physics Letters, 2009, 95, .	1.5	11
99	Influence of mixed organic cations on the structural and optical properties of lead tri-iodide perovskites. Nanoscale, 2019, 11, 5215-5221.	2.8	11
100	Multifunctional atomic force probes for Mn2+ doped perovskite solar cells. Journal of Power Sources, 2019, 425, 130-137.	4.0	11
101	Piezoelectric Energy Harvester Based on LiNbO3 Thin Films. Materials, 2020, 13, 3984.	1.3	11
102	Investigation on the role of amines in the liquefaction and recrystallization process of MAPbI₃ perovskite. Journal of Materials Chemistry A, 2020, 8, 13585-13593.	5.2	11
103	Metal oxide charge transport layers in perovskite solar cellsâ€”optimising low temperature processing and improving the interfaces towards low temperature processed, efficient and stable devices. JPhys Energy, 2021, 3, 012004.	2.3	11
104	Band alignment of ZnO/multilayer MoS2 interface determined by <i>x</i>-ray photoelectron spectroscopy. Applied Physics Letters, 2016, 109, .	1.5	10
105	Understanding the Impact of Cu-In-Ga-S Nanoparticles Compactness on Holes Transfer of Perovskite Solar Cells. Nanomaterials, 2019, 9, 286.	1.9	9
106	Oxygen Pressure Influence on Properties of Nanocrystalline LiNbO3 Films Grown by Laser Ablation. Nanomaterials, 2020, 10, 1371.	1.9	9
107	Crystalline and magnetic structures, magnetization, heat capacity, and anisotropic magnetostriction effect in a yttrium-chromium oxide. Physical Review Materials, 2020, 4, .	0.9	9
108	Enhancing the Efficiency and Stability of NiO_{<i>x</i>}-Based Silicon Photoanode via Interfacial Engineering. ACS Applied Energy Materials, 2019, 2, 6883-6890.	2.5	7

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109	Degradation induced lattice anchoring self-passivation in CsPbI_{3â^'x}Br_x. Journal of Materials Chemistry A, 2020, 8, 9963-9969.	5.2	7
110	Interfacialâ€Fieldâ€Induced Increase of the Structural Phase Transition Temperature in Organicâ€"Inorganic Perovskite Crystals Coated with ZnO Nanoshell. Advanced Materials Interfaces, 2018, 5, 1800301.	1.9	6
111	A weak Galerkin method for diffraction gratings. Applicable Analysis, 2017, 96, 190-214.	0.6	5
112	Field Electron Emission of ZnO Nanowire Pyramidal Bundle Arrays. Journal of Nanoscience and Nanotechnology, 2010, 10, 2360-2365.	0.9	4
113	Near-perfect absorber of infrared radiation based on Au nanorod arrays. Journal of Nanophotonics, 2017, 11, 016018.	0.4	4
114	Spontaneous Formation of Nanocrystals in Amorphous Matrix: Alternative Pathway to Bright Emission in Quasiâ€2D Perovskites. Advanced Optical Materials, 2019, 7, 1900269.	3.6	3
115	Growth, evolution and photocatalytic activity of ZnO nano backâ€tapered arrays. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 94-100.	0.8	2
116	Catalytic performance of Fe3O4nanoparticles for cyclocondensation synthesis of thiacrown ethers. Materials Research Express, 2015, 2, 015010.	0.8	2
117	Perovskite Solar Cells: Sputtered Indiumâ€Zinc Oxide for Buffer Layer Free Semitransparent Perovskite Photovoltaic Devices in Perovskite/Silicon 4Tâ€Tandem Solar Cells (Adv. Mater. Interfaces 6/2021). Advanced Materials Interfaces, 2021, 8, 2170029.	1.9	2
118	Thermal and Thermochemical Energy Conversion and Storage. ACS Symposium Series, 2020, , 257-301.	0.5	1
119	High transmittance inorganic semiconductors as a hole-transport window for planar inverted perovskite solar cells. , 2017, , .		0
120	Structural Phase Transition: Interfacial-Field-Induced Increase of the Structural Phase Transition Temperature in Organic-Inorganic Perovskite Crystals Coated with ZnO Nanoshell (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 29	1.9	0
121	Ruddlesdenâ€"Popper Perovskites: Spontaneous Formation of Nanocrystals in Amorphous Matrix: Alternative Pathway to Bright Emission in Quasiâ€2D Perovskites (Advanced Optical Materials 19/2019). Advanced Optical Materials, 2019, 7, 1970074.	3.6	0
122	Efficient planar antimony sulfide thin film photovoltaics with large grain and preferential growth. , 2016, , .		0
123	Broadband Polarization-Insensitive Absorption In Solar Spectrum Enhanced By Magnetic Polaritons. , 2017, , .		0
124	Stability of perovskite solar cells on flexible substrates. , 2018, , .		0