Zhubing He

List of Publications by Year
in descending order

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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	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
2	Large-scale planar and spherical light-emitting diodes based on arrays of perovskite quantum wires. Nature Photonics, 2022, 16, 284-290.	15.6	56
3	Vertical Heterogeneous Integration of Metal Halide Perovskite Quantum-Wires/Nanowires for Flexible Narrowband Photodetectors. Nano Letters, 2022, 22, 3062-3070.	4.5	18
4	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
5	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
6	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
7	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
8	Close-loop recycling of perovskite solar cells through dissolution-recrystallization of perovskite by butylamine. Cell Reports Physical Science, 2021, 2, 100341.	2.8	32
9	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
10	Interfacial stabilization for inverted perovskite solar cells with long-term stability. Science Bulletin, 2021, 66, 991-1002.	4.3	45
11	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
12	Moth eyeâ€inspired highly efficient, robust, and neutralâ€colored semitransparent perovskite solar cells for buildingâ€integrated photovoltaics. EcoMat, 2021, 3, e12117.	6.8	28
13	Heterogeneous 2D/3D Tinâ€Halides Perovskite Solar Cells with Certified Conversion Efficiency Breaking 14%. Advanced Materials, 2021, 33, e2102055.	11.1	321
14	The Nonâ€Innocent Role of Holeâ€Transporting Materials in Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100514.	3.1	18
15	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
16	Efficient Perovskite Solar Cells with a Novel Aggregationâ€Induced Emission Molecule as Holeâ€Transport Material. Solar Rrl, 2020, 4, 1900189.	3.1	14
17	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
18	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

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19	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
20	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
21	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
22	Improving Efficiency and Stability of Perovskite Solar Cells Enabled by A Near-Infrared-Absorbing Moisture Barrier. Joule, 2020, 4, 1575-1593.	11.7	88
23	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
24	Thermal and Thermochemical Energy Conversion and Storage. ACS Symposium Series, 2020, , 257-301.	0.5	1
25	Tin-Based Defects and Passivation Strategies in Tin-Related Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3752-3772.	8.8	143
26	Oxygen Pressure Influence on Properties of Nanocrystalline LiNbO3 Films Grown by Laser Ablation. Nanomaterials, 2020, 10, 1371.	1.9	9
27	Piezoelectric Energy Harvester Based on LiNbO3 Thin Films. Materials, 2020, 13, 3984.	1.3	11
28	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
29	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
30	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
31	Self-Powered and Broadband Lead-Free Inorganic Perovskite Photodetector with High Stability. ACS Applied Materials & Interfaces, 2020, 12, 30530-30537.	4.0	101
32	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
33	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
34	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
35	Coupling halide perovskites with different materials: From doping to nanocomposites, beyond photovoltaics. Progress in Materials Science, 2020, 110, 100639.	16.0	38
36	Degradation induced lattice anchoring self-passivation in CsPbI_{3â^'x}Br_x. Journal of Materials Chemistry A, 2020, 8, 9963-9969.	5.2	7

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37	Crystalline and magnetic structures, magnetization, heat capacity, and anisotropic magnetostriction effect in a yttrium-chromium oxide. Physical Review Materials, 2020, 4, .	0.9	9
38	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
39	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
40	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
41	Dopantâ€Free Smallâ€Molecule Holeâ€Transporting Material for Inverted Perovskite Solar Cells with Efficiency Exceeding 21%. Advanced Materials, 2019, 31, e1902781.	11.1	268
42	Dopantâ€Free Hole Transporting Molecules for Highly Efficient Perovskite Photovoltaic with Strong Interfacial Interaction. Solar Rrl, 2019, 3, 1900319.	3.1	20
43	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
44	Efficient and Stable FASnI₃ Perovskite Solar Cells with Effective Interface Modulation by Lowâ€Dimensional Perovskite Layer. ChemSusChem, 2019, 12, 5007-5014.	3.6	111
45	High Short-Circuit Current Density via Integrating the Perovskite and Ternary Organic Bulk Heterojunction. ACS Energy Letters, 2019, 4, 2535-2536.	8.8	47
46	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
47	Influence of mixed organic cations on the structural and optical properties of lead tri-iodide perovskites. Nanoscale, 2019, 11, 5215-5221.	2.8	11
48	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
49	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
50	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
51	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
52	Conjugated Polymerâ€“Assisted Grain Boundary Passivation for Efficient Inverted Planar Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1808855.	7.8	133
53	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
54	Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803872.	10.2	236

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55	Multifunctional atomic force probes for Mn2+ doped perovskite solar cells. Journal of Power Sources, 2019, 425, 130-137.	4.0	11
56	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
57	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
58	Understanding the Impact of Cu-In-Ga-S Nanoparticles Compactness on Holes Transfer of Perovskite Solar Cells. Nanomaterials, 2019, 9, 286.	1.9	9
59	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
60	Printable Fabrication of a Fully Integrated and Selfâ€Powered Sensor System on Plastic Substrates. Advanced Materials, 2019, 31, e1804285.	11.1	148
61	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
62	Moleculeâ€Doped Nickel Oxide: Verified Charge Transfer and Planar Inverted Mixed Cation Perovskite Solar Cell. Advanced Materials, 2018, 30, e1800515.	11.1	287
63	Understanding the Doping Effect on NiO: Toward Highâ€Performance Inverted Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1703519.	10.2	286
64	Enhanced DSSCs performance of TiO2 nanostructure by surface passivation layers. Materials Research Bulletin, 2018, 99, 491-495.	2.7	17
65	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
66	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
67	The Impact of Hybrid Compositional Film/Structure on Organicâ€“Inorganic Perovskite Solar Cells. Nanomaterials, 2018, 8, 356.	1.9	30
68	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
69	Formamidiniumâ€Based Lead Halide Perovskites: Structure, Properties, and Fabrication Methodologies. Small Methods, 2018, 2, 1700387.	4.6	48
70	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
71	Stability of perovskite solar cells on flexible substrates. , 2018, , .		0
72	A weak Galerkin method for diffraction gratings. Applicable Analysis, 2017, 96, 190-214.	0.6	5

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73	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
74	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
75	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
76	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
77	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
78	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
79	Perovskite solar cells - An overview of critical issues. Progress in Quantum Electronics, 2017, 53, 1-37.	3.5	132
80	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
81	Near-perfect absorber of infrared radiation based on Au nanorod arrays. Journal of Nanophotonics, 2017, 11, 016018.	0.4	4
82	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
83	Ruthenium acetylacetonate in interface engineering for high performance planar hybrid perovskite solar cells. Optics Express, 2017, 25, A253.	1.7	16
84	Tungsten-based highly selective solar absorber using simple nanodisk array. Optics Express, 2017, 25, A1072.	1.7	40
85	High transmittance inorganic semiconductors as a hole-transport window for planar inverted perovskite solar cells. , 2017, , .		0
86	An Efficient and Effective Design of InP Nanowires for Maximal Solar Energy Harvesting. Nanoscale Research Letters, 2017, 12, 604.	3.1	27
87	Broadband Polarization-Insensitive Absorption In Solar Spectrum Enhanced By Magnetic Polaritons. , 2017, , .		0
88	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
89	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
90	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

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91	Large Stokes Shift and High Efficiency Luminescent Solar Concentrator Incorporated with CuInS2/ZnS Quantum Dots. Scientific Reports, 2016, 5, 17777.	1.6	136
92	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
93	Band alignment of ZnO/multilayer MoS2 interface determined by <i>x</i>-ray photoelectron spectroscopy. Applied Physics Letters, 2016, 109, .	1.5	10
94	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
95	Efficient planar antimony sulfide thin film photovoltaics with large grain and preferential growth. , 2016, , .		0
96	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
97	Catalytic performance of Fe3O4nanoparticles for cyclocondensation synthesis of thiacrown ethers. Materials Research Express, 2015, 2, 015010.	0.8	2
98	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
99	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
100	Field Electron Emission of ZnO Nanowire Pyramidal Bundle Arrays. Journal of Nanoscience and Nanotechnology, 2010, 10, 2360-2365.	0.9	4
101	ZnO nanowires array p-n homojunction and its application as a visible-blind ultraviolet photodetector. Applied Physics Letters, 2010, 96, .	1.5	93
102	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
103	Tunable Electrical Properties of Silicon Nanowires via Surface-Ambient Chemistry. ACS Nano, 2010, 4, 3045-3052.	7.3	72
104	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
105	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
106	High-performance, fully transparent, and flexible zinc-doped indium oxide nanowire transistors. Applied Physics Letters, 2009, 94, .	1.5	46
107	p-type conduction in arsenic-doped ZnSe nanowires. Applied Physics Letters, 2009, 95, 033117.	1.5	40
108	Silicon nanowire sensors for Hg2+ and Cd2+ ions. Applied Physics Letters, 2009, 94, .	1.5	83

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109	Crossbar heterojunction field effect transistors of CdSe:In nanowires and Si nanoribbons. Applied Physics Letters, 2009, 95, .	1.5	11
110	Photoconductive Properties of Selenium Nanowire Photodetectors. Journal of Nanoscience and Nanotechnology, 2009, 9, 6292-6298.	0.9	26
111	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
112	Tuning Electrical and Photoelectrical Properties of CdSe Nanowires via Indium Doping. Small, 2009, 5, 345-350.	5.2	78
113	Graphene sheets via microwave chemical vapor deposition. Chemical Physics Letters, 2009, 467, 361-364.	1.2	131
114	Surface-Enhanced Raman Scattering from Uniform Gold and Silver Nanoparticle-Coated Substrates. Journal of Physical Chemistry C, 2009, 113, 9191-9196.	1.5	38
115	High-Quality Graphenes via a Facile Quenching Method for Field-Effect Transistors. Nano Letters, 2009, 9, 1374-1377.	4.5	92
116	Coaxial nanocables of p-type zinc telluride nanowires sheathed with silicon oxide: synthesis, characterization and properties. Nanotechnology, 2009, 20, 455702.	1.3	20
117	Photoconductivity of a Single Smallâ€Molecule Organic Nanowire. Advanced Materials, 2008, 20, 2427-2432.	11.1	108
118	Single zinc-doped indium oxide nanowire as driving transistor for organic light-emitting diode. Applied Physics Letters, 2008, 92, .	1.5	29
119	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
120	Selective growth of catalyst-free ZnO nanowire arrays on Al:ZnO for device application. Applied Physics Letters, 2007, 91, .	1.5	45
121	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
122	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
123	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
124	Complex PbTe hopper (skeletal) crystals with high hierarchy. Chemical Communications, 2005, , 5802.	2.2	36