Mercouri G Kanatzidis

List of Publications by Year
in descending order

914 papers	120,883 citations	135 159 h-index	182 318 g-index
929 all docs	929 docs citations	929 times ranked	51684 citing authors

#	Article	IF	Citations
1	Semiconducting Tin and Lead Iodide Perovskites with Organic Cations: Phase Transitions, High Mobilities, and Near-Infrared Photoluminescent Properties. Inorganic Chemistry, 2013, 52, 9019-9038.	1.9	4,516
2	Ultralow thermal conductivity and high thermoelectric figure of merit in SnSe crystals. Nature, 2014, 508, 373-377.	13.7	3,963
3	High-performance bulk thermoelectrics with all-scale hierarchical architectures. Nature, 2012, 489, 414-418.	13.7	3,767
4	Liquid Exfoliation of Layered Materials. Science, 2013, 340, .	6.0	3,109
5	High-efficiency two-dimensional Ruddlesdenâ€“Popper perovskite solar cells. Nature, 2016, 536, 312-316.	13.7	2,767
6	Cubic AgPbmSbTe2+m: Bulk Thermoelectric Materials with High Figure of Merit. Science, 2004, 303, 818-821.	6.0	2,745
7	Lead-free solid-state organicâ€“inorganic halide perovskite solar cells. Nature Photonics, 2014, 8, 489-494.	15.6	2,410
8	New and Old Concepts in Thermoelectric Materials. Angewandte Chemie - International Edition, 2009, 48, 8616-8639.	7.2	1,993
9	2D Homologous Perovskites as Light-Absorbing Materials for Solar Cell Applications. Journal of the American Chemical Society, 2015, 137, 7843-7850.	6.6	1,818
10	Rationally Designing High-Performance Bulk Thermoelectric Materials. Chemical Reviews, 2016, 116, 12123-12149.	23.0	1,624
11	All-solid-state dye-sensitized solar cells with high efficiency. Nature, 2012, 485, 486-489.	13.7	1,608
12	Ruddlesdenâ€“Popper Hybrid Lead Iodide Perovskite 2D Homologous Semiconductors. Chemistry of Materials, 2016, 28, 2852-2867.	3.2	1,607
13	Ultrahigh power factor and thermoelectric performance in hole-doped single-crystal SnSe. Science, 2016, 351, 141-144.	6.0	1,594
14	Beyond fossil fuelâ€“driven nitrogen transformations. Science, 2018, 360, .	6.0	1,379
15	Crystal Growth of the Perovskite Semiconductor CsPbBr₃: A New Material for High-Energy Radiation Detection. Crystal Growth and Design, 2013, 13, 2722-2727.	1.4	1,234
16	Anomalous Band Gap Behavior in Mixed Sn and Pb Perovskites Enables Broadening of Absorption Spectrum in Solar Cells. Journal of the American Chemical Society, 2014, 136, 8094-8099.	6.6	1,234
17	Nanostructured Thermoelectrics: Big Efficiency Gains from Small Features. Advanced Materials, 2010, 22, 3970-3980.	11.1	1,220
18	Low-temperature fabrication of high-performance metal oxide thin-film electronics via combustion processing. Nature Materials, 2011, 10, 382-388.	13.3	1,093

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19	Nanostructured Thermoelectrics: The New Paradigm?. Chemistry of Materials, 2010, 22, 648-659.	3.2	1,002
20	Two-Dimensional Hybrid Halide Perovskites: Principles and Promises. Journal of the American Chemical Society, 2019, 141, 1171-1190.	6.6	999
21	Strained endotaxial nanostructures with high thermoelectric figure of merit. Nature Chemistry, 2011, 3, 160-166.	6.6	911
22	CsSnI₃: Semiconductor or Metal? High Electrical Conductivity and Strong Near-Infrared Photoluminescence from a Single Material. High Hole Mobility and Phase-Transitions. Journal of the American Chemical Society, 2012, 134, 8579-8587.	6.6	894
23	The panoscopic approach to high performance thermoelectrics. Energy and Environmental Science, 2014, 7, 251-268.	15.6	834
24	CsBi4Te6: A High-Performance Thermoelectric Material for Low-Temperature Applications. Science, 2000, 287, 1024-1027.	6.0	827
25	Design of active and stable Coâ€"Moâ€"Sx chalcogels as pH-universal catalysts for the hydrogen evolution reaction. Nature Materials, 2016, 15, 197-203.	13.3	825
26	Hybrid Germanium Iodide Perovskite Semiconductors: Active Lone Pairs, Structural Distortions, Direct and Indirect Energy Gaps, and Strong Nonlinear Optical Properties. Journal of the American Chemical Society, 2015, 137, 6804-6819.	6.6	710
27	Prospects for low-toxicity lead-free perovskite solar cells. Nature Communications, 2019, 10, 965.	5.8	695
28	Hybrid Dionâ€"Jacobson 2D Lead Iodide Perovskites. Journal of the American Chemical Society, 2018, 140, 3775-3783.	6.6	686
29	Hierarchical Nanoassembly of MoS₂/Co₉S₈/Ni₃S₂/Ni as a Highly Efficient Electrocatalyst for Overall Water Splitting in a Wide pH Range. Journal of the American Chemical Society, 2019, 141, 10417-10430.	6.6	653
30	Thinking Like a Chemist: Intuition in Thermoelectric Materials. Angewandte Chemie - International Edition, 2016, 55, 6826-6841.	7.2	639
31	The Renaissance of Halide Perovskites and Their Evolution as Emerging Semiconductors. Accounts of Chemical Research, 2015, 48, 2791-2802.	7.6	611
32	Solvent-Mediated Crystallization of CH₃NH₃SnI₃ Films for Heterojunction Depleted Perovskite Solar Cells. Journal of the American Chemical Society, 2015, 137, 11445-11452.	6.6	598
33	Metal Chalcogenides: A Rich Source of Nonlinear Optical Materials. Chemistry of Materials, 2014, 26, 849-869.	3.2	569
34	Highly Selective and Efficient Removal of Heavy Metals by Layered Double Hydroxide Intercalated with the MoS₄^{2â€"} Ion. Journal of the American Chemical Society, 2016, 138, 2858-2866.	6.6	563
35	Air-Stable Molecular Semiconducting Iodosalts for Solar Cell Applications: Cs₂SnI₆ as a Hole Conductor. Journal of the American Chemical Society, 2014, 136, 15379-15385.	6.6	560
36	Light-induced lattice expansion leads to high-efficiency perovskite solar cells. Science, 2018, 360, 67-70.	6.0	554

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37	High Thermoelectric Performance of p-Type SnTe via a Synergistic Band Engineering and Nanostructuring Approach. Journal of the American Chemical Society, 2014, 136, 7006-7017.	6.6	553
38	Anharmonicity and Disorder in the Black Phases of Cesium Lead Iodide Used for Stable Inorganic Perovskite Solar Cells. ACS Nano, 2018, 12, 3477-3486.	7.3	546
39	White-Light Emission and Structural Distortion in New Corrugated Two-Dimensional Lead Bromide Perovskites. Journal of the American Chemical Society, 2017, 139, 5210-5215.	6.6	536
40	Strong Electronâ€“Phonon Coupling and Self-Trapped Excitons in the Defect Halide Perovskites A₃M₂I₉ (A = Cs, Rb; M = Bi, Sb). Chemistry of Materials, 2017, 29, 4129-4145.	3.2	509
41	Broad Wavelength Tunable Robust Lasing from Single-Crystal Nanowires of Cesium Lead Halide Perovskites (CsPbX₃, X = Cl, Br, I). ACS Nano, 2016, 10, 7963-7972.	7.3	507
42	The 2D Halide Perovskite Rulebook: How the Spacer Influences Everything from the Structure to Optoelectronic Device Efficiency. Chemical Reviews, 2021, 121, 2230-2291.	23.0	506
43	Non-equilibrium processing leads to record high thermoelectric figure of merit in PbTeâ€“SrTe. Nature Communications, 2016, 7, 12167.	5.8	498
44	Local Polar Fluctuations in Lead Halide Perovskite Crystals. Physical Review Letters, 2017, 118, 136001.	2.9	489
45	Importance of Reducing Vapor Atmosphere in the Fabrication of Tin-Based Perovskite Solar Cells. Journal of the American Chemical Society, 2017, 139, 836-842.	6.6	470
46	The Metal Flux: A Preparative Tool for the Exploration of Intermetallic Compounds. Angewandte Chemie - International Edition, 2005, 44, 6996-7023.	7.2	456
47	Layered Metal Sulfides Capture Uranium from Seawater. Journal of the American Chemical Society, 2012, 134, 16441-16446.	6.6	434
48	High Performance Thermoelectrics from Earth-Abundant Materials: Enhanced Figure of Merit in PbS by Second Phase Nanostructures. Journal of the American Chemical Society, 2011, 133, 20476-20487.	6.6	433
49	Spinodal Decomposition and Nucleation and Growth as a Means to Bulk Nanostructured Thermoelectrics:â€‰ Enhanced Performance in Pb₁₋<i>_x</i>Sn<i>_x</i>Teâˆ’PbS. Journal of the American Chemical Society, 2007, 129, 9780-9788.	6.6	421
50	High performance bulk thermoelectrics via a panoscopic approach. Materials Today, 2013, 16, 166-176.	8.3	421
51	SnSe: a remarkable new thermoelectric material. Energy and Environmental Science, 2016, 9, 3044-3060.	15.6	418
52	Efficient Uranium Capture by Polysulfide/Layered Double Hydroxide Composites. Journal of the American Chemical Society, 2015, 137, 3670-3677.	6.6	404
53	Codoping in SnTe: Enhancement of Thermoelectric Performance through Synergy of Resonance Levels and Band Convergence. Journal of the American Chemical Society, 2015, 137, 5100-5112.	6.6	394
54	From unstable CsSnI3 to air-stable Cs2SnI6: A lead-free perovskite solar cell light absorber with bandgap of 1.48 eV and high absorption coefficient. Solar Energy Materials and Solar Cells, 2017, 159, 227-234.	3.0	388

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55	Controllable Perovskite Crystallization at a Gasâ€“Solid Interface for Hole Conductor-Free Solar Cells with Steady Power Conversion Efficiency over 10%. Journal of the American Chemical Society, 2014, 136, 16411-16419.	6.6	383
56	Porous Semiconducting Gels and Aerogels from Chalcogenide Clusters. Science, 2007, 317, 490-493.	6.0	381
57	High spectral resolution of gamma-rays at room temperature by perovskite CsPbBr3 single crystals. Nature Communications, 2018, 9, 1609.	5.8	381
58	New Type of 2D Perovskites with Alternating Cations in the Interlayer Space, (C(NH₂)₃)(CH₃NH₃)_{<i>n</i>}Pb_{<i>n</i>}I<sub>3<i>n</i> Structure, Properties, and Photovoltaic Performance. Journal of the American Chemical Society, 2017, 139, 16297-16309.	6.6	374
59	Valence Band Modification and High Thermoelectric Performance in SnTe Heavily Alloyed with MnTe. Journal of the American Chemical Society, 2015, 137, 11507-11516.	6.6	371
60	High Members of the 2D Ruddlesden-Popper Halide Perovskites: Synthesis, Optical Properties, and Solar Cells of (CH3(CH2)3NH3)2(CH3NH3)4Pb5I16. CheM, 2017, 2, 427-440.	5.8	354
61	High Thermoelectric Figure of Merit and Nanostructuring in Bulk p-type Na1â^ˆ’xPbmSbyTem+2. Angewandte Chemie - International Edition, 2006, 45, 3835-3839.	7.2	351
62	Structural Diversity in White-Light-Emitting Hybrid Lead Bromide Perovskites. Journal of the American Chemical Society, 2018, 140, 13078-13088.	6.6	351
63	Tunable White-Light Emission in Single-Cation-Templated Three-Layered 2D Perovskites (CH₃CH₂NH₃)₄Pb₃Br_{10â€“<i>x</i>}Cl<sub><i>x</i></su Journal of the American Chemical Society, 2017, 139, 11956-11963.	6.6	349
64	Extraordinary role of Hg in enhancing the thermoelectric performance of p-type SnTe. Energy and Environmental Science, 2015, 8, 267-277.	15.6	347
65	Thin Films and Solar Cells Based on Semiconducting Two-Dimensional Ruddlesdenâ€“Popper (CH₃(CH₂)₃NH₃)₂(CH₃NH₃)<sub><i>n</i> Perovskites. ACS Energy Letters, 2017, 2, 982-990.	8.8	345
66	â€œUnleadedâ€•Perovskites: Status Quo and Future Prospects of Tinâ€Based Perovskite Solar Cells. Advanced Materials, 2019, 31, e1803230.	11.1	345
67	High Thermoelectric Performance via Hierarchical Compositionally Alloyed Nanostructures. Journal of the American Chemical Society, 2013, 135, 7364-7370.	6.6	344
68	Nanostructuring, Compositional Fluctuations, and Atomic Ordering in the Thermoelectric Materials AgPbmSbTe2+m. The Myth of Solid Solutions. Journal of the American Chemical Society, 2005, 127, 9177-9190.	6.6	342
69	Thermoelectrics: From history, a window to the future. Materials Science and Engineering Reports, 2019, 138, 100501.	14.8	341
70	Polycrystalline SnSe with a thermoelectric figure of merit greater than the single crystal. Nature Materials, 2021, 20, 1378-1384.	13.3	340
71	Halide Perovskites: Poor Man's Highâ€Performance Semiconductors. Advanced Materials, 2016, 28, 5778-5793.	11.1	339
72	Enhanced photovoltaic performance and stability with a new type of hollow 3D perovskite {en}FASnI ₃. Science Advances, 2017, 3, e1701293.	4.7	325

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73	High Performance Na-doped PbTeâ€“PbS Thermoelectric Materials: Electronic Density of States Modification and Shape-Controlled Nanostructures. Journal of the American Chemical Society, 2011, 133, 16588-16597.	6.6	322
74	Origin of the High Performance in GeTe-Based Thermoelectric Materials upon Bi₂Te₃ Doping. Journal of the American Chemical Society, 2014, 136, 11412-11419.	6.6	319
75	Entropically Stabilized Local Dipole Formation in Lead Chalcogenides. Science, 2010, 330, 1660-1663.	6.0	308
76	Raising the Thermoelectric Performance of p-Type PbS with Endotaxial Nanostructuring and Valence-Band Offset Engineering Using CdS and ZnS. Journal of the American Chemical Society, 2012, 134, 16327-16336.	6.6	308
77	Microstructureâ€Lattice Thermal Conductivity Correlation in Nanostructured PbTe_{0.7}S_{0.3} Thermoelectric Materials. Advanced Functional Materials, 2010, 20, 764-772.	7.8	307
78	Efficient Removal and Recovery of Uranium by a Layered Organicâ€“Inorganic Hybrid Thiostannate. Journal of the American Chemical Society, 2016, 138, 12578-12585.	6.6	307
79	Rhombohedral to Cubic Conversion of GeTe via MnTe Alloying Leads to Ultralow Thermal Conductivity, Electronic Band Convergence, and High Thermoelectric Performance. Journal of the American Chemical Society, 2018, 140, 2673-2686.	6.6	307
80	<i>n</i>-Type Bi₂Te_{3â€“<i>x</i>}Se_{<i>x</i>} Nanoplates with Enhanced Thermoelectric Efficiency Driven by Wide-Frequency Phonon Scatterings and Synergistic Carrier Scatterings. ACS Nano, 2016, 10, 4719-4727.	7.3	303
81	Distinct Impact of Alkali-Ion Doping on Electrical Transport Properties of Thermoelectric <i>p</i>-Type Polycrystalline SnSe. Journal of the American Chemical Society, 2016, 138, 8875-8882.	6.6	298
82	Overcoming Short-Circuit in Lead-Free CH₃NH₃SnI₃ Perovskite Solar Cells via Kinetically Controlled Gasâ€“Solid Reaction Film Fabrication Process. Journal of Physical Chemistry Letters, 2016, 7, 776-782.	2.1	290
83	Photochemical Nitrogen Conversion to Ammonia in Ambient Conditions with FeMoS-Chalcogels. Journal of the American Chemical Society, 2015, 137, 2030-2034.	6.6	287
84	Power generation from nanostructured PbTe-based thermoelectrics: comprehensive development from materials to modules. Energy and Environmental Science, 2016, 9, 517-529.	15.6	287
85	Understanding Film Formation Morphology and Orientation in High Member 2D Ruddlesdenâ€“Popper Perovskites for Highâ€Efficiency Solar Cells. Advanced Energy Materials, 2018, 8, 1700979.	10.2	286
86	Nucleation-controlled growth of superior lead-free perovskite Cs3Bi2I9 single-crystals for high-performance X-ray detection. Nature Communications, 2020, 11, 2304.	5.8	286
87	Performance Enhancement of Lead-Free Tin-Based Perovskite Solar Cells with Reducing Atmosphere-Assisted Dispersible Additive. ACS Energy Letters, 2017, 2, 897-903.	8.8	285
88	Nanostructures Boost the Thermoelectric Performance of PbS. Journal of the American Chemical Society, 2011, 133, 3460-3470.	6.6	282
89	Enhanced Thermoelectric Properties in the Counter-Doped SnTe System with Strained Endotaxial SrTe. Journal of the American Chemical Society, 2016, 138, 2366-2373.	6.6	269
90	Synergistically optimized electrical and thermal transport properties of SnTe via alloying high-solubility MnTe. Energy and Environmental Science, 2015, 8, 3298-3312.	15.6	268

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91	Semiconductor physics of organicâ€“inorganic 2D halide perovskites. Nature Nanotechnology, 2020, 15, 969-985.	15.6	268
92	Remnant PbI2, an unforeseen necessity in high-efficiency hybrid perovskite-based solar cells?. APL Materials, 2014, 2, .	2.2	264
93	Stable Lightâ€Emitting Diodes Using Phaseâ€Pure Ruddlesdenâ€“Popper Layered Perovskites. Advanced Materials, 2018, 30, 1704217.	11.1	258
94	Carrier Diffusion Lengths of over 500 nm in Lead-Free Perovskite CH₃NH₃SnI₃ Films. Journal of the American Chemical Society, 2016, 138, 14750-14755.	6.6	252
95	Exfoliated and Restacked MoS2and WS2:Â Ionic or Neutral Species? Encapsulation and Ordering of Hard Electropositive Cations. Journal of the American Chemical Society, 1999, 121, 11720-11732.	6.6	248
96	Selective Removal of Cs⁺, Sr²⁺, and Ni²⁺ by K_{2<i>x</i>}Mg_{<i>x</i>}Sn_{3â€“<i>x</i>}S₆ (<i>x</i> = 0.5â€“1) (KMS-2) Relevant to Nuclear Waste Remediation. Chemistry of Materials, 2013, 25, 2116-2127.	3.2	248
97	High-performance thermoelectrics and challenges for practical devices. Nature Materials, 2022, 21, 503-513.	13.3	248
98	Structure of Restacked MoS2and WS2Elucidated by Electron Crystallography. Journal of the American Chemical Society, 1999, 121, 638-643.	6.6	247
99	Thermoelectrics with earth abundant elements: low thermal conductivity and high thermopower in doped SnS. Journal of Materials Chemistry A, 2014, 2, 17302-17306.	5.2	246
100	Metal sulfide ion exchangers: superior sorbents for the capture of toxic and nuclear waste-related metal ions. Chemical Science, 2016, 7, 4804-4824.	3.7	246
101	Phase Transition Control for High Performance Ruddlesdenâ€“Popper Perovskite Solar Cells. Advanced Materials, 2018, 30, e1707166.	11.1	244
102	Strong Second Harmonic Generation from the Tantalum Thioarsenates A₃Ta₂AsS₁₁ (A = K and Rb). Journal of the American Chemical Society, 2009, 131, 75-77.	6.6	243
103	Two-Dimensional Dionâ€“Jacobson Hybrid Lead Iodide Perovskites with Aromatic Diammonium Cations. Journal of the American Chemical Society, 2019, 141, 12880-12890.	6.6	241
104	Coordination chemistry of heavy polychalcogenide ligands. Coordination Chemistry Reviews, 1994, 130, 509-621.	9.5	240
105	High thermoelectric performance in Bi_{0.46}Sb_{1.54}Te₃ nanostructured with ZnTe. Energy and Environmental Science, 2018, 11, 1520-1535.	15.6	239
106	Myths and reality of HPbI3 in halide perovskite solar cells. Nature Communications, 2018, 9, 4785.	5.8	238
107	The 2019 materials by design roadmap. Journal Physics D: Applied Physics, 2019, 52, 013001.	1.3	236
108	Structural and thermodynamic limits of layer thickness in 2D halide perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 58-66.	3.3	236

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109	Thermoelectrics with Earth Abundant Elements: High Performance p-type PbS Nanostructured with SrS and CaS. Journal of the American Chemical Society, 2012, 134, 7902-7912.	6.6	233
110	Layered metal sulfides: Exceptionally selective agents for radioactive strontium removal. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3696-3699.	3.3	230
111	Efficient Lead-Free Solar Cells Based on Hollow {en}MASnI₃ Perovskites. Journal of the American Chemical Society, 2017, 139, 14800-14806.	6.6	230
112	High <i>ZT</i> in p-Type (PbTe)_{1â€“2<i>x</i>}(PbSe)_{<i>x</i>}(PbS)_{<i>x</i>} Thermoelectric Materials. Journal of the American Chemical Society, 2014, 136, 3225-3237.	6.6	228
113	Role of Organic Counterion in Lead- and Tin-Based Two-Dimensional Semiconducting Iodide Perovskites and Application in Planar Solar Cells. Chemistry of Materials, 2016, 28, 7781-7792.	3.2	228
114	Optical-Vibrational Properties of the Cs₂SnX₆ (X = Cl, Br, I) Defect Perovskites and Hole-Transport Efficiency in Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2016, 120, 11777-11785.	1.5	222
115	TiO₂â€“ZnS Cascade Electron Transport Layer for Efficient Formamidinium Tin Iodide Perovskite Solar Cells. Journal of the American Chemical Society, 2016, 138, 14998-15003.	6.6	220
116	Structureâ€“Band Gap Relationships in Hexagonal Polytypes and Low-Dimensional Structures of Hybrid Tin Iodide Perovskites. Inorganic Chemistry, 2017, 56, 56-73.	1.9	220
117	Compositional and Solvent Engineering in Dionâ€“Jacobson 2D Perovskites Boosts Solar Cell Efficiency and Stability. Advanced Energy Materials, 2019, 9, 1803384.	10.2	219
118	Soluble Semiconductors AAsSe₂ (A = Li, Na) with a Direct-Band-Gap and Strong Second Harmonic Generation: A Combined Experimental and Theoretical Study. Journal of the American Chemical Society, 2010, 132, 3484-3495.	6.6	218
119	Imine-Linked Microporous Polymer Organic Frameworks. Chemistry of Materials, 2010, 22, 4974-4979.	3.2	218
120	Dynamic Stereochemical Activity of the Sn²⁺ Lone Pair in Perovskite CsSnBr₃. Journal of the American Chemical Society, 2016, 138, 11820-11832.	6.6	217
121	On the Origin of Increased Phonon Scattering in Nanostructured PbTe Based Thermoelectric Materials. Journal of the American Chemical Society, 2010, 132, 8669-8675.	6.6	211
122	Nitrogenase-mimic iron-containing chalcogels for photochemical reduction of dinitrogen to ammonia. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5530-5535.	3.3	211
123	CsPbBr3 perovskite detectors with 1.4% energy resolution for high-energy Î^{3}-rays. Nature Photonics, 2021, 15, 36-42.	15.6	210
124	Highly Efficient and Rapid Cs⁺ Uptake by the Layered Metal Sulfide K_{2<i>x</i>}Mn_{<i>x</i>}Sn_{3âˆ’<i>x</i>}S₆ (KMS-1). Journal of the American Chemical Society, 2009, 131, 6599-6607.	6.6	207
125	Telluriumâ€Free Thermoelectric: The Anisotropic <i>n</i>â€Type Semiconductor Bi₂S₃. Advanced Energy Materials, 2012, 2, 634-638.	10.2	207
126	Cooperative tin oxide fullerene electron selective layers for high-performance planar perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 14276-14283.	5.2	204

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127	Intrinsic femtosecond charge generation dynamics in single crystal CH₃NH₃PbI₃. Energy and Environmental Science, 2015, 8, 3700-3707.	15.6	203
128	Controlling Metallurgical Phase Separation Reactions of the Ge_{0.87}Pb_{0.13}Te Alloy for High Thermoelectric Performance. Advanced Energy Materials, 2013, 3, 815-820.	10.2	202
129	Antagonism between Spinâ€“Orbit Coupling and Steric Effects Causes Anomalous Band Gap Evolution in the Perovskite Photovoltaic Materials CH₃NH₃Sn_{1â€“<i>x</i>}Pb_{<i>x</i>}I₃. Journal of Physical Chemistry Letters, 2015, 6, 3503-3509.	2.1	202
130	Inch-Size 0D-Structured Lead-Free Perovskite Single Crystals for Highly Sensitive Stable X-Ray Imaging. Matter, 2020, 3, 180-196.	5.0	202
131	Defect engineering in thermoelectric materials: what have we learned?. Chemical Society Reviews, 2021, 50, 9022-9054.	18.7	201
132	Transport Properties of Bi2S3and the Ternary Bismuth Sulfides KBi6.33S10and K2Bi8S13. Chemistry of Materials, 1997, 9, 1655-1658.	3.2	196
133	Nanostructures versus Solid Solutions:Â Low Lattice Thermal Conductivity and Enhanced Thermoelectric Figure of Merit in Pb9.6Sb0.2Te10-xSexBulk Materials. Journal of the American Chemical Society, 2006, 128, 14347-14355.	6.6	193
134	Uniaxial Expansion of the 2D Ruddlesdenâ€“Popper Perovskite Family for Improved Environmental Stability. Journal of the American Chemical Society, 2019, 141, 5518-5534.	6.6	193
135	High Thermoelectric Performance SnTeâ€“In₂Te₃ Solid Solutions Enabled by Resonant Levels and Strong Vacancy Phonon Scattering. Chemistry of Materials, 2015, 27, 7801-7811.	3.2	191
136	Enhanced Efficiency of Hotâ€Cast Largeâ€Area Planar Perovskite Solar Cells/Modules Having Controlled Chloride Incorporation. Advanced Energy Materials, 2017, 7, 1601660.	10.2	191
137	Conjugated Organic Cations Enable Efficient Self-Healing FASnI3 Solar Cells. Joule, 2019, 3, 3072-3087.	11.7	190
138	Dynamical Transformation of Two-Dimensional Perovskites with Alternating Cations in the Interlayer Space for High-Performance Photovoltaics. Journal of the American Chemical Society, 2019, 141, 2684-2694.	6.6	189
139	K_{2x}Sn_{4âˆ’x}S_{8âˆ’x}(x = 0.65â€“1): a new metal sulfide for rapid and selective removal of Cs⁺, Sr²⁺and UO₂²⁺ions. Chemical Science, 2016, 7, 1121-1132.	3.7	188
140	{Sn[Zn4Sn4S17]}6âˆ’: A Robust Open Framework Based on Metal-Linked Penta-Supertetrahedral [Zn4Sn4S17]10âˆ’ Clusters with Ion-Exchange Properties. Angewandte Chemie - International Edition, 2005, 44, 3552-3555.	7.2	186
141	Selective incarceration of caesium ions by Venus flytrap action of a flexible framework sulfide. Nature Chemistry, 2010, 2, 187-191.	6.6	186
142	Chalcogenide Aerogels as Sorbents for Radioactive Iodine. Chemistry of Materials, 2015, 27, 2619-2626.	3.2	186
143	A New Thermoelectric Material: CsBi4Te6. Journal of the American Chemical Society, 2004, 126, 6414-6428.	6.6	185
144	Dimensional Reduction: A Design Tool for New Radiation Detection Materials. Advanced Materials, 2011, 23, 4163-4167.	11.1	185

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145	Superior thermoelectric performance in PbTeâ€“PbS pseudo-binary: extremely low thermal conductivity and modulated carrier concentration. Energy and Environmental Science, 2015, 8, 2056-2068.	15.6	185
146	Two-Dimensional Halide Perovskites Incorporating Straight Chain Symmetric Diammonium Ions, (NH₃C_{<i>m</i>}H_{2<i>m</i>}NH₃)(CH₃NH₃)<sub><i>n</i (<i>m</i> = 4â€“9; <i>n</i> = 1â€“4). Journal of the American Chemical Society, 2018, 140, 12226-12238.	6.6	184
147	Molten alkali-metal polychalcogenides as reagents and solvents for the synthesis of new chalcogenide materials. Chemistry of Materials, 1990, 2, 353-363.	3.2	181
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