Stephen J Pennycook

List of Publications by Year
in descending order

815	57,150	616 124	2033 205
papers	citations	h-index	g-index

873	873	873	44936
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electronegativityâ€Induced Charge Balancing to Boost Stability and Activity of Amorphous Electrocatalysts. Advanced Materials, 2022, 34, e2100537.	21.0	39
2	Aberration-corrected scanning transmission electron microscopy: the potential for nano- and interface science. International Journal of Materials Research, 2022, 94, 350-357.	0.3	0
3	Observation of perfect diamagnetism and interfacial effect on the electronic structures in infinite layer Nd0.8Sr0.2NiO2 superconductors. Nature Communications, 2022, 13, 743.	12.8	34
4	Large-Scale Epitaxial Growth of Ultralong Stripe BiFeO3 Films and Anisotropic Optical Properties. ACS Applied Materials & Interfaces, 2022, , .	8.0	1
5	Machine learning in scanning transmission electron microscopy. Nature Reviews Methods Primers, 2022, 2, .	21.2	59
6	Accurate and Robust Calibration of the Uniform Affine Transformation Between Scan-Camera Coordinates for Atom-Resolved In-Focus 4D-STEM Datasets. Microscopy and Microanalysis, 2022, 28, 622-632.	0.4	4
7	Strong MoirÃ© Excitons in High-Angle Twisted Transition Metal Dichalcogenide Homobilayers with Robust Commensuration. Nano Letters, 2022, 22, 203-210.	9.1	12
8	Room-temperature spin-orbit torque switching in a manganite-based heterostructure. Physical Review B, 2022, 105, .	3.2	12
9	Learning motifs and their hierarchies in atomic resolution microscopy. Science Advances, 2022, 8, eabk1005.	10.3	10
10	Origin of giant electric-field-induced strain in faulted alkali niobate films. Nature Communications, 2022, 13, .	12.8	11
11	Fabrication and growth mechanism of ultra-crystalline C60 on silicon substrate in vacuum. Carbon Letters, 2021, 31, 315-322.	5.9	2
12	Probing the meta-stability of oxide core/shell nanoparticle systems at atomic resolution. Chemical Engineering Journal, 2021, 405, 126820.	12.7	8
13	Efficient Hydrogen Evolution of Oxidized Niâ€N₃ Defective Sites for Alkaline Freshwater and Seawater Electrolysis. Advanced Materials, 2021, 33, e2003846.	21.0	198
14	Coherent Sb/CuTe Core/Shell Nanostructure with Large Strain Contrast Boosting the Thermoelectric Performance of nâ€Type PbTe. Advanced Functional Materials, 2021, 31, 2007340.	14.9	30
15	Printable two-dimensional superconducting monolayers. Nature Materials, 2021, 20, 181-187.	27.5	102
16	Defect-nucleated phase transition in atomically-thin WS₂. 2D Materials, 2021, 8, 025017.	4.4	5
17	Two-Dimensional Metallic Vanadium Ditelluride as a High-Performance Electrode Material. ACS Nano, 2021, 15, 1858-1868.	14.6	49
18	Correlated cation lattice symmetry and oxygen octahedral rotation in perovskite oxide heterostructures. Journal of Applied Physics, 2021, 129, 025303.	2.5	2

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19	Electrochemically Exfoliated Platinum Dichalcogenide Atomic Layers for High-Performance Air-Stable Infrared Photodetectors. ACS Applied Materials & Interfaces, 2021, 13, 8518-8527.	8.0	23
20	Unlocking the origin of compositional fluctuations in InGaN light emitting diodes. Physical Review Materials, 2021, 5, .	2.4	7
21	Symmetry of the Underlying Lattice in (K,Na)NbO₃-Based Relaxor Ferroelectrics with Large Electromechanical Response. ACS Applied Materials & Interfaces, 2021, 13, 7461-7469.	8.0	30
22	Atomically Dispersed Indium Sites for Selective CO₂ Electroreduction to Formic Acid. ACS Nano, 2021, 15, 5671-5678.	14.6	121
23	Bipolar Conduction and Giant Positive Magnetoresistance in Doped Metallic Titanium Oxide Heterostructures. Advanced Materials Interfaces, 2021, 8, 2002147.	3.7	2
24	High-entropy-stabilized chalcogenides with high thermoelectric performance. Science, 2021, 371, 830-834.	12.6	546
25	Flexoelectric Thin-Film Photodetectors. Nano Letters, 2021, 21, 2946-2952.	9.1	44
26	Unveiling Atomic-Scale MoirÃ© Features and Atomic Reconstructions in High-Angle Commensurately Twisted Transition Metal Dichalcogenide Homobilayers. Nano Letters, 2021, 21, 3262-3270.	9.1	15
27	Reversible hydrogen control of antiferromagnetic anisotropy in Î±-Fe2O3. Nature Communications, 2021, 12, 1668.	12.8	30
28	Direct Laser Patterning of a 2D WSe₂ Logic Circuit. Advanced Functional Materials, 2021, 31, 2009549.	14.9	15
29	Ordered clustering of single atomic Te vacancies in atomically thin PtTe2 promotes hydrogen evolution catalysis. Nature Communications, 2021, 12, 2351.	12.8	83
30	Medium Entropyâ€Enabled High Performance Cubic GeTe Thermoelectrics. Advanced Science, 2021, 8, 2100220.	11.2	51
31	Tungsten Suboxide Nanoneedles as an Effective Thermal Shield through Near-Infrared Reflection and Absorption. Journal of Physical Chemistry C, 2021, 125, 11115-11123.	3.1	4
32	Atomically sharp interface enabled ultrahigh-speed non-volatile memory devices. Nature Nanotechnology, 2021, 16, 882-887.	31.5	105
33	Solutionâ€Processable Metalâ€“Organic Framework Nanosheets with Variable Functionalities. Advanced Materials, 2021, 33, e2101257.	21.0	33
34	Alkali-deficiency driven charged out-of-phase boundaries for giant electromechanical response. Nature Communications, 2021, 12, 2841.	12.8	19
35	Nanoscale bubble domains with polar topologies in bulk ferroelectrics. Nature Communications, 2021, 12, 3632.	12.8	57
36	Zeroâ€Valent Palladium Singleâ€Atoms Catalysts Confined in Black Phosphorus for Efficient Semiâ€Hydrogenation. Advanced Materials, 2021, 33, e2008471.	21.0	55

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37	Metalâ€Organic Frameworks: Solutionâ€Processable Metalâ€“Organic Framework Nanosheets with Variable Functionalities (Adv. Mater. 29/2021). Advanced Materials, 2021, 33, 2170228.	21.0	2
38	Electric Field Control of the Magnetic Weyl Fermion in an Epitaxial SrRuO₃ (111) Thin Film. Advanced Materials, 2021, 33, e2101316.	21.0	24
39	Quasiâ€Paired Pt Atomic Sites on Mo₂C Promoting Selective Fourâ€Electron Oxygen Reduction. Advanced Science, 2021, 8, e2101344.	11.2	29
40	In-situ derived highly active NiS2 and MoS2 nanosheets on NiMoO4 microcuboids via controlled surface sulfidation for high-current-density hydrogen evolution reaction. Electrochimica Acta, 2021, 389, 138733.	5.2	9
41	Light-Emitting V-Pits: An Alternative Approach toward Luminescent Indium-Rich InGaN Quantum Dots. ACS Photonics, 2021, 8, 2853-2860.	6.6	10
42	Symmetry-dependent field-free switching of perpendicular magnetization. Nature Nanotechnology, 2021, 16, 277-282.	31.5	145
43	Electron beam triggered single-atom dynamics in two-dimensional materials. Journal of Physics Condensed Matter, 2021, 33, 063001.	1.8	6
44	Phase-Tunable Synthesis and Etching-Free Transfer of Two-Dimensional Magnetic FeTe. ACS Nano, 2021, 15, 19089-19097.	14.6	18
45	Atomic-scale fatigue mechanism of ferroelectric tunnel junctions. Science Advances, 2021, 7, eabh2716.	10.3	25
46	Spaceâ€confined microwave synthesis of ternaryâ€layered BiOCl crystals with highâ€performance ultraviolet photodetection. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 593-600.	17.3	32
47	Hollow structure engineering of FeCo alloy nanoparticles electrospun in nitrogen-doped carbon enables high performance flexible all-solid-state zincâ€“air batteries. Sustainable Energy and Fuels, 2020, 4, 1747-1753.	4.9	36
48	Introducing Normalized Centrifugation for a More Accurate Thermodynamic Analysis of Molybdenum Disulfide Dispersions: A Study on Mixed Solvents of Alcohols and Amines with Water. ACS Applied Materials & Interfaces, 2020, 12, 3096-3103.	8.0	11
49	Enhanced Magnetic Anisotropy and Orbital Symmetry Breaking in Manganite Heterostructures. Advanced Functional Materials, 2020, 30, 1909536.	14.9	17
50	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. Energy and Environmental Science, 2020, 13, 229-237.	30.8	78
51	Controlled Growth and Thicknessâ€Dependent Conductionâ€Type Transition of 2D Ferrimagnetic Cr₂S₃ Semiconductors. Advanced Materials, 2020, 32, e1905896.	21.0	114
52	Phase Diagram and Superconducting Dome of Infinite-Layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Nd</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn><mml:mn> Thin Film. Physical Review Letters, 2020, 125, 147003.	7.8	204
53	Cavity Plasmonics in Tunnel Junctions: Outcoupling and the Role of Surface Roughness. Physical Review Applied, 2020, 14, .	3.8	12
54	Trimetal atoms confined in openly accessible nitrogen-doped carbon constructs for an efficient ORR. Journal of Materials Chemistry A, 2020, 8, 17266-17275.	10.3	32

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55	Magnetic Anisotropy of a Quasi Two-Dimensional Canted Antiferromagnet. Nano Letters, 2020, 20, 1890-1895.	9.1	13
56	Giant piezoelectricity in oxide thin films with nanopillar structure. Science, 2020, 369, 292-297.	12.6	86
57	High-performance potassium sodium niobate piezoceramics for ultrasonic transducer. Nano Energy, 2020, 70, 104559.	16.0	68
58	Emergent Topological Hall Effect at a Chargeâ€Transfer Interface. Small, 2020, 16, e2004683.	10.0	14
59	On-Chip Template-Directed Conversion of Metal Hydroxides to Metalâ€“Organic Framework Films with Enhanced Adhesion. ACS Applied Materials & Interfaces, 2020, 12, 36715-36722.	8.0	11
60	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. Nature Communications, 2020, 11, 3729.	12.8	120
61	Enhanced mechanical and thermoelectric properties enabled by hierarchical structure in medium-temperature Sb2Te3 based alloys. Nano Energy, 2020, 78, 105228.	16.0	26
62	Periodic Wrinkleâ€Patterned Singleâ€Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity. Advanced Materials, 2020, 32, e2004477.	21.0	47
63	Memory Devices: MoS₂/Polymer Heterostructures Enabling Stable Resistive Switching and Multistate Randomness (Adv. Mater. 42/2020). Advanced Materials, 2020, 32, 2070317.	21.0	1
64	Atomically-precise dopant-controlled single cluster catalysis for electrochemical nitrogen reduction. Nature Communications, 2020, 11, 4389.	12.8	110
65	MoS₂/Polymer Heterostructures Enabling Stable Resistive Switching and Multistate Randomness. Advanced Materials, 2020, 32, e2002704.	21.0	23
66	Materializing efficient methanol oxidation via electron delocalization in nickel hydroxide nanoribbon. Nature Communications, 2020, 11, 4647.	12.8	117
67	Single-Atom Tungsten-Doped CoP Nanoarrays as a High-Efficiency pH-Universal Catalyst for Hydrogen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2020, 8, 14825-14832.	6.7	73
68	Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Znâ€“Air Battery and Selfâ€Driven Water Splitting. Advanced Energy Materials, 2020, 10, 2002896.	19.5	210
69	Engineering the photoresponse of liquid-exfoliated 2D materials by size selection and controlled mixing for an ultrasensitive and ultraresponsive photodetector. Materials Horizons, 2020, 7, 3325-3338.	12.2	31
70	Chip-Level Integration of Covalent Organic Frameworks for Trace Benzene Sensing. ACS Sensors, 2020, 5, 1474-1481.	7.8	56
71	Imprinting Ferromagnetism and Superconductivity in Single Atomic Layers of Molecular Superlattices. Advanced Materials, 2020, 32, e1907645.	21.0	25
72	Engineering covalently bonded 2D layered materials by self-intercalation. Nature, 2020, 581, 171-177.	27.8	185

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73	Extremely low thermal conductivity from bismuth selenohalides with 1D soft crystal structure. Science China Materials, 2020, 63, 1759-1768.	6.3	38
74	Two-Dimensional Metallic NiTe₂ with Ultrahigh Environmental Stability, Conductivity, and Electrocatalytic Activity. ACS Nano, 2020, 14, 9011-9020.	14.6	60
75	An Anomalous Magneto-Optic Effect in Epitaxial Indium Selenide Layers. Nano Letters, 2020, 20, 5330-5338.	9.1	10
76	Domain Engineering in ReS₂ by Coupling Strain during Electrochemical Exfoliation. Advanced Functional Materials, 2020, 30, 2003057.	14.9	22
77	Electronic and plasmonic phenomena at nonstoichiometric grain boundaries in metallic SrNbO₃. Nanoscale, 2020, 12, 6844-6851.	5.6	9
78	Potential-Dependent Phase Transition and Mo-Enriched Surface Reconstruction of Î³-CoOOH in a Heterostructured Co-Mo₂C Precatalyst Enable Water Oxidation. ACS Catalysis, 2020, 10, 4411-4419.	11.2	174
79	Engineering Local and Global Structures of Single Co Atoms for a Superior Oxygen Reduction Reaction. ACS Catalysis, 2020, 10, 5862-5870.	11.2	126
80	Enhanced Valley Zeeman Splitting in Fe-Doped Monolayer MoS₂. ACS Nano, 2020, 14, 4636-4645.	14.6	69
81	Characteristic Lengths of Interlayer Charge Transfer in Correlated Oxide Heterostructures. Nano Letters, 2020, 20, 2493-2499.	9.1	11
82	Ultrahigh Average ZT Realized in p-Type SnSe Crystalline Thermoelectrics through Producing Extrinsic Vacancies. Journal of the American Chemical Society, 2020, 142, 5901-5909.	13.7	94
83	Contrasting roles of small metallic elements M (M = Cu, Zn, Ni) in enhancing the thermoelectric performance of n-type PbM_{0.01}Se. Journal of Materials Chemistry A, 2020, 8, 5699-5708.	10.3	32
84	Bulk Spin Torqueâ€Driven Perpendicular Magnetization Switching in L1₀ FePt Single Layer. Advanced Materials, 2020, 32, e2002607.	21.0	66
85	Atomic Origin of Interfaceâ€Dependent Oxygen Migration by Electrochemical Gating at the LaAlO 3 â€“SrTiO 3 Heterointerface. Advanced Science, 2020, 7, 2000729.	11.2	2
86	The Role of Ferroelectric Polarization in Resistive Memory Properties of Metal/Insulator/Semiconductor Tunnel Junctions: A Comparative Study. ACS Applied Materials & Interfaces, 2020, 12, 32935-32942.	8.0	28
87	Synergizing Mo Single Atoms and Mo₂C Nanoparticles on CNTs Synchronizes Selectivity and Activity of Electrocatalytic N₂ Reduction to Ammonia. Advanced Materials, 2020, 32, e2002177.	21.0	190
88	Direct Growth of Wafer-Scale, Transparent, p-Type Reduced-Graphene-Oxide-like Thin Films by Pulsed Laser Deposition. ACS Nano, 2020, 14, 3290-3298.	14.6	20
89	Spin-Valley Locking Effect in Defect States of Monolayer MoS₂. Nano Letters, 2020, 20, 2129-2136.	9.1	61
90	Single Atom Electrocatalysis: Heterogeneous Single Atom Electrocatalysis, Where â€œSinglesâ€•Are â€œMarriedâ€•(Adv. Energy Mater. 9/2020). Advanced Energy Materials, 2020, 10, 2070037.	19.5	5

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91	Room Temperature Commensurate Charge Density Wave on Epitaxially Grown Bilayer 2H-Tantalum Sulfide on Hexagonal Boron Nitride. ACS Nano, 2020, 14, 3917-3926.	14.6	27
92	Ultrathin Two-Dimensional Membranes Assembled by Ionic Covalent Organic Nanosheets with Reduced Apertures for Gas Separation. Journal of the American Chemical Society, 2020, 142, 4472-4480.	13.7	304
93	Energy-Efficient Stacksâ€"Covellite (CuS) on Polyethylene Terephthalate Film: A Sustainable Solution to Heat Management. Journal of Physical Chemistry C, 2020, 124, 3314-3321.	3.1	5
94	Heterogeneous Single Atom Electrocatalysis, Where â€œSinglesâ€•Are â€œMarriedâ€• Advanced Energy Materials, 2020, 10, 1903181.	19.5	113
95	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. Journal of the American Chemical Society, 2020, 142, 2948-2955.	13.7	27
96	Band Sharpening and Band Alignment Enable High Quality Factor to Enhance Thermoelectric Performance in n-Type PbS. Journal of the American Chemical Society, 2020, 142, 4051-4060.	13.7	130
97	Epitaxial Growth of Centimeter-Scale Single-Crystal MoS₂ Monolayer on Au(111). ACS Nano, 2020, 14, 5036-5045.	14.6	211
98	Nanoscale Phase Mixture and Multifield-Induced Topotactic Phase Transformation in SrFeO_x. ACS Applied Materials & Interfaces, 2020, 12, 21883-21893.	8.0	19
99	Phaseâ€Controlled Synthesis of Monolayer W 1â^' x Re x S 2 Alloy with Improved Photoresponse Performance. Small, 2020, 16, 2000852.	10.0	18
100	Singleâ€Atom Catalysts: Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Znâ€"Air Battery and Selfâ€Driven Water Splitting (Adv. Energy Mater. 48/2020). Advanced Energy Materials, 2020, 10, 2070195.	19.5	4
101	Controlled Sign Reversal of Electroresistance in Oxide Tunnel Junctions by Electrochemical-Ferroelectric Coupling. Physical Review Letters, 2020, 125, 266802.	7.8	15
102	Flexible Ferroelectrics: Periodic Wrinkleâ€Patterned Singleâ€Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity (Adv. Mater. 50/2020). Advanced Materials, 2020, 32, 2070377.	21.0	0
103	Topological Hall Effect: Emergent Topological Hall Effect at a Chargeâ€Transfer Interface (Small) Tj ETQq1 1 0.784314 rgBT /Overlock	10.0	1
104	(Ni,Co)Se₂/NiCoâ€LDH Core/Shell Structural Electrode with the Cactusâ€Like (Ni,Co)Se₂ Core for Asymmetric Supercapacitors. Small, 2019, 15, e1803895.	10.0	203
105	Decorating Co/CoNx nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. Energy Storage Materials, 2019, 16, 243-250.	18.0	244
106	A machine perspective of atomic defects in scanning transmission electron microscopy. InformaÄnÃ-MateriÃ¡ly, 2019, 1, 359-375.	17.3	37
107	Engineering and Modifying Two-Dimensional Materials via Electron Beams. Microscopy and Microanalysis, 2019, 25, 1474-1475.	0.4	0
108	Designing Energy Materials via Atomic-resolution Microscopy and Spectroscopy. Microscopy and Microanalysis, 2019, 25, 1998-1999.	0.4	1

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109	Ultrahigh Performance in Lead-Free Piezoceramics Utilizing a Relaxor Slush Polar State with Multiphase Coexistence. Journal of the American Chemical Society, 2019, 141, 13987-13994.	13.7	296
110	Nanoâ€Ferroelectric for High Efficiency Overall Water Splitting under Ultrasonic Vibration. Angewandte Chemie - International Edition, 2019, 58, 15076-15081.	13.8	185
111	Nanoâ€Ferroelectric for High Efficiency Overall Water Splitting under Ultrasonic Vibration. Angewandte Chemie, 2019, 131, 15220-15225.	2.0	15
112	Chemically Exfoliated VSe₂ Monolayers with Roomâ€Temperature Ferromagnetism. Advanced Materials, 2019, 31, e1903779.	21.0	251
113	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. Nature Communications, 2019, 10, 3149.	12.8	42
114	Interface-based tuning of Rashba spin-orbit interaction in asymmetric oxide heterostructures with 3d electrons. Nature Communications, 2019, 10, 3052.	12.8	51
115	Onâ€Chip Tailorability of Capacitive Gas Sensors Integrated with Metalâ€“Organic Framework Films. Angewandte Chemie, 2019, 131, 14227-14232.	2.0	24
116	Multiscale Defects as Strong Phonon Scatters to Enhance Thermoelectric Performance in Mg₂Sn_{1â€“}_xSb_x Solid Solutions. Small Methods, 2019, 3, 1900412.	8.6	16
117	Simultaneous Boost of Power Factor and Figureâ€ofâ€Merit in Inâ€“Cu Codoped SnTe. Small, 2019, 15, e1902493.	10.0	43
118	Layer Rotation-Angle-Dependent Excitonic Absorption in van der Waals Heterostructures Revealed by Electron Energy Loss Spectroscopy. ACS Nano, 2019, 13, 9541-9550.	14.6	25
119	Onâ€Chip Tailorability of Capacitive Gas Sensors Integrated with Metalâ€“Organic Framework Films. Angewandte Chemie - International Edition, 2019, 58, 14089-14094.	13.8	86
120	High yield electrochemical exfoliation synthesis of tin selenide quantum dots for high-performance lithium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 23958-23963.	10.3	26
121	Percolated Strain Networks and Universal Scaling Properties of Strain Glasses. Physical Review Letters, 2019, 123, 015701.	7.8	18
122	Synergistic boost of output power density and efficiency in In-Liâ€“codoped SnTe. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21998-22003.	7.1	29
123	Enhancing Thermoelectric Performance of p-Type PbSe through Suppressing Electronic Thermal Transports. ACS Applied Energy Materials, 2019, 2, 8236-8243.	5.1	30
124	Artificial two-dimensional polar metal by charge transfer to a ferroelectric insulator. Communications Physics, 2019, 2, .	5.3	26
125	Observation of an Emerging Charged Domain Wall at a Non-ferroelectric Heterointerface with Aberration-corrected STEM. Microscopy and Microanalysis, 2019, 25, 672-673.	0.4	0
126	Correlated Lattice Instability and Emergent Charged Domain Walls at Oxide Heterointerfaces. Advanced Functional Materials, 2019, 29, 1906655.	14.9	6

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127	Titelbild: Onâ€Chip Tailorability of Capacitive Gas Sensors Integrated with Metalâ€“Organic Framework Films (Angew. Chem. 40/2019). Angewandte Chemie, 2019, 131, 14137-14137.	2.0	0
128	From Thin Films to Nanopillars: Tunable Morphology of Covellite via Radio Frequency Magnetron Sputtering for Cost-Effective Photothermal Vaporization. ACS Applied Nano Materials, 2019, 2, 7441-7448.	5.0	3
129	Three-Dimensional Resonant Exciton in Monolayer Tungsten Diselenide Actuated by Spinâ€“Orbit Coupling. ACS Nano, 2019, 13, 14529-14539.	14.6	10
130	Enhanced Thermoelectric and Mechanical Properties in Yb_{0.3}Co₄Sb₁₂ with In Situ Formed CoSi Nanoprecipitates. Advanced Energy Materials, 2019, 9, 1902435.	19.5	53
131	Nanoscale Topotactic Phase Transformation in SrFeO_x Epitaxial Thin Films for Highâ€Density Resistive Switching Memory. Advanced Materials, 2019, 31, e1903679.	21.0	58
132	Comprehensive Investigation on the Thermoelectric Properties of pâ€Type PbTeâ€PbSeâ€PbS Alloys. Advanced Electronic Materials, 2019, 5, 1900609.	5.1	29
133	High-Concentration Niobium-Substituted WS2 Basal Domains with Reconfigured Electronic Band Structure for Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2019, 11, 34862-34868.	8.0	21
134	Growth of Nb-Doped Monolayer WS₂ by Liquid-Phase Precursor Mixing. ACS Nano, 2019, 13, 10768-10775.	14.6	102
135	Current-induced magnetization switching in all-oxide heterostructures. Nature Nanotechnology, 2019, 14, 939-944.	31.5	139
136	Remarkably Enhanced Negative Electrocaloric Effect in PbZrO₃ Thin Film by Interface Engineering. ACS Applied Materials & Interfaces, 2019, 11, 36863-36870.	8.0	28
137	Copper Single Atoms Anchored in Porous Nitrogen-Doped Carbon as Efficient pH-Universal Catalysts for the Nitrogen Reduction Reaction. ACS Catalysis, 2019, 9, 10166-10173.	11.2	284
138	High thermoelectric performance in low-cost SnS _{0.91} Se _{0.09} crystals. Science, 2019, 365, 1418-1424.	12.6	395
139	Effects of precursor pre-treatment on the vapor deposition of WS₂ monolayers. Nanoscale Advances, 2019, 1, 953-960.	4.6	17
140	ZnO Nanosheets Abundant in Oxygen Vacancies Derived from Metalâ€Organic Frameworks for ppbâ€Level Gas Sensing. Advanced Materials, 2019, 31, e1807161.	21.0	251
141	Outstanding Piezoelectric Performance in Leadâ€Free 0.95(K,Na)(Sb,Nb)O₃â€0.05(Bi,Na,K)ZrO₃ Thick Films with Oriented Nanophase Coexistence. Advanced Electronic Materials, 2019, 5, 1800691.	5.1	18
142	Unraveling Highâ€Yield Phaseâ€Transition Dynamics in Transition Metal Dichalcogenides on Metallic Substrates. Advanced Science, 2019, 6, 1802093.	11.2	23
143	Location-selective growth of two-dimensional metallic/semiconducting transition metal dichalcogenide heterostructures. Nanoscale, 2019, 11, 4183-4189.	5.6	16
144	Electrochemically Induced Amorphization and Unique Lithium and Sodium Storage Pathways in FeSbO4 Nanocrystals. ACS Applied Materials & Interfaces, 2019, 11, 20082-20090.	8.0	14

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145	Selective Engineering of Chalcogen Defects in MoS₂ by Low-Energy Helium Plasma. ACS Applied Materials & Interfaces, 2019, 11, 24404-24411.	8.0	37
146	A Coherently Strained Monoclinic [111]PbTiO₃ Film Exhibiting Zero Poisson's Ratio State. Advanced Functional Materials, 2019, 29, 1901687.	14.9	30
147	High-Energy Gain Upconversion in Monolayer Tungsten Disulfide Photodetectors. Nano Letters, 2019, 19, 5595-5603.	9.1	41
148	Microstructural Origins of High Piezoelectric Performance: A Pathway to Practical Leadâ€Free Materials. Advanced Functional Materials, 2019, 29, 1902911.	14.9	58
149	Seeing atomic-scale structural origins and foreseeing new pathways to improved thermoelectric materials. Materials Horizons, 2019, 6, 1548-1570.	12.2	27
150	Single-Atom Coated Separator for Robust Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 25147-25154.	8.0	152
151	Synergistically optimizing interdependent thermoelectric parameters of n-type PbSe through alloying CdSe. Energy and Environmental Science, 2019, 12, 1969-1978.	30.8	99
152	Point Defects and Localized Excitons in 2D WSe₂. ACS Nano, 2019, 13, 6050-6059.	14.6	127
153	Controlling the Magnetic Properties of LaMnO 3 /SrTiO 3 Heterostructures by Stoichiometry and Electronic Reconstruction: Atomicâ€Scale Evidence. Advanced Materials, 2019, 31, 1901386.	21.0	27
154	Strong Charge Transfer at 2Hâ€“1T Phase Boundary of MoS₂ for Superb Highâ€Performance Energy Storage. Small, 2019, 15, e1900131.	10.0	53
155	Phaseâ€Controlled Synthesis of Monolayer Ternary Telluride with a Random Local Displacement of Tellurium Atoms. Advanced Materials, 2019, 31, e1900862.	21.0	51
156	Metalâ€“organic framework-derived hierarchical MoS₂/CoS₂ nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. Journal of Materials Chemistry A, 2019, 7, 13339-13346.	10.3	133
157	Study of unique and highly crystalline MoS₂/MoO₂ nanostructures for electro chemical applications. Materials Research Letters, 2019, 7, 275-281.	8.7	20
158	Nitrogen-Doped Cobalt Phosphide for Enhanced Hydrogen Evolution Activity. ACS Applied Materials & Interfaces, 2019, 11, 17359-17367.	8.0	40
159	Enhanced magnetism in lightly doped manganite heterostructures: strain or stoichiometry?. Nanoscale, 2019, 11, 7364-7370.	5.6	13
160	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. Chemical Engineering Journal, 2019, 369, 988-995.	12.7	121
161	Amphoteric Indium Enables Carrier Engineering to Enhance the Power Factor and Thermoelectric Performance in nâ€Type Ag_nPb₁₀₀In_nTe₁₀₀₊₂_n (LIST). Advanced Energy Materials, 2019, 9, 1900414.	19.5	60
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