Stephen J Pennycook

List of Publications by Year in Descending Order

839 papers	44,696 citations	107 h-index	181 g-index
873 ext. papers	51,000 ext. citations	9.8 avg, IF	7.58 L-index

#	Paper	IF	Citations
839	Aberration-corrected scanning transmission electron microscopy: the potential for nano- and interface science. *International Journal of Materials Research*, **2022**, 94, 350-357	0.5	
838	Observation of perfect diamagnetism and interfacial effect on the electronic structures in infinite layer NdSrNiO superconductors.. *Nature Communications*, **2022**, 13, 743	17.4	4
837	Machine learning in scanning transmission electron microscopy. *Nature Reviews Methods Primers*, **2022**, 2,		5
836	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**, 1-11	0.5	0
835	Learning motifs and their hierarchies in atomic resolution microscopy.. *Science Advances*, **2022**, 8, eabk1005	14.3	1
834	Electronegativity Induced Charge Balancing to Boost Stability and Activity of Amorphous Electrocatalyst.. *Advanced Materials*, **2021**, e2100537	24	6
833	Atomic-scale fatigue mechanism of ferroelectric tunnel junctions. *Science Advances*, **2021**, 7, eabh2716	14.3	7
832	Electron beam triggered single-atom dynamics in two-dimensional materials. *Journal of Physics Condensed Matter*, **2021**, 33, 063001	1.8	2
831	Flexoelectric Thin-Film Photodetectors. *Nano Letters*, **2021**, 21, 2946-2952	11.5	9
830	Unveiling Atomic-Scale Moir Features and Atomic Reconstructions in High-Angle Commensurately Twisted Transition Metal Dichalcogenide Homobilayers. *Nano Letters*, **2021**, 21, 3262-3270	11.5	5
829	Reversible hydrogen control of antiferromagnetic anisotropy in FeO. *Nature Communications*, **2021**, 12, 1668	17.4	13
828	Direct Laser Patterning of a 2D WSe2 Logic Circuit. *Advanced Functional Materials*, **2021**, 31, 2009549	15.6	6
827	Ordered clustering of single atomic Te vacancies in atomically thin PtTe promotes hydrogen evolution catalysis. *Nature Communications*, **2021**, 12, 2351	17.4	24
826	Medium Entropy-Enabled High Performance Cubic GeTe Thermoelectrics. *Advanced Science*, **2021**, 8, 2100220	13.6	14
825	Tungsten Suboxide Nanoneedles as an Effective Thermal Shield through Near-Infrared Reflection and Absorption. *Journal of Physical Chemistry C*, **2021**, 125, 11115-11123	3.8	2
824	Atomically sharp interface enabled ultrahigh-speed non-volatile memory devices. *Nature Nanotechnology*, **2021**, 16, 882-887	28.7	26
823	Solution-Processable Metal-Organic Framework Nanosheets with Variable Functionalities. *Advanced Materials*, **2021**, 33, e2101257	24	8

822	Alkali-deficiency driven charged out-of-phase boundaries for giant electromechanical response. *Nature Communications*, **2021**, 12, 2841	17.4	4
821	Nanoscale bubble domains with polar topologies in bulk ferroelectrics. *Nature Communications*, **2021**, 12, 3632	17.4	10
820	Zero-Valent Palladium Single-Atoms Catalysts Confined in Black Phosphorus for Efficient Semi-Hydrogenation. *Advanced Materials*, **2021**, 33, e2008471	24	15
819	Fabrication and growth mechanism of ultra-crystalline C60 on silicon substrate in vacuum. *Carbon Letters*, **2021**, 31, 315-322	2.3	2
818	Probing the meta-stability of oxide core/shell nanoparticle systems at atomic resolution. *Chemical Engineering Journal*, **2021**, 405, 126820	14.7	4
817	Efficient Hydrogen Evolution of Oxidized Ni-N Defective Sites for Alkaline Freshwater and Seawater Electrolysis. *Advanced Materials*, **2021**, 33, e2003846	24	65
816	Coherent Sb/CuTe Core/Shell Nanostructure with Large Strain Contrast Boosting the Thermoelectric Performance of n-Type PbTe. *Advanced Functional Materials*, **2021**, 31, 2007340	15.6	17
815	Printable two-dimensional superconducting monolayers. *Nature Materials*, **2021**, 20, 181-187	27	38
814	Defect-nucleated phase transition in atomically-thin WS2. *2D Materials*, **2021**, 8, 025017	5.9	4
813	Two-Dimensional Metallic Vanadium Ditelluride as a High-Performance Electrode Material. *ACS Nano*, **2021**, 15, 1858-1868	16.7	11
812	Correlated cation lattice symmetry and oxygen octahedral rotation in perovskite oxide heterostructures. *Journal of Applied Physics*, **2021**, 129, 025303	2.5	0
811	Electrochemically Exfoliated Platinum Dichalcogenide Atomic Layers for High-Performance Air-Stable Infrared Photodetectors. *ACS Applied Materials & Interfaces*, **2021**, 13, 8518-8527	9.5	9
810	Unlocking the origin of compositional fluctuations in InGaN light emitting diodes. *Physical Review Materials*, **2021**, 5,	3.2	3
809	Symmetry of the Underlying Lattice in (K,Na)NbO-Based Relaxor Ferroelectrics with Large Electromechanical Response. *ACS Applied Materials & Interfaces*, **2021**, 13, 7461-7469	9.5	6
808	Atomically Dispersed Indium Sites for Selective CO Electroreduction to Formic Acid. *ACS Nano*, **2021**, 15, 5671-5678	16.7	38
807	Bipolar Conduction and Giant Positive Magnetoresistance in Doped Metallic Titanium Oxide Heterostructures. *Advanced Materials Interfaces*, **2021**, 8, 2002147	4.6	2
806	High-entropy-stabilized chalcogenides with high thermoelectric performance. *Science*, **2021**, 371, 830-834	35.3	167
805	Metal-Organic Frameworks: Solution-Processable Metal–Organic Framework Nanosheets with Variable Functionalities (Adv. Mater. 29/2021). *Advanced Materials*, **2021**, 33, 2170228	24	0

804	Electric Field Control of the Magnetic Weyl Fermion in an Epitaxial SrRuO (111) Thin Film. *Advanced Materials*, **2021**, 33, e2101316	24	4
803	Quasi-Paired Pt Atomic Sites on Mo C Promoting Selective Four-Electron Oxygen Reduction. *Advanced Science*, **2021**, 8, e2101344	13.6	10
802	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	6.7	0
801	Symmetry-dependent field-free switching of perpendicular magnetization. *Nature Nanotechnology*, **2021**, 16, 277-282	28.7	32
800	Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Zn–Air Battery and Self-Driven Water Splitting. *Advanced Energy Materials*, **2020**, 10, 2002896	21.8	95
799	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	14.4	16
798	Chip-Level Integration of Covalent Organic Frameworks for Trace Benzene Sensing. *ACS Sensors*, **2020**, 5, 1474-1481	9.2	25
797	Imprinting Ferromagnetism and Superconductivity in Single Atomic Layers of Molecular Superlattices. *Advanced Materials*, **2020**, 32, e1907645	24	11
796	Engineering covalently bonded 2D layered materials by self-intercalation. *Nature*, **2020**, 581, 171-177	50.4	68
795	Extremely low thermal conductivity from bismuth selenohalides with 1D soft crystal structure. *Science China Materials*, **2020**, 63, 1759-1768	7.1	22
794	Two-Dimensional Metallic NiTe with Ultrahigh Environmental Stability, Conductivity, and Electrocatalytic Activity. *ACS Nano*, **2020**, 14, 9011-9020	16.7	27
793	An Anomalous Magneto-Optic Effect in Epitaxial Indium Selenide Layers. *Nano Letters*, **2020**, 20, 5330-5338	11.5	4
792	Domain Engineering in ReS2 by Coupling Strain during Electrochemical Exfoliation. *Advanced Functional Materials*, **2020**, 30, 2003057	15.6	8
791	Electronic and plasmonic phenomena at nonstoichiometric grain boundaries in metallic SrNbO. *Nanoscale*, **2020**, 12, 6844-6851	7.7	6
790	Potential-Dependent Phase Transition and Mo-Enriched Surface Reconstruction of CoOOH in a Heterostructured Co-Mo2C Precatalyst Enable Water Oxidation. *ACS Catalysis*, **2020**, 10, 4411-4419	13.1	88
789	Engineering Local and Global Structures of Single Co Atoms for a Superior Oxygen Reduction Reaction. *ACS Catalysis*, **2020**, 10, 5862-5870	13.1	76
788	Enhanced Valley Zeeman Splitting in Fe-Doped Monolayer MoS. *ACS Nano*, **2020**, 14, 4636-4645	16.7	32
787	Characteristic Lengths of Interlayer Charge Transfer in Correlated Oxide Heterostructures. *Nano Letters*, **2020**, 20, 2493-2499	11.5	4

786	Ultrahigh Average Realized in p-Type SnSe Crystalline Thermoelectrics through Producing Extrinsic Vacancies. *Journal of the American Chemical Society*, **2020**, 142, 5901-5909	16.4	51
785	Contrasting roles of small metallic elements M (M = Cu, Zn, Ni) in enhancing the thermoelectric performance of n-type PbM0.01Se. *Journal of Materials Chemistry A*, **2020**, 8, 5699-5708	13	12
784	Bulk Spin Torque-Driven Perpendicular Magnetization Switching in L1 FePt Single Layer. *Advanced Materials*, **2020**, 32, e2002607	24	32
783	Atomic Origin of Interface-Dependent Oxygen Migration by Electrochemical Gating at the LaAlO-SrTiO Heterointerface. *Advanced Science*, **2020**, 7, 2000729	13.6	1
782	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	9.5	9
781	Synergizing Mo Single Atoms and Mo C Nanoparticles on CNTs Synchronizes Selectivity and Activity of Electrocatalytic N Reduction to Ammonia. *Advanced Materials*, **2020**, 32, e2002177	24	93
780	Direct Growth of Wafer-Scale, Transparent, p-Type Reduced-Graphene-Oxide-like Thin Films by Pulsed Laser Deposition. *ACS Nano*, **2020**, 14, 3290-3298	16.7	6
779	Spin-Valley Locking Effect in Defect States of Monolayer MoS. *Nano Letters*, **2020**, 20, 2129-2136	11.5	27
778	Single Atom Electrocatalysis: Heterogeneous Single Atom Electrocatalysis, Where Singles Are Married (Adv. Energy Mater. 9/2020). *Advanced Energy Materials*, **2020**, 10, 2070037	21.8	5
777	Room Temperature Commensurate Charge Density Wave on Epitaxially Grown Bilayer 2H-Tantalum Sulfide on Hexagonal Boron Nitride. *ACS Nano*, **2020**, 14, 3917-3926	16.7	17
776	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	16.4	152
775	Energy-Efficient Stacks Covellite (CuS) on Polyethylene Terephthalate Film: A Sustainable Solution to Heat Management. *Journal of Physical Chemistry C*, **2020**, 124, 3314-3321	3.8	5
774	Heterogeneous Single Atom Electrocatalysis, Where Singles Are Married *Advanced Energy Materials*, **2020**, 10, 1903181	21.8	64
773	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. *Journal of the American Chemical Society*, **2020**, 142, 2948-2955	16.4	12
772	Band Sharpening and Band Alignment Enable High Quality Factor to Enhance Thermoelectric Performance in -Type PbS. *Journal of the American Chemical Society*, **2020**, 142, 4051-4060	16.4	71
771	Epitaxial Growth of Centimeter-Scale Single-Crystal MoS Monolayer on Au(111). *ACS Nano*, **2020**, 14, 5036-5045	16.7	107
770	Nanoscale Phase Mixture and Multifield-Induced Topotactic Phase Transformation in SrFeO. *ACS Applied Materials & Interfaces*, **2020**, 12, 21883-21893	9.5	6
769	Controlled Sign Reversal of Electroresistance in Oxide Tunnel Junctions by Electrochemical-Ferroelectric Coupling. *Physical Review Letters*, **2020**, 125, 266802	7.4	9

768	Flexible Ferroelectrics: Periodic Wrinkle-Patterned Single-Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity (Adv. Mater. 50/2020). *Advanced Materials*, **2020**, 32, 2070377	24	
767	Topological Hall Effect: Emergent Topological Hall Effect at a Charge-Transfer Interface (Small 50/2020). *Small*, **2020**, 16, 2070273	11	0
766	Hollow structure engineering of FeCo alloy nanoparticles electrospun in nitrogen-doped carbon enables high performance flexible all-solid-state zinc–air batteries. *Sustainable Energy and Fuels*, **2020**, 4, 1747-1753	5.8	26
765	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	9.5	9
764	Enhanced Magnetic Anisotropy and Orbital Symmetry Breaking in Manganite Heterostructures. *Advanced Functional Materials*, **2020**, 30, 1909536	15.6	10
763	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. *Energy and Environmental Science*, **2020**, 13, 229-237	35.4	43
762	Controlled Growth and Thickness-Dependent Conduction-Type Transition of 2D Ferrimagnetic Cr S Semiconductors. *Advanced Materials*, **2020**, 32, e1905896	24	58
761	Phase Diagram and Superconducting Dome of Infinite-Layer Nd_{1-x}Sr_{x}NiO_{2} Thin Films. *Physical Review Letters*, **2020**, 125, 147003	7.4	77
760	Cavity Plasmonics in Tunnel Junctions: Outcoupling and the Role of Surface Roughness. *Physical Review Applied*, **2020**, 14,	4.3	7
759	Trimetal atoms confined in openly accessible nitrogen-doped carbon constructs for an efficient ORR. *Journal of Materials Chemistry A*, **2020**, 8, 17266-17275	13	17
758	Magnetic Anisotropy of a Quasi Two-Dimensional Canted Antiferromagnet. *Nano Letters*, **2020**, 20, 1890-1895	11.5	6
757	Giant piezoelectricity in oxide thin films with nanopillar structure. *Science*, **2020**, 369, 292-297	33.3	34
756	High-performance potassium sodium niobate piezoceramics for ultrasonic transducer. *Nano Energy*, **2020**, 70, 104559	17.1	37
755	Emergent Topological Hall Effect at a Charge-Transfer Interface. *Small*, **2020**, 16, e2004683	11	2
754	On-Chip Template-Directed Conversion of Metal Hydroxides to Metal-Organic Framework Films with Enhanced Adhesion. *ACS Applied Materials & Interfaces*, **2020**, 12, 36715-36722	9.5	5
753	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. *Nature Communications*, **2020**, 11, 3729	17.4	57
752	Enhanced mechanical and thermoelectric properties enabled by hierarchical structure in medium-temperature Sb2Te3 based alloys. *Nano Energy*, **2020**, 78, 105228	17.1	13
751	Periodic Wrinkle-Patterned Single-Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity. *Advanced Materials*, **2020**, 32, e2004477	24	18

750	Memory Devices: MoS2/Polymer Heterostructures Enabling Stable Resistive Switching and Multistate Randomness (Adv. Mater. 42/2020). *Advanced Materials*, **2020**, 32, 2070317	24	1
749	Atomically-precise dopant-controlled single cluster catalysis for electrochemical nitrogen reduction. *Nature Communications*, **2020**, 11, 4389	17.4	52
748	MoS /Polymer Heterostructures Enabling Stable Resistive Switching and Multistate Randomness. *Advanced Materials*, **2020**, 32, e2002704	24	11
747	Materializing efficient methanol oxidation via electron delocalization in nickel hydroxide nanoribbon. *Nature Communications*, **2020**, 11, 4647	17.4	29
746	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	8.3	32
745	Space-confined microwave synthesis of ternary-layered BiOCl crystals with high-performance ultraviolet photodetection. *Informa□□Materi□y*, **2020**, 2, 593-600	23.1	25
744	Phase-Controlled Synthesis of Monolayer W Re S Alloy with Improved Photoresponse Performance. *Small*, **2020**, 16, e2000852	11	7
743	Single-Atom Catalysts: Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Zn□Air Battery and Self-Driven Water Splitting (Adv. Energy Mater. 48/2020). *Advanced Energy Materials*, **2020**, 10, 2070195	21.8	2
742	Nanoscale Topotactic Phase Transformation in SrFeO Epitaxial Thin Films for High-Density Resistive Switching Memory. *Advanced Materials*, **2019**, 31, e1903679	24	27
741	Comprehensive Investigation on the Thermoelectric Properties of p-Type PbTe-PbSe-PbS Alloys. *Advanced Electronic Materials*, **2019**, 5, 1900609	6.4	20
740	High-Concentration Niobium-Substituted WS Basal Domains with Reconfigured Electronic Band Structure for Hydrogen Evolution Reaction. *ACS Applied Materials & Interfaces*, **2019**, 11, 34862-34868	9.5	11
739	Growth of Nb-Doped Monolayer WS by Liquid-Phase Precursor Mixing. *ACS Nano*, **2019**, 13, 10768-10775	16.7	54
738	Current-induced magnetization switching in all-oxide heterostructures. *Nature Nanotechnology*, **2019**, 14, 939-944	28.7	64
737	Remarkably Enhanced Negative Electrocaloric Effect in PbZrO Thin Film by Interface Engineering. *ACS Applied Materials & Interfaces*, **2019**, 11, 36863-36870	9.5	16
736	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	13.1	168
735	High thermoelectric performance in low-cost SnSSe crystals. *Science*, **2019**, 365, 1418-1424	33.3	233
734	Effects of precursor pre-treatment on the vapor deposition of WS2 monolayers. *Nanoscale Advances*, **2019**, 1, 953-960	5.1	7
733	ZnO Nanosheets Abundant in Oxygen Vacancies Derived from Metal-Organic Frameworks for ppb-Level Gas Sensing. *Advanced Materials*, **2019**, 31, e1807161	24	141

732	Outstanding Piezoelectric Performance in Lead-Free 0.95(K,Na)(Sb,Nb)O3-0.05(Bi,Na,K)ZrO3 Thick Films with Oriented Nanophase Coexistence. *Advanced Electronic Materials*, **2019**, 5, 1800691	6.4	11
731	Unraveling High-Yield Phase-Transition Dynamics in Transition Metal Dichalcogenides on Metallic Substrates. *Advanced Science*, **2019**, 6, 1802093	13.6	14
730	Location-selective growth of two-dimensional metallic/semiconducting transition metal dichalcogenide heterostructures. *Nanoscale*, **2019**, 11, 4183-4189	7.7	10
729	Electrochemically Induced Amorphization and Unique Lithium and Sodium Storage Pathways in FeSbO Nanocrystals. *ACS Applied Materials & Interfaces*, **2019**, 11, 20082-20090	9.5	11
728	Selective Engineering of Chalcogen Defects in MoS by Low-Energy Helium Plasma. *ACS Applied Materials & Interfaces*, **2019**, 11, 24404-24411	9.5	24
727	A Coherently Strained Monoclinic [111]PbTiO3 Film Exhibiting Zero Poisson's Ratio State. *Advanced Functional Materials*, **2019**, 29, 1901687	15.6	19
726	High-Energy Gain Upconversion in Monolayer Tungsten Disulfide Photodetectors. *Nano Letters*, **2019**, 19, 5595-5603	11.5	24
725	Microstructural Origins of High Piezoelectric Performance: A Pathway to Practical Lead-Free Materials. *Advanced Functional Materials*, **2019**, 29, 1902911	15.6	30
724	Seeing atomic-scale structural origins and foreseeing new pathways to improved thermoelectric materials. *Materials Horizons*, **2019**, 6, 1548-1570	14.4	16
723	Single-Atom Coated Separator for Robust Lithium-Sulfur Batteries. *ACS Applied Materials & Interfaces*, **2019**, 11, 25147-25154	9.5	95
722	Synergistically optimizing interdependent thermoelectric parameters of n-type PbSe through alloying CdSe. *Energy and Environmental Science*, **2019**, 12, 1969-1978	35.4	63
721	Point Defects and Localized Excitons in 2D WSe. *ACS Nano*, **2019**, 13, 6050-6059	16.7	76
720	Controlling the Magnetic Properties of LaMnO /SrTiO Heterostructures by Stoichiometry and Electronic Reconstruction: Atomic-Scale Evidence. *Advanced Materials*, **2019**, 31, e1901386	24	19
719	Strong Charge Transfer at 2H-1T Phase Boundary of MoS for Superb High-Performance Energy Storage. *Small*, **2019**, 15, e1900131	11	37
718	Phase-Controlled Synthesis of Monolayer Ternary Telluride with a Random Local Displacement of Tellurium Atoms. *Advanced Materials*, **2019**, 31, e1900862	24	30
717	Metal□rganic framework-derived hierarchical MoS2/CoS2 nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. *Journal of Materials Chemistry A*, **2019**, 7, 13339-13346	13	81
716	Study of unique and highly crystalline MoS2/MoO2 nanostructures for electro chemical applications. *Materials Research Letters*, **2019**, 7, 275-281	7.4	11
715	Nitrogen-Doped Cobalt Phosphide for Enhanced Hydrogen Evolution Activity. *ACS Applied Materials & Interfaces*, **2019**, 11, 17359-17367	9.5	22

714	Enhanced magnetism in lightly doped manganite heterostructures: strain or stoichiometry?. *Nanoscale*, **2019**, 11, 7364-7370	7.7	10
713	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. *Chemical Engineering Journal*, **2019**, 369, 988-995	14.7	77
712	Amphoteric Indium Enables Carrier Engineering to Enhance the Power Factor and Thermoelectric Performance in n-Type AgnPb100InnTe100+2n (LIST). *Advanced Energy Materials*, **2019**, 9, 1900414	21.8	34
711	Atomic scale characterization of point and extended defects in niobate thin films. *Ultramicroscopy*, **2019**, 203, 82-87	3.1	2
710	Biosensors: ZnO Nanosheets Abundant in Oxygen Vacancies Derived from Metal-Organic Frameworks for ppb-Level Gas Sensing (Adv. Mater. 11/2019). *Advanced Materials*, **2019**, 31, 1970076	24	6
709	New Family of Plasmonic Photocatalysts without Noble Metals. *Chemistry of Materials*, **2019**, 31, 2320-2327	9.6	17
708	Highly Polarized Fluorescent Film Based on Aligned Quantum Rods by Contact Ink-Jet Printing Method. *IEEE Photonics Journal*, **2019**, 11, 1-11	1.8	4
707	Electrocaloric effect in ferroelectric ceramics with point defects. *Applied Physics Letters*, **2019**, 114, 142901	3.4	9
706	Atomically-thin Bi2MoO6 nanosheets with vacancy pairs for improved photocatalytic CO2 reduction. *Nano Energy*, **2019**, 61, 54-59	17.1	150
705	Piezoelectric Films: Outstanding Piezoelectric Performance in Lead-Free 0.95(K,Na)(Sb,Nb)O3-0.05(Bi,Na,K)ZrO3 Thick Films with Oriented Nanophase Coexistence (Adv. Electron. Mater. 4/2019). *Advanced Electronic Materials*, **2019**, 5, 1970020	6.4	1
704	2D Transition Metal Dichalcogenide: Unraveling High-Yield Phase-Transition Dynamics in Transition Metal Dichalcogenides on Metallic Substrates (Adv. Sci. 7/2019). *Advanced Science*, **2019**, 6, 1970042	13.6	78
703	Twinned Tungsten Carbonitride Nanocrystals Boost Hydrogen Evolution Activity and Stability. *Small*, **2019**, 15, e1900248	11	44
702	Healing of Planar Defects in 2D Materials via Grain Boundary Sliding. *Advanced Materials*, **2019**, 31, e1900237	24	24
701	Decorating Co/CoNx nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. *Energy Storage Materials*, **2019**, 16, 243-250	19.4	157
700	A machine perspective of atomic defects in scanning transmission electron microscopy. *Informati Materi*, **2019**, 1, 359-375	23.1	19
699	Engineering and Modifying Two-Dimensional Materials via Electron Beams. *Microscopy and Microanalysis*, **2019**, 25, 1474-1475	0.5	
698	Designing Energy Materials via Atomic-resolution Microscopy and Spectroscopy. *Microscopy and Microanalysis*, **2019**, 25, 1998-1999	0.5	0
697	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	16.4	152

696	Nano-Ferroelectric for High Efficiency Overall Water Splitting under Ultrasonic Vibration. *Angewandte Chemie - International Edition*, **2019**, 58, 15076-15081	16.4	87
695	Nano-Ferroelectric for High Efficiency Overall Water Splitting under Ultrasonic Vibration. *Angewandte Chemie*, **2019**, 131, 15220-15225	3.6	7
694	Chemically Exfoliated VSe Monolayers with Room-Temperature Ferromagnetism. *Advanced Materials*, **2019**, 31, e1903779	24	131
693	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. *Nature Communications*, **2019**, 10, 3149	17.4	20
692	Interface-based tuning of Rashba spin-orbit interaction in asymmetric oxide heterostructures with 3d electrons. *Nature Communications*, **2019**, 10, 3052	17.4	27
691	On-Chip Tailorability of Capacitive Gas Sensors Integrated with Metal□Organic Framework Films. *Angewandte Chemie*, **2019**, 131, 14227-14232	3.6	10
690	Multiscale Defects as Strong Phonon Scatters to Enhance Thermoelectric Performance in Mg2Sn1□Sbx Solid Solutions. *Small Methods*, **2019**, 3, 1900412	12.8	6
689	Simultaneous Boost of Power Factor and Figure-of-Merit in In-Cu Codoped SnTe. *Small*, **2019**, 15, e1902493	13	29
688	Layer Rotation-Angle-Dependent Excitonic Absorption in van der Waals Heterostructures Revealed by Electron Energy Loss Spectroscopy. *ACS Nano*, **2019**, 13, 9541-9550	16.7	17
687	On-Chip Tailorability of Capacitive Gas Sensors Integrated with Metal-Organic Framework Films. *Angewandte Chemie - International Edition*, **2019**, 58, 14089-14094	16.4	53
686	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	13	15
685	Percolated Strain Networks and Universal Scaling Properties of Strain Glasses. *Physical Review Letters*, **2019**, 123, 015701	7.4	9
684	Synergistic boost of output power density and efficiency in In-Li-codoped SnTe. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 21998-22003	11.5	15
683	Enhancing Thermoelectric Performance of p-Type PbSe through Suppressing Electronic Thermal Transports. *ACS Applied Energy Materials*, **2019**, 2, 8236-8243	6.1	18
682	Artificial two-dimensional polar metal by charge transfer to a ferroelectric insulator. *Communications Physics*, **2019**, 2,	5.4	13
681	Observation of an Emerging Charged Domain Wall at a Non-ferroelectric Heterointerface with Aberration-corrected STEM. *Microscopy and Microanalysis*, **2019**, 25, 672-673	0.5	
680	Correlated Lattice Instability and Emergent Charged Domain Walls at Oxide Heterointerfaces. *Advanced Functional Materials*, **2019**, 29, 1906655	15.6	4
679	Titelbild: On-Chip Tailorability of Capacitive Gas Sensors Integrated with Metal□Organic Framework Films (Angew. Chem. 40/2019). *Angewandte Chemie*, **2019**, 131, 14137-14137	3.6	

678	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	5.6	3
677	Three-Dimensional Resonant Exciton in Monolayer Tungsten Diselenide Actuated by Spin-Orbit Coupling. *ACS Nano*, **2019**, 13, 14529-14539	16.7	5
676	Enhanced Thermoelectric and Mechanical Properties in Yb0.3Co4Sb12 with In Situ Formed CoSi Nanoprecipitates. *Advanced Energy Materials*, **2019**, 9, 1902435	21.8	29
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