

Hui-Ming Cheng

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

775
papers

106,138
citations

151
h-index

309
g-index

826
ext. papers

118,739
ext. citations

12.1
avg, IF

8.75
L-index

#	Paper	IF	Citations
775	Two-Dimensional Functional Minerals as Sustainable Materials for Optics.. <i>Advanced Materials</i> , 2022 , e2110464	24	3
774	Ultrastable Interfacial Contacts Enabling Unimpeded Charge Transfer and Ion Diffusion in Flexible Lithium-Ion Batteries.. <i>Advanced Science</i> , 2022 , e2105419	13.6	3
773	Effect of C/SiC Volume Ratios on Mechanical and Oxidation Behaviors of Cf/CB ₂ C Composites Fabricated by Chemical Vapor Infiltration Technique. <i>Acta Metallurgica Sinica (English Letters)</i> , 2022 , 35, 801	2.5	0
772	Designing Electrophilic and Nucleophilic Dual Centers in the ReS Plane toward Efficient Bifunctional Catalysts for Li-CO Batteries.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	12
771	Densification of MXene films by sequential bridging.. <i>National Science Review</i> , 2022 , 9, nwab195	10.8	
770	Iron-doped NiS microcrystals with exposed {001} facets for electrocatalytic water oxidation. <i>Journal of Colloid and Interface Science</i> , 2022 , 608, 599-604	9.3	4
769	Response of microorganisms to phosphate nanoparticles in Pb polluted sediment: Implications of Pb bioavailability, enzyme activities and bacterial community. <i>Chemosphere</i> , 2022 , 286, 131643	8.4	2
768	Carrier Trapping in Wrinkled 2D Monolayer MoS for Ultrathin Memory.. <i>ACS Nano</i> , 2022 ,	16.7	4
767	Patterning of Wafer-scale MXene Films for High-performance Image Sensor Arrays.. <i>Advanced Materials</i> , 2022 , e2201298	24	5
766	Fabrication of Large Aerogel-Like Carbon/Carbon Composites with Excellent Load-Bearing Capacity and Thermal-Insulating Performance at 1800 °C.. <i>ACS Nano</i> , 2022 ,	16.7	3
765	A 2D material-based transparent hydrogel with engineerable interference colours.. <i>Nature Communications</i> , 2022 , 13, 1212	17.4	1
764	Enhancing hydrogen peroxide activation of CuCo layered double hydroxide by compositing with biochar: Performance and mechanism.. <i>Science of the Total Environment</i> , 2022 , 154188	10.2	1
763	Accurate structural descriptor enabled screening for nitrogen and oxygen vacancy codoped TiO ₂ with a large bandgap narrowing. <i>Journal of Materials Science and Technology</i> , 2022 , 122, 84-90	9.1	0
762	Fabrication of Large-Area Uniform Nanometer-Thick Functional Layers and Their Stacks for Flexible Quantum Dot Light-Emitting Diodes.. <i>Small Methods</i> , 2022 , 6, e2101030	12.8	0
761	Electrochemical Capacitors with Confined Redox Electrolytes and Porous Electrodes.. <i>Advanced Materials</i> , 2022 , e2202380	24	3
760	2D Functional Minerals as Sustainable Materials for Magneto-Optics (Adv. Mater. 16/2022). <i>Advanced Materials</i> , 2022 , 34, 2270124	24	0
759	Tailoring microstructures of carbon fiber reinforced carbon aerogel-like matrix composites by carbonization to modulate their mechanical properties and thermal conductivities. <i>Carbon</i> , 2022 , 196, 807-818	10.4	0

758	In-situ imaging techniques for advanced battery development. <i>Materials Today</i> , 2022 ,	21.8	1
757	Electrochemical Deposition of a Single-Crystalline Nanorod Polycyclic Aromatic Hydrocarbon Film with Efficient Charge and Exciton Transport.. <i>Angewandte Chemie - International Edition</i> , 2021 ,	16.4	3
756	Challenges and development of lithium-ion batteries for low temperature environments. <i>ETransportation</i> , 2021 , 100145	12.7	14
755	Construction of sandwich-structured C/C-SiC and C/C-SiC-ZrC composites with good mechanical and anti-ablation properties. <i>Journal of the European Ceramic Society</i> , 2021 ,	6	2
754	Lignocellulosic biomass derived N-doped and CoO-loaded carbocatalyst used as highly efficient peroxymonosulfate activator for ciprofloxacin degradation.. <i>Journal of Colloid and Interface Science</i> , 2021 , 610, 221-233	9.3	1
753	Constructing a Stable Interface Layer by Tailoring Solvation Chemistry in Carbonate Electrolytes for High Performance Lithium Metal Batteries. <i>Advanced Materials</i> , 2021 , e2108400	24	21
752	Uniform polypyrrole electrodeposition triggered by phytic acid-guided interface engineering for high energy density flexible supercapacitor.. <i>Journal of Colloid and Interface Science</i> , 2021 , 611, 356-365	9.3	4
751	Metallic Co and crystalline Co-Mo oxides supported on graphite felt for bifunctional electrocatalytic hydrogen evolution and urea oxidation.. <i>Journal of Colloid and Interface Science</i> , 2021 , 612, 413-423	9.3	4
750	A Ta-TaS monolith catalyst with robust and metallic interface for superior hydrogen evolution. <i>Nature Communications</i> , 2021 , 12, 6051	17.4	20
749	Graphene-Supported Atomically Dispersed Metals as Bifunctional Catalysts for Next-Generation Batteries Based on Conversion Reactions. <i>Advanced Materials</i> , 2021 , e2105812	24	23
748	A Durable and Efficient Electrocatalyst for Saline Water Splitting with Current Density Exceeding 2000 mA cm ² . <i>Advanced Functional Materials</i> , 2021 , 31, 2010367	15.6	36
747	A flexible ultrasensitive optoelectronic sensor array for neuromorphic vision systems. <i>Nature Communications</i> , 2021 , 12, 1798	17.4	66
746	Doping Concentration Modulation in Vanadium-Doped Monolayer Molybdenum Disulfide for Synaptic Transistors. <i>ACS Nano</i> , 2021 , 15, 7340-7347	16.7	13
745	Properties and photodetector applications of two-dimensional black arsenic phosphorus and black phosphorus. <i>Science China Information Sciences</i> , 2021 , 64, 1	3.4	13
744	Intercalated architecture of MAZ family layered van der Waals materials with emerging topological, magnetic and superconducting properties. <i>Nature Communications</i> , 2021 , 12, 2361	17.4	53
743	Polymorph Evolution Mechanisms and Regulation Strategies of Lithium Metal Anode under Multiphysical Fields. <i>Chemical Reviews</i> , 2021 , 121, 5986-6056	68.1	48
742	Largely Tunable Magneto-Coloration of Monolayer 2D Materials via Size Tailoring. <i>ACS Nano</i> , 2021 , 15, 9445-9452	16.7	1
741	Fabrication of high-conductivity RGO film at a temperature lower than 1500 °C by electrical current. <i>Journal of Materials Science: Materials in Electronics</i> , 2021 , 32, 11727-11736	2.1	1

740	Catalyst-Free Growth of Atomically Thin Bi ₂ O ₂ Se Nanoribbons for High-Performance Electronics and Optoelectronics. <i>Advanced Functional Materials</i> , 2021 , 31, 2101170	15.6	7
739	Aligned Carbon-Based Electrodes for Fast-Charging Batteries: A Review. <i>Small</i> , 2021 , 17, e2007676	11	13
738	Engineering the Active Sites of Graphene Catalyst: From CO Activation to Activate Li-CO Batteries. <i>ACS Nano</i> , 2021 , 15, 9841-9850	16.7	14
737	An in-situ solidification strategy to block polysulfides in Lithium-Sulfur batteries. <i>Energy Storage Materials</i> , 2021 , 37, 224-232	19.4	22
736	Ion-Dipole Chemistry Drives Rapid Evolution of Li Ions Solvation Sheath in Low-Temperature Li Batteries. <i>Advanced Energy Materials</i> , 2021 , 11, 2100935	21.8	38
735	Breaking the Rate-Integrity Dilemma in Large-Area Bubbling Transfer of Graphene by Strain Engineering. <i>Advanced Functional Materials</i> , 2021 , 31, 2104228	15.6	1
734	High-Performance ITO-Free Perovskite Solar Cells Enabled by Single-Walled Carbon Nanotube Films. <i>Advanced Functional Materials</i> , 2021 , 31, 2104396	15.6	11
733	Anisotropic moiré optical transitions in twisted monolayer/bilayer phosphorene heterostructures. <i>Nature Communications</i> , 2021 , 12, 3947	17.4	9
732	Flexible organic photodetectors and their use in wearable systems 2021 , 103145		1
731	Independent thickness and lateral size sorting of two-dimensional materials. <i>Science China Materials</i> , 2021 , 64, 2739-2746	7.1	2
730	An ultrasensitive molybdenum-based double-heterojunction phototransistor. <i>Nature Communications</i> , 2021 , 12, 4094	17.4	13
729	Dual-Phasic Carbon with Co Single Atoms and Nanoparticles as a Bifunctional Oxygen Electrocatalyst for Rechargeable Zn-Air Batteries. <i>Advanced Functional Materials</i> , 2021 , 31, 2103360	15.6	24
728	Dissolution-precipitation growth of uniform and clean two dimensional transition metal dichalcogenides. <i>National Science Review</i> , 2021 , 8, nwa115	10.8	16
727	Single-atom catalysts for metal-sulfur batteries: Current progress and future perspectives. <i>Journal of Energy Chemistry</i> , 2021 , 54, 452-466	12	28
726	In-situ self-assembly construction of hollow tubular g-CN isotype heterojunction for enhanced visible-light photocatalysis: Experiments and theories. <i>Journal of Hazardous Materials</i> , 2021 , 401, 123355	12.8	83
725	Extremely efficient flexible organic solar cells with a graphene transparent anode: Dependence on number of layers and doping of graphene. <i>Carbon</i> , 2021 , 171, 350-358	10.4	12
724	Six-membered-ring inorganic materials: definition and prospects. <i>National Science Review</i> , 2021 , 8, nwa148	10.8	4
723	Chemical Vapor Deposition Growth of Two-Dimensional Compound Materials: Controllability, Material Quality, and Growth Mechanism. <i>Accounts of Materials Research</i> , 2021 , 2, 36-47	7.5	31

722	Structure, Preparation, and Applications of 2D Material-Based Metal Semiconductor Heterostructures. <i>Small Structures</i> , 2021 , 2, 2000093	8.7	36
721	The application of Zeolitic imidazolate frameworks (ZIFs) and their derivatives based materials for photocatalytic hydrogen evolution and pollutants treatment. <i>Chemical Engineering Journal</i> , 2021 , 417, 127914	14.7	30
720	Surface and interface engineering of two-dimensional bismuth-based photocatalysts for ambient molecule activation. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 196-233	13	19
719	Carbon Dots-Decorated Carbon-Based Metal-Free Catalysts for Electrochemical Energy Storage. <i>Small</i> , 2021 , 17, e2002998	11	15
718	Modulating Electronic Structure of Monolayer Transition Metal Dichalcogenides by Substitutional Nb-Doping. <i>Advanced Functional Materials</i> , 2021 , 31, 2006941	15.6	23
717	Insights into the deposition chemistry of Li ions in nonaqueous electrolyte for stable Li anodes. <i>Chemical Society Reviews</i> , 2021 , 50, 3178-3210	58.5	43
716	High-performance flexible resistive random access memory devices based on graphene oxidized with a perpendicular oxidation gradient. <i>Nanoscale</i> , 2021 , 13, 2448-2455	7.7	5
715	Efficient Reversible Conversion between MoS and Mo/Na S Enabled by Graphene-Supported Single Atom Catalysts. <i>Advanced Materials</i> , 2021 , 33, e2007090	24	46
714	Superconductivity and High-Pressure Performance of 2D MoC Crystals. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 2219-2225	6.4	1
713	Lithium Metal Batteries: Ion-Dipole Chemistry Drives Rapid Evolution of Li Ions Solvation Sheath in Low-Temperature Li Batteries (Adv. Energy Mater. 28/2021). <i>Advanced Energy Materials</i> , 2021 , 11, 2170112	21.8	1
712	Collective Behavior Induced Highly Sensitive Magneto-Optic Effect in 2D Inorganic Liquid Crystals. <i>Journal of the American Chemical Society</i> , 2021 , 143, 12886-12893	16.4	1
711	High-Performance Lithium Metal Batteries with a Wide Operating Temperature Range in Carbonate Electrolyte by Manipulating Interfacial Chemistry. <i>ACS Energy Letters</i> , 2021 , 6, 3170-3179	20.1	18
710	Realization of a non-markov chain in a single 2D mineral RRAM. <i>Science Bulletin</i> , 2021 , 66, 1634-1640	10.6	4
709	Nanoribbons: Catalyst-Free Growth of Atomically Thin Bi ₂ O ₂ Se Nanoribbons for High-Performance Electronics and Optoelectronics (Adv. Funct. Mater. 31/2021). <i>Advanced Functional Materials</i> , 2021 , 31, 2170230	15.6	1
708	Magnetic Doping Induced Superconductivity-to-Incommensurate Density Waves Transition in a 2D Ultrathin Cr-Doped MoC Crystal. <i>ACS Nano</i> , 2021 , 15, 14938-14946	16.7	1
707	A flexible nickel phthalocyanine resistive random access memory with multi-level data storage capability. <i>Journal of Materials Science and Technology</i> , 2021 , 86, 151-157	9.1	4
706	Glue-assisted grinding exfoliation of large-size 2D materials for insulating thermal conduction and large-current-density hydrogen evolution. <i>Materials Today</i> , 2021 , 51, 145-145	21.8	10
705	A Scalable Artificial Neuron Based on Ultrathin Two-Dimensional Titanium Oxide. <i>ACS Nano</i> , 2021 , 15, 15123-15131	16.7	5

704	Engineering d-p Orbital Hybridization in Single-Atom Metal-Embedded Three-Dimensional Electrodes for Li-S Batteries. <i>Advanced Materials</i> , 2021 , 33, e2105947	24	41
703	Ultralight carbon fiber felt reinforced monolithic carbon aerogel composites with excellent thermal insulation performance. <i>Carbon</i> , 2021 , 183, 525-529	10.4	7
702	Stress release in high-capacity flexible lithium-ion batteries through nested wrinkle texturing of graphene. <i>Journal of Energy Chemistry</i> , 2021 , 61, 243-249	12	6
701	Fluorination-assisted preparation of self-supporting single-atom Fe-N-doped single-wall carbon nanotube film as bifunctional oxygen electrode for rechargeable Zn-Air batteries. <i>Applied Catalysis B: Environmental</i> , 2021 , 294, 120239	21.8	21
700	Hierarchical urchin-like amorphous carbon with Co-adding anchored on nickel foam: A free-standing electrode for advanced asymmetrical supercapacitors and adsorbed Pb (II). <i>Journal of Colloid and Interface Science</i> , 2021 , 603, 58-69	9.3	6
699	Toward an Understanding of the Reversible Li-CO Batteries over Metal-N-Functionalized Graphene Electrocatalysts.. <i>ACS Nano</i> , 2021 ,	16.7	10
698	Semiconductor nanochannels in metallic carbon nanotubes by thermomechanical chirality alteration.. <i>Science</i> , 2021 , 374, 1616-1620	33.3	8
697	The importance of H ₂ in the controlled growth of semiconducting single-wall carbon nanotubes. <i>Journal of Materials Science and Technology</i> , 2020 , 54, 105-111	9.1	1
696	Reliable liquid electrolytes for lithium metal batteries. <i>Energy Storage Materials</i> , 2020 , 30, 113-129	19.4	44
695	Critical review of recent progress of flexible perovskite solar cells. <i>Materials Today</i> , 2020 , 39, 66-88	21.8	70
694	Fast lithium ion transport in solid polymer electrolytes from polysulfide-bridged copolymers. <i>Nano Energy</i> , 2020 , 75, 104976	17.1	11
693	Recent Progress in 3D Printing of 2D Material-Based Macrostructures. <i>Advanced Materials Technologies</i> , 2020 , 5, 1901066	6.8	13
692	A flexible thermoelectric device based on a Bi ₂ Te ₃ -carbon nanotube hybrid. <i>Journal of Materials Science and Technology</i> , 2020 , 58, 80-85	9.1	12
691	Mechanical-electro-magnetic coupling in strained bilayer CrI ₃ . <i>Science China Technological Sciences</i> , 2020 , 63, 1265-1271	3.5	2
690	3D graphene aerogel based photocatalysts: Synthesized, properties, and applications. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020 , 594, 124666	5.1	11
689	Transport through a network of two-dimensional NbC superconducting crystals connected via weak links. <i>Physical Review B</i> , 2020 , 101,	3.3	1
688	The Chemistry and Promising Applications of Graphene and Porous Graphene Materials. <i>Advanced Functional Materials</i> , 2020 , 30, 1909035	15.6	79
687	Defect and interlayer coupling tuned quasiparticle scattering in 2D disordered Mo ₂ C superconducting microcrystals. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 434002	3	1

686	Structure-related electrochemical performance of organosulfur compounds for lithium-sulfur batteries. <i>Energy and Environmental Science</i> , 2020 , 13, 1076-1095	35.4	69
685	An Anion-Tuned Solid Electrolyte Interphase with Fast Ion Transfer Kinetics for Stable Lithium Anodes. <i>Advanced Energy Materials</i> , 2020 , 10, 1903843	21.8	92
684	Second Time-Scale Synthesis of High-Quality Graphite Films by Quenching for Effective Electromagnetic Interference Shielding. <i>ACS Nano</i> , 2020 , 14, 3121-3128	16.7	35
683	Superhigh Electromagnetic Interference Shielding of Ultrathin Aligned Pristine Graphene Nanosheets Film. <i>Advanced Materials</i> , 2020 , 32, e1907411	24	140
682	Synthesis of monolithic carbon aerogels with high mechanical strength via ambient pressure drying without solvent exchange. <i>Journal of Materials Science and Technology</i> , 2020 , 50, 66-74	9.1	14
681	Bi-Cation Electrolyte for a 1.7 V Aqueous Zn Ion Battery. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 13790-13796	9.5	32
680	Monolayer carbon-encapsulated Mo-doped Ni nanoparticles anchored on single-wall carbon nanotube film for total water splitting. <i>Applied Catalysis B: Environmental</i> , 2020 , 269, 118823	21.8	24
679	Metal sulfide/MOF-based composites as visible-light-driven photocatalysts for enhanced hydrogen production from water splitting. <i>Coordination Chemistry Reviews</i> , 2020 , 409, 213220	23.2	92
678	Ligand-assisted cation-exchange engineering for high-efficiency colloidal Cs _{1-x} FaxPb ₁₃ quantum dot solar cells with reduced phase segregation. <i>Nature Energy</i> , 2020 , 5, 79-88	62.3	237
677	A Flexible Carbon Nanotube Sen-Memory Device. <i>Advanced Materials</i> , 2020 , 32, e1907288	24	26
676	A Nanosheet Array of Cu ₂ Se Intercalation Compound with Expanded Interlayer Space for Sodium Ion Storage. <i>Advanced Energy Materials</i> , 2020 , 10, 2000666	21.8	33
675	Sustainable hydrogen production by molybdenum carbide-based efficient photocatalysts: From properties to mechanism. <i>Advances in Colloid and Interface Science</i> , 2020 , 279, 102144	14.3	34
674	Carbon-Based Fibers for Advanced Electrochemical Energy Storage Devices. <i>Chemical Reviews</i> , 2020 , 120, 2811-2878	68.1	156
673	Mass production of 2D materials by intermediate-assisted grinding exfoliation. <i>National Science Review</i> , 2020 , 7, 324-332	10.8	50
672	A highly active and durable electrocatalyst for large current density hydrogen evolution reaction. <i>Science Bulletin</i> , 2020 , 65, 123-130	10.6	31
671	High-efficiency and stable silicon heterojunction solar cells with lightly fluorinated single-wall carbon nanotube films. <i>Nano Energy</i> , 2020 , 69, 104442	17.1	16
670	Unsaturated Single Atoms on Monolayer Transition Metal Dichalcogenides for Ultrafast Hydrogen Evolution. <i>ACS Nano</i> , 2020 , 14, 767-776	16.7	69
669	Semiconductor-based photocatalysts for photocatalytic and photoelectrochemical water splitting: will we stop with photocorrosion?. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 2286-2322	13	123

668	Intercalation-Induced Conversion Reactions Give High-Capacity Potassium Storage. <i>ACS Nano</i> , 2020 , 14, 14026-14035	16.7	17
667	Porous Graphene Materials: The Chemistry and Promising Applications of Graphene and Porous Graphene Materials (Adv. Funct. Mater. 41/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070275	15.6	17
666	Pushing the conductance and transparency limit of monolayer graphene electrodes for flexible organic light-emitting diodes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 25991-25998	11.5	10
665	Status and prospects of porous graphene networks for lithium-sulfur batteries. <i>Materials Horizons</i> , 2020 , 7, 2487-2518	14.4	33
664	Precise Identification of the Active Phase of Cobalt Catalyst for Carbon Nanotube Growth by Transmission Electron Microscopy. <i>ACS Nano</i> , 2020 ,	16.7	18
663	Chemical vapor deposition of layered two-dimensional MoSiN materials. <i>Science</i> , 2020 , 369, 670-674	33.3	198
662	Superhigh Uniform Magnetic Cr Substitution in a 2D Mo C Superconductor for a Macroscopic-Scale Kondo Effect. <i>Advanced Materials</i> , 2020 , 32, e2002825	24	3
661	High-throughput production of cheap mineral-based two-dimensional electrocatalysts for high-current-density hydrogen evolution. <i>Nature Communications</i> , 2020 , 11, 3724	17.4	51
660	Giant magneto-birefringence effect and tuneable colouration of 2D crystal suspensions. <i>Nature Communications</i> , 2020 , 11, 3725	17.4	10
659	Megamerger of MOFs and g-C ₃ N ₄ for energy and environment applications: upgrading the framework stability and performance. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 17883-17906	13	19
658	Synthesis of Ultrahigh-Quality Monolayer Molybdenum Disulfide through In Situ Defect Healing with Thiol Molecules. <i>Small</i> , 2020 , 16, e2003357	11	12
657	CdPS nanosheets-based membrane with high proton conductivity enabled by Cd vacancies. <i>Science</i> , 2020 , 370, 596-600	33.3	36
656	Distinct superconducting properties and hydrostatic pressure effects in 2D H ₂ and EMo ₂ C crystal sheets. <i>NPG Asia Materials</i> , 2020 , 12,	10.3	4
655	Homogeneous and Fast Ion Conduction of PEO-Based Solid-State Electrolyte at Low Temperature. <i>Advanced Functional Materials</i> , 2020 , 30, 2007172	15.6	71
654	Strategies towards Low-Cost Dual-Ion Batteries with High Performance. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 3802-3832	16.4	155
653	Transfer-free CVD graphene for highly sensitive glucose sensors. <i>Journal of Materials Science and Technology</i> , 2020 , 37, 71-76	9.1	16
652	Dual-Additive Assisted Chemical Vapor Deposition for the Growth of Mn-Doped 2D MoS with Tunable Electronic Properties. <i>Small</i> , 2020 , 16, e1903181	11	28
651	An integrated thermoelectric-assisted photoelectrochemical system to boost water splitting. <i>Science Bulletin</i> , 2020 , 65, 1163-1169	10.6	10

650	Vertical Chemical Vapor Deposition Growth of Highly Uniform 2D Transition Metal Dichalcogenides. <i>ACS Nano</i> , 2020 , 14, 4646-4653	16.7	49
649	Lithium Anodes: An Anion-Tuned Solid Electrolyte Interphase with Fast Ion Transfer Kinetics for Stable Lithium Anodes (Adv. Energy Mater. 14/2020). <i>Advanced Energy Materials</i> , 2020 , 10, 2070063	21.8	2
648	Micro-Macroscopic Coupled Electrode Architecture for High-Energy-Density Lithium Sulfur Batteries. <i>ACS Applied Energy Materials</i> , 2019 , 2, 7393-7402	6.1	6
647	Perfect proton selectivity in ion transport through two-dimensional crystals. <i>Nature Communications</i> , 2019 , 10, 4243	17.4	31
646	Production of carbon dots during the liquid phase exfoliation of MoS ₂ quantum dots. <i>Carbon</i> , 2019 , 155, 243-249	10.4	6
645	Suppressing lithium dendrite formation by slowing its desolvation kinetics. <i>Chemical Communications</i> , 2019 , 55, 13211-13214	5.8	22
644	Roles of multiwall carbon nanotubes in phytoremediation: cadmium uptake and oxidative burst in <i>Boehmeria nivea</i> (L.) Gaudich. <i>Environmental Science: Nano</i> , 2019 , 6, 851-862	7.1	28
643	Ultrahigh-voltage integrated micro-supercapacitors with designable shapes and superior flexibility. <i>Energy and Environmental Science</i> , 2019 , 12, 1534-1541	35.4	129
642	Die wiederaufladbare Aluminiumbatterie: Möglichkeiten und Herausforderungen. <i>Angewandte Chemie</i> , 2019 , 131, 12104-12124	3.6	15
641	Synthesis and applications of three-dimensional graphene network structures. <i>Materials Today Nano</i> , 2019 , 5, 100027	9.7	47
640	Carbon-Based Metal-Free Catalysts for Energy Storage and Environmental Remediation. <i>Advanced Materials</i> , 2019 , 31, e1806128	24	118
639	The Rechargeable Aluminum Battery: Opportunities and Challenges. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 11978-11996	16.4	168
638	A Desolvated Solid-Solid Interface for a High-Capacitance Electric Double Layer. <i>Advanced Energy Materials</i> , 2019 , 9, 1803715	21.8	11
637	Engineering Two-Dimensional Materials and Their Heterostructures as High-Performance Electrocatalysts. <i>Electrochemical Energy Reviews</i> , 2019 , 2, 373-394	29.3	47
636	Smart Materials and Design toward Safe and Durable Lithium Ion Batteries. <i>Small Methods</i> , 2019 , 3, 1900323	12.3	34
635	Interlayer epitaxy of wafer-scale high-quality uniform AB-stacked bilayer graphene films on liquid PtSi/solid Pt. <i>Nature Communications</i> , 2019 , 10, 2809	17.4	27
634	Carbon nanotube-linked hollow carbon nanospheres doped with iron and nitrogen as single-atom catalysts for the oxygen reduction reaction in acidic solutions. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 14478-14482	13	40
633	Carbon nanotube/silicon heterojunctions for photovoltaic applications. <i>Nano Materials Science</i> , 2019 , 1, 156-172	10.2	30

632	Secondary-Atom-Assisted Synthesis of Single Iron Atoms Anchored on N-Doped Carbon Nanowires for Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2019 , 9, 5929-5934	13.1	98
631	Energy band edge alignment of anisotropic BiVO ₄ to drive photoelectrochemical hydrogen evolution. <i>Materials Today Energy</i> , 2019 , 13, 205-213	7	8
630	An overview on nitride and nitrogen-doped photocatalysts for energy and environmental applications. <i>Composites Part B: Engineering</i> , 2019 , 172, 704-723	10	41
629	Gradient Sn-Doped Heteroepitaxial Film of Faceted Rutile TiO ₂ as an Electron Selective Layer for Efficient Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 19638-19646	9.5	19
628	Defective graphene as a high-efficiency Raman enhancement substrate. <i>Journal of Materials Science and Technology</i> , 2019 , 35, 1996-2002	9.1	10
627	A Double Support Layer for Facile Clean Transfer of Two-Dimensional Materials for High-Performance Electronic and Optoelectronic Devices. <i>ACS Nano</i> , 2019 , 13, 5513-5522	16.7	18
626	Transfer Methods of Graphene from Metal Substrates: A Review. <i>Small Methods</i> , 2019 , 3, 1900049	12.8	35
625	A Freestanding Single-Wall Carbon Nanotube Film Decorated with N-Doped Carbon-Encapsulated Ni Nanoparticles as a Bifunctional Electrocatalyst for Overall Water Splitting. <i>Advanced Science</i> , 2019 , 6, 1802177	13.6	38
624	2D hierarchical yolk-shell heterostructures as advanced host-interlayer integrated electrode for enhanced Li-S batteries. <i>Journal of Energy Chemistry</i> , 2019 , 36, 64-73	12	29
623	Layer-Stacking, Defects, and Robust Superconductivity on the Mo-Terminated Surface of Ultrathin MoC Flakes Grown by CVD. <i>Nano Letters</i> , 2019 , 19, 3327-3335	11.5	15
622	Nickel phthalocyanine as an excellent hole-transport material in inverted planar perovskite solar cells. <i>Chemical Communications</i> , 2019 , 55, 5343-5346	5.8	19
621	Ultrafast Transition of Nonuniform Graphene to High-Quality Uniform Monolayer Films on Liquid Cu. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 17629-17636	9.5	9
620	Towards the practical use of flexible lithium ion batteries. <i>Energy Storage Materials</i> , 2019 , 23, 434-438	19.4	43
619	Multifunctional fabrics of carbon nanotube fibers. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 8790-8797	13	32
618	Identification of active sites in nitrogen and sulfur co-doped carbon-based oxygen reduction catalysts. <i>Carbon</i> , 2019 , 147, 303-311	10.4	31
617	Boosting photoelectrochemical water splitting performance of Ta ₃ N ₅ nanorod array photoanodes by forming a dual co-catalyst shell. <i>Nano Energy</i> , 2019 , 59, 683-688	17.1	36
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615	Electric Double Layer: A Desolvated Solid-Solid Interface for a High-Capacitance Electric Double Layer (Adv. Energy Mater. 12/2019). <i>Advanced Energy Materials</i> , 2019 , 9, 1970037	21.8	1

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612	Overview of the synthesis of MXenes and other ultrathin 2D transition metal carbides and nitrides. <i>Current Opinion in Solid State and Materials Science</i> , 2019 , 23, 149-163	12	178
611	Effects of domain structures on vortex state of two-dimensional superconducting Mo ₂ C crystals. <i>2D Materials</i> , 2019 , 6, 021005	5.9	5
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608	Homogeneous Doping of Substitutional Nitrogen/Carbon in TiO ₂ Plates for Visible Light Photocatalytic Water Oxidation. <i>Advanced Functional Materials</i> , 2019 , 29, 1901943	15.6	44
607	Key Aspects of Lithium Metal Anodes for Lithium Metal Batteries. <i>Small</i> , 2019 , 15, e1900687	11	134
606	Free-standing integrated cathode derived from 3D graphene/carbon nanotube aerogels serving as binder-free sulfur host and interlayer for ultrahigh volumetric-energy-density lithium sulfur batteries. <i>Nano Energy</i> , 2019 , 60, 743-751	17.1	98
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604	Controlled Vapor-Solid Deposition of Millimeter-Size Single Crystal 2D Bi ₂ O ₂ Se for High-Performance Phototransistors. <i>Advanced Functional Materials</i> , 2019 , 29, 1807979	15.6	74
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601	Hollow Nanostructures for Photocatalysis: Advantages and Challenges. <i>Advanced Materials</i> , 2019 , 31, e1801369	24	305
600	The Regulating Role of Carbon Nanotubes and Graphene in Lithium-Ion and Lithium-Sulfur Batteries. <i>Advanced Materials</i> , 2019 , 31, e1800863	24	234
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597	Oriented outperforms disorder: Thickness-independent mass transport for lithium-sulfur batteries. <i>Carbon</i> , 2019 , 154, 90-97	10.4	10

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592	Improved Damping and High Strength of Graphene-Coated Nickel Hybrid Foams. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 42690-42696	9.5	11
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589	Reconstructed transparent conductive layers of fluorine doped tin oxide for greatly weakened hysteresis and improved efficiency of perovskite solar cells. <i>Chemical Communications</i> , 2019 , 56, 129-132	5.8	2
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460	Growth of semiconducting single-wall carbon nanotubes with a narrow band-gap distribution. <i>Nature Communications</i> , 2016 , 7, 11160	17.4	62
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458	Elemental superdoping of graphene and carbon nanotubes. <i>Nature Communications</i> , 2016 , 7, 10921	17.4	190
457	Quantitative Analysis of Temperature Dependence of Raman shift of monolayer WS ₂ . <i>Scientific Reports</i> , 2016 , 6, 32236	4.9	52
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455	Selective Breaking of Hydrogen Bonds of Layered Carbon Nitride for Visible Light Photocatalysis. <i>Advanced Materials</i> , 2016 , 28, 6471-7	24	390
454	3D Interconnected Electrode Materials with Ultrahigh Areal Sulfur Loading for Li-S Batteries. <i>Advanced Materials</i> , 2016 , 28, 3374-82	24	433
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450	Enhanced Photocatalytic H ₂ Production in Core-Shell Engineered Rutile TiO ₂ . <i>Advanced Materials</i> , 2016 , 28, 5850-6	24	152
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446	The smart era of electrochemical energy storage devices. <i>Energy Storage Materials</i> , 2016 , 3, 66-68	19.4	24
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- 2 An Interlayer Containing Dissociated LiNO₃ with Fast Release Speed for Stable Lithium Metal Batteries with 400 Wh kg⁻¹ Energy Density. *Small*,2202349 11 2
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