Xiao-Lin Wei

List of Publications by Year
in descending order

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76 papers	3,433 citations	147566 31 h-index	143772 57 g-index
77 all docs	77 docs citations	77 times ranked	5574 citing authors

#	Article	IF	Citations
1	First-Principles Study of Phosphorene and Graphene Heterostructure as Anode Materials for Rechargeable Li Batteries. Journal of Physical Chemistry Letters, 2015, 6, 5002-5008.	2.1	274
2	Tunable dipole and carrier mobility for a few layer Janus MoSSe structure. Journal of Materials Chemistry C, 2018, 6, 1693-1700.	2.7	164
3	Self-Assembled Three-Dimensional Graphene-Based Aerogel with Embedded Multifarious Functional Nanoparticles and Its Excellent Photoelectrochemical Activities. ACS Sustainable Chemistry and Engineering, 2014, 2, 741-748.	3.2	143
4	Pristine and defect-containing phosphorene as promising anode materials for rechargeable Li batteries. Journal of Materials Chemistry A, 2015, 3, 11246-11252.	5.2	136
5	Engineering Ultrathin C₃N₄ Quantum Dots on Graphene as a Metal-Free Water Reduction Electrocatalyst. ACS Catalysis, 2018, 8, 3965-3970.	5.5	130
6	MoS₂â€Quantumâ€Dotâ€Interspersed Li₄Ti₅O₁₂ Nanosheets with Enhanced Performance for Liâ€and Naâ€Ion Batteries. Advanced Functional Materials, 2016, 26, 3349-3358.	7.8	128
7	Self-assembled FeS₂ cubes anchored on reduced graphene oxide as an anode material for lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 2090-2096.	5.2	122
8	Upconversion-P25-graphene composite as an advanced sunlight driven photocatalytic hybrid material. Journal of Materials Chemistry, 2012, 22, 11765.	6.7	119
9	R-graphyne: a new two-dimensional carbon allotrope with versatile Dirac-like point in nanoribbons. Journal of Materials Chemistry A, 2013, 1, 5341.	5.2	118
10	Thermal transport in graphyne nanoribbons. Physical Review B, 2012, 85, .	1.1	103
11	Three-dimensional interconnected Ni(Fe)OxHy nanosheets on stainless steel mesh as a robust integrated oxygen evolution electrode. Nano Research, 2018, 11, 1294-1300.	5.8	103
12	Ultra-low thermal conductivity of two-dimensional phononic crystals in the incoherent regime. Npj Computational Materials, 2018, 4, .	3.5	99
13	Modulating the atomic and electronic structures through alloying and heterostructure of single-layer MoS₂. Journal of Materials Chemistry A, 2014, 2, 2101-2109.	5.2	92
14	An extremely stable MnO2 anode incorporated with 3D porous graphene-like networks for lithium-ion batteries. Journal of Materials Chemistry A, 2014, 2, 3163.	5.2	91
15	A Bond-order Theory on the Phonon Scattering by Vacancies in Two-dimensional Materials. Scientific Reports, 2014, 4, 5085.	1.6	91
16	A macroscopic three-dimensional tetrapod-separated graphene-like oxygenated N-doped carbon nanosheet architecture for use in supercapacitors. Journal of Materials Chemistry A, 2016, 4, 9900-9909.	5.2	86
17	Freestanding, Hierarchical, and Porous Bilayered Na_xV₂O₅Â·nH₂O/rGO/CNT Composites as High-Performance Cathode Materials for Nonaqueous K-Ion Batteries and Aqueous Zinc-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 706-716.	4.0	82
18	In situ shape and phase transformation synthesis of Co3S4 nanosheet arrays for high-performance electrochemical supercapacitors. RSC Advances, 2013, 3, 22922.	1.7	66

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19	Rational Construction of a Functionalized V₂O₅ Nanosphere/MWCNT Layerâ€byâ€Layer Nanoarchitecture as Cathode for Enhanced Performance of Lithiumâ€Ion Batteries. Advanced Functional Materials, 2015, 25, 5633-5639.	7.8	62
20	Free-standing 3D composite of CoO nanocrystals anchored on carbon nanotubes as high-power anodes in Li-Ion hybrid supercapacitors. Journal of Power Sources, 2019, 437, 226934.	4.0	57
21	A Facile and Low-Cost Route to Heteroatom Doped Porous Carbon Derived from Broussonetia Papyrifera Bark with Excellent Supercapacitance and CO2 Capture Performance. Scientific Reports, 2016, 6, 22646.	1.6	52
22	Two-dimensional topological insulators with tunable band gaps: Single-layer HgTe and HgSe. Scientific Reports, 2015, 5, 14115.	1.6	50
23	Enhanced gas sensor based on nitrogen-vacancy graphene nanoribbons. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 559-562.	0.9	49
24	Thermoelectric properties of gamma-graphyne nanoribbons and nanojunctions. Journal of Applied Physics, 2013, 114, .	1.1	49
25	Surface oxide induced effects on thin films of the topological insulators Bi<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>Se<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>and Bi<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow />	1.1	49
26	Electrochemically reduced graphene oxide with porous structure as a binder-free electrode for high-rate supercapacitors. RSC Advances, 2014, 4, 13673.	1.7	48
27	Electrostatic properties of few-layer MoS2 films. AIP Advances, 2013, 3, .	0.6	46
28	Phonon mean free path spectrum and thermal conductivity for Si1â^'xGex nanowires. Applied Physics Letters, 2014, 104, .	1.5	46
29	Scalable In Situ Reactive Assembly of Polypyrroleâ€Coated MnO₂ Nanowire and Carbon Nanotube Composite as Freestanding Cathodes for High Performance Aqueous Znâ€Ion Batteries. ChemElectroChem, 2020, 7, 2762-2770.	1.7	45
30	Ultrafast hetero-assembly of monolithic interwoven V2O5 nanobelts/carbon nanotubes architectures for high-energy alkali-ion batteries. Journal of Power Sources, 2018, 395, 295-304.	4.0	37
31	Porous N-doped carbon sheets wrapped MnO in 3D carbon networks as high-performance anode for Li-ion batteries. Electrochimica Acta, 2020, 342, 136115.	2.6	37
32	Spiral growth of topological insulator Sb2Te3 nanoplates. Applied Physics Letters, 2013, 102, .	1.5	32
33	Free-standing Hierarchical Porous Assemblies of Commercial TiO 2 Nanocrystals and Multi-walled Carbon Nanotubes as High-performance Anode Materials for Sodium Ion Batteries. Electrochimica Acta, 2017, 236, 33-42.	2.6	29
34	Tuning the electronic properties of monolayer MoS2, MoSe2 and MoSSe by applying z-axial strain. Chemical Physics Letters, 2019, 730, 191-197.	1.2	29
35	Fe3O4â€“carbon nanocomposites via a simple synthesis as anode materials for rechargeable lithium ion batteries. CrystEngComm, 2013, 15, 9849.	1.3	28
36	Size and boundary scattering controlled contribution of spectral phonons to the thermal conductivity in graphene ribbons. Journal of Applied Physics, 2014, 115, .	1.1	28

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37	Role of intrinsic dipole on photocatalytic water splitting for Janus MoSSe/nitrides heterostructure: A first-principles study. Progress in Natural Science: Materials International, 2019, 29, 335-340.	1.8	28
38	Yolk-shell spheres constructed of ultrathin MoSe2 nanosheets as a high-performance anode for sodium dual ion batteries. Solid State Ionics, 2020, 353, 115373.	1.3	27
39	Energy gaps in nitrogen delta-doping graphene: A first-principles study. Applied Physics Letters, 2011, 99, 012107.	1.5	25
40	Protein-assisted assembly of mesoporous nanocrystals and carbon nanotubes for self-supporting high-performance sodium electrodes. Journal of Materials Chemistry A, 2017, 5, 2749-2758.	5.2	24
41	Hierarchical MoS₂@Nâ€Doped Carbon Hollow Spheres with Enhanced Performance in Sodium Dualâ€Ion Batteries. ChemElectroChem, 2019, 6, 661-667.	1.7	24
42	Creating Unidirectional Fast Ion Diffusion Channels in G/NiS₂â€MoS₂ÂHeterostructures for Highâ€Performance Sodiumâ€Ion Batteries. Small, 2022, 18, e2200782.	5.2	24
43	Intrinsic defect engineered Janus MoSSe sheet as a promising photocatalyst for water splitting. RSC Advances, 2020, 10, 10816-10825.	1.7	22
44	Significantly improved high-rate Li-ion batteries anode by encapsulating tin dioxide nanocrystals into mesotunnels. CrystEngComm, 2013, 15, 8537.	1.3	21
45	Synthesis and characterization of few-layer Sb2Te3 nanoplates with electrostatic properties. RSC Advances, 2012, 2, 10694.	1.7	19
46	Quantum oscillation of Rashba spin splitting in topological insulator Bi<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>Se<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>induced by the quantum size effects of Pb adlayers. Physical Review B, 2012, 86, .	1.1	19
47	Hollow Co3O4@N-doped carbon nanocrystals anchored on carbon nanotubes for freestanding anode with superior Li/Na storage performance. Chemical Engineering Journal, 2021, 415, 128861.	6.6	19
48	Heterostructured multi-yolk-shell SnO2/Mn2SnO4@C nanoboxes for stable and highly efficient Li/Na storage. Journal of Power Sources, 2021, 506, 230243.	4.0	19
49	Waterâ€Processable and Multiscaleâ€Designed Vanadium Oxide Cathodes with Predominant Zn²⁺ Intercalation Pseudocapacitance toward High Gravimetric/Areal/Volumetric Capacity. Small, 2022, 18, e2105796.	5.2	19
50	Quantum confinement in graphene quantum dots. Physica Status Solidi - Rapid Research Letters, 2014, 8, 436-440.	1.2	18
51	Hierarchical Porous Nitrogenâ€Doped Carbon Constructed of Crumpled and Interconnected Grapheneâ€Like Nanosheets for Sodiumâ€Ion Batteries and Allâ€Solidâ€State Symmetric Supercapacitors. ChemElectroChem, 2018, 5, 546-557.	1.7	18
52	Well-dispersed MnO-quantum-dots/N-doped carbon layer anchored on carbon nanotube as free-standing anode for high-performance Li-ion batteries. Electrochimica Acta, 2019, 319, 302-311.	2.6	16
53	Hierarchically Pomegranateâ€Like MnO@porous Carbon Microspheres as an Enhancedâ€Capacity Anode for Lithiumâ€Ion Batteries. ChemElectroChem, 2019, 6, 2891-2900.	1.7	15
54	Rational Design of an Interfacial Bilayer for Aqueous Dendrite-Free Zinc Anodes. ACS Applied Materials & Interfaces, 2022, 14, 954-960.	4.0	14

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55	A 2D ZnSe/BiOX vertical heterostructure as a promising photocatalyst for water splitting: a first-principles study. Journal Physics D: Applied Physics, 2020, 53, 055108.	1.3	13
56	Fermi level tuning of topological insulator Bi2(SexTe1â^'x)3 nanoplates. Journal of Applied Physics, 2013, 113, 024306.	1.1	12
57	Modified Graphene Sheets as Promising Cathode Catalysts for Liâ€"O₂ Batteries: A First-Principles Study. Journal of Physical Chemistry C, 2021, 125, 4363-4370.	1.5	12
58	The role of permanent and induced electrostatic dipole moments for Schottky barriers in Janus MXY/graphene heterostructures: a first-principles study. Dalton Transactions, 0, , .	1.6	11
59	Electronic and magnetism properties of two-dimensional stacked nickel hydroxides and nitrides. Scientific Reports, 2015, 5, 11656.	1.6	10
60	Ce₂O₂S anchored on graphitized carbon with tunable architectures as a new promising anode for Li-ion batteries. Journal of Materials Chemistry A, 2015, 3, 10026-10030.	5.2	10
61	3D nanocomposite archiecture constructed by reduced graphene oxide, thermally-treated protein and mesoporous NaTi2(PO4)3 nanocrystals as free-standing electrodes for advanced sodium ion battery. Journal of Materials Science: Materials in Electronics, 2018, 29, 9258-9267.	1.1	10
62	Facile approach to prepare FeP2/P/C nanofiber heterostructure via electrospinning as highly performance self-supporting anode for Li/Na ion batteries. Electrochimica Acta, 2022, 403, 139682.	2.6	10
63	Fabrication of MnSe/SnSe@C heterostructures for high-performance Li/Na storage. New Journal of Chemistry, 2022, 46, 5848-5860.	1.4	10
64	The effects of subsurface Ov and Tiint of anatase (1â€¯0â€¯1) surface on CO2 conversion: A first-principles study. Computational Materials Science, 2018, 155, 424-430.	1.4	8
65	The unique carrier mobility of monolayer Janus MoSSe nanoribbons: a first-principles study. Dalton Transactions, 2021, 50, 10252-10260.	1.6	8
66	Bondingâ€"antibonding state transition induces multiple electron modulations toward oxygen reduction reaction electrocatalysis. New Journal of Chemistry, 2020, 44, 8191-8197.	1.4	6
67	MesoporousÂMn-dopedÂand carbon-coated NaTi2(PO4)3 nanocrystals as an anode material for improved performance of sodium-ion hybrid capacitors. Journal of Materials Science: Materials in Electronics, 2020, 31, 17550-17562.	1.1	5
68	Single transition metal atom modified MoSe2 as a promising electrocatalyst for nitrogen Fixation: A first-principles study. Chemical Physics Letters, 2021, 780, 138939.	1.2	5
69	Understanding the Influence of C-Doping on CO₂ Photoreduction at SnS₂ Nanosheets: A First-Principles Study. Journal of Physical Chemistry C, 2022, 126, 1271-1280.	1.5	4
70	Modified Morphology of Graphene Sheets by Argon-Atom Bombardment: Molecular Dynamics Simulations. Journal of Nanoscience and Nanotechnology, 2011, 11, 10863-10867.	0.9	3
71	Lithium-Ion Batteries: Rational Construction of a Functionalized V2O5Nanosphere/MWCNT Layer-by-Layer Nanoarchitecture as Cathode for Enhanced Performance of Lithium-Ion Batteries (Adv.) Tj ETQq1 1 0.784314 rgBT /Ove	7.8	
72	Surface Defect Modulation with Intercalation Ion Doping Vanadium Oxide to Enhance Zinc Storage Performance. Energy & Fuels, 2022, 36, 2872-2879.	2.5	2

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73	Ultrafine Co_{0.85}Se nanocrystals dispersed in 3D CNT network as a flexible free-standing anode for high-performance lithium-ion battery. New Journal of Chemistry, 2021, 45, 12168-12177.	1.4	1
74	Molecular dynamics simulation of Argon-atom bombardment on graphene sheets. , 2010, , .		0
75	Stability and electronic properties of Î±/Î²-Mo6S6 nanowires encapsulated inside carbon nanotubes. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 134, 114891.	1.3	0
76	Intrinsic anion vacancy of Mo6X6 (XÂ=ÂS, Se, Te) nanowires as a promising nitrogen fixation catalysis: A first-principles study. Chemical Physics Letters, 2022, 802, 139752.	1.2	0