

Wei-Wei Lei

List of Publications by Year in descending order

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115
papers

8,258
citations

57631

44
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48187

88
g-index

116
all docs

116
docs citations

116
times ranked

9033
citing authors

#	ARTICLE	IF	CITATIONS
1	Porous boron nitride nanosheets for effective water cleaning. Nature Communications, 2013, 4, 1777.	5.8	831
2	Boron nitride colloidal solutions, ultralight aerogels and freestanding membranes through one-step exfoliation and functionalization. Nature Communications, 2015, 6, 8849.	5.8	658
3	Boron Carbon Nitride Nanostructures from Salt Melts: Tunable Water-Soluble Phosphors. Journal of the American Chemical Society, 2011, 133, 7121-7127.	6.6	428
4	Highly Thermoconductive, Thermostable, and Superflexible Film by Engineering 1D Rigid Rodlike Aramid Nanofiber/2D Boron Nitride Nanosheets. Advanced Materials, 2020, 32, e1906939.	11.1	234
5	Functionalized boron nitride membranes with ultrafast solvent transport performance for molecular separation. Nature Communications, 2018, 9, 1902.	5.8	225
6	Oxygen-doped boron nitride nanosheets with excellent performance in hydrogen storage. Nano Energy, 2014, 6, 219-224.	8.2	210
7	Functionalized Boron Nitride Nanosheets/Graphene Interlayer for Fast and Long-Life Lithium-Sulfur Batteries. Advanced Energy Materials, 2017, 7, 1602380.	10.2	201
8	High and Stable Ionic Conductivity in 2D Nanofluidic Ion Channels between Boron Nitride Layers. Journal of the American Chemical Society, 2017, 139, 6314-6320.	6.6	193
9	BN Nanosheet/Polymer Films with Highly Anisotropic Thermal Conductivity for Thermal Management Applications. ACS Applied Materials & Interfaces, 2017, 9, 43163-43170.	4.0	190
10	Additive-Free MXene Liquid Crystals and Fibers. ACS Central Science, 2020, 6, 254-265.	5.3	182
11	Bio-inspired Nanocomposite Membranes for Osmotic Energy Harvesting. Joule, 2020, 4, 247-261.	11.7	177
12	Porous Boron Carbon Nitride Nanosheets as Efficient Metal-Free Catalysts for the Oxygen Reduction Reaction in Both Alkaline and Acidic Solutions. ACS Energy Letters, 2017, 2, 306-312.	8.8	176
13	Bioinspired Design of Strong, Tough, and Thermally Stable Polymeric Materials via Nanoconfinement. ACS Nano, 2018, 12, 9266-9278.	7.3	157
14	A lignin-based nano-adsorbent for superfast and highly selective removal of phosphate. Journal of Materials Chemistry A, 2018, 6, 9971-9983.	5.2	155
15	Lightweight, Superelastic Yet Thermoconductive Boron Nitride Nanocomposite Aerogel for Thermal Energy Regulation. ACS Nano, 2019, 13, 7860-7870.	7.3	143
16	Fire-Resistant, Strong, and Green Polymer Nanocomposites Based on Poly(lactic acid) and Core-Shell Nanofibrous Flame Retardants. ACS Sustainable Chemistry and Engineering, 2017, 5, 7894-7904.	3.2	142
17	Superelastic Ti ₃ C ₂ T _x MXene-Based Hybrid Aerogels for Compression-Resilient Devices. ACS Nano, 2021, 15, 5000-5010.	7.3	139
18	Super-compatible functional boron nitride nanosheets/polymer films with excellent mechanical properties and ultra-high thermal conductivity for thermal management. Journal of Materials Chemistry C, 2018, 6, 1363-1369.	2.7	133

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19	Route to high-energy density polymeric nitrogen t-N via He ⁺ N compounds. Nature Communications, 2018, 9, 722.	5.8	131
20	B/N co-doped carbon nanosphere frameworks as high-performance electrodes for supercapacitors. Journal of Materials Chemistry A, 2018, 6, 8053-8058.	5.2	124
21	Thin film nanocomposite nanofiltration membranes from amine functionalized-boron nitride/polypiperazine amide with enhanced flux and fouling resistance. Journal of Materials Chemistry A, 2018, 6, 12066-12081.	5.2	122
22	Stable Ti ₃ C ₂ T _x MXene ⁺ Boron Nitride Membranes with Low Internal Resistance for Enhanced Salinity Gradient Energy Harvesting. ACS Nano, 2021, 15, 6594-6603.	7.3	116
23	A highly stretchable, ultra-tough, remarkably tolerant, and robust self-healing glycerol-hydrogel for a dual-responsive soft actuator. Journal of Materials Chemistry A, 2019, 7, 25969-25977.	5.2	111
24	Large scale boron carbon nitride nanosheets with enhanced lithium storage capabilities. Chemical Communications, 2013, 49, 352-354.	2.2	110
25	Highly Crumpled Boron Nitride Nanosheets as Adsorbents: Scalable Solvent ⁺ Less Production. Advanced Materials Interfaces, 2015, 2, 1400529.	1.9	108
26	Multifunctional Polymer/Porous Boron Nitride Nanosheet Membranes for Superior Trapping Emulsified Oils and Organic Molecules. Advanced Materials Interfaces, 2015, 2, 1500228.	1.9	106
27	Enhanced Ion Sieving of Graphene Oxide Membranes via Surface Amine Functionalization. Journal of the American Chemical Society, 2021, 143, 5080-5090.	6.6	99
28	Functional mechanism analysis and customized structure design of interlayers for high performance Li-S battery. Energy Storage Materials, 2019, 23, 314-349.	9.5	95
29	Template-Free Synthesis of Functional 3D BN architecture for removal of dyes from water. Scientific Reports, 2014, 4, 4453.	1.6	91
30	Flower stamen-like porous boron carbon nitride nanoscrolls for water cleaning. Nanoscale, 2017, 9, 9787-9791.	2.8	89
31	Porous BN/TiO ₂ hybrid nanosheets as highly efficient visible-light-driven photocatalysts. Applied Catalysis B: Environmental, 2017, 207, 72-78.	10.8	86
32	High temperature thermally conductive nanocomposite textile by ⁺ green ⁺ electrospinning. Nanoscale, 2018, 10, 16868-16872.	2.8	81
33	Superior adsorption of pharmaceutical molecules by highly porous BN nanosheets. Physical Chemistry Chemical Physics, 2016, 18, 84-88.	1.3	80
34	Scalable, Robust, Low ⁺ Cost, and Highly Thermally Conductive Anisotropic Nanocomposite Films for Safe and Efficient Thermal Management. Advanced Functional Materials, 2022, 32, 2110782.	7.8	80
35	In situ synthesis of g-C ₃ N ₄ /TiO ₂ heterostructures with enhanced photocatalytic hydrogen evolution under visible light. RSC Advances, 2017, 7, 40327-40333.	1.7	61
36	A bioinspired 3D solar evaporator with balanced water supply and evaporation for highly efficient photothermal steam generation. Journal of Materials Chemistry A, 2022, 10, 2856-2866.	5.2	61

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37	Self-healable poly(acrylic acid-co-maleic acid)/glycerol/boron nitride nanosheet composite hydrogels at low temperature with enhanced mechanical properties and water retention. <i>Soft Matter</i> , 2019, 15, 3680-3688.	1.2	58
38	Nanofluidic electric generators constructed from boron nitride nanosheet membranes. <i>Nano Energy</i> , 2018, 47, 368-373.	8.2	57
39	All-solid-state high-energy planar asymmetric supercapacitors based on all-in-one monolithic film using boron nitride nanosheets as separator. <i>Energy Storage Materials</i> , 2018, 10, 24-31.	9.5	55
40	A transparent glycerol-hydrogel with stimuli-responsive actuation induced unexpectedly at subzero temperatures. <i>Journal of Materials Chemistry A</i> , 2021, 9, 7935-7945.	5.2	52
41	Direct Synthesis, Growth Mechanism, and Optical Properties of 3D AlN Nanostructures with Urchin Shapes. <i>Crystal Growth and Design</i> , 2009, 9, 1489-1493.	1.4	49
42	Ultrathin Ti ₃ C ₂ T _x (MXene) membrane for pressure-driven electrokinetic power generation. <i>Nano Energy</i> , 2020, 75, 104954.	8.2	49
43	Novel thin film nanocomposite membranes decorated with few-layered boron nitride nanosheets for simultaneously enhanced water flux and organic fouling resistance. <i>Applied Surface Science</i> , 2019, 488, 565-577.	3.1	48
44	Bioinspired Ultrastrong Nanocomposite Membranes for Salinity Gradient Energy Harvesting from Organic Solutions. <i>Advanced Energy Materials</i> , 2020, 10, 1904098.	10.2	48
45	Micro-supercapacitors powered integrated system for flexible electronics. <i>Energy Storage Materials</i> , 2020, 32, 402-417.	9.5	47
46	One-step template-free synthesis of 3D functionalized flower-like boron nitride nanosheets for NH ₃ and CO ₂ adsorption. <i>Nanoscale</i> , 2018, 10, 10979-10985.	2.8	45
47	Functional double-layer membrane as separator for lithium-sulfur battery with strong catalytic conversion and excellent polysulfide-blocking. <i>Chemical Engineering Journal</i> , 2020, 382, 122918.	6.6	45
48	Enhancing the thermal and mechanical properties of polyvinyl alcohol (PVA) with boron nitride nanosheets and cellulose nanocrystals. <i>Polymer</i> , 2018, 148, 101-108.	1.8	43
49	Mechanically stretchable piezoelectric polyvinylidene fluoride (PVDF)/Boron nitride nanosheets (BNNSs) polymer nanocomposites. <i>Composites Part B: Engineering</i> , 2019, 175, 107157.	5.9	43
50	Room temperature ferromagnetism in new diluted magnetic semiconductor AlN:Mg nanowires. <i>CrystEngComm</i> , 2013, 15, 3271.	1.3	40
51	A rational design of hollow nanocages Ag@CuO-TiO ₂ for enhanced acetone sensing performance. <i>Sensors and Actuators B: Chemical</i> , 2019, 295, 70-78.	4.0	40
52	High N-content holey few-layered graphene electrocatalysts: scalable solvent-less production. <i>Journal of Materials Chemistry A</i> , 2015, 3, 1682-1687.	5.2	39
53	Vanadium-Doped Monolayer MoS ₂ with Tunable Optical Properties for Field-Effect Transistors. <i>ACS Applied Nano Materials</i> , 2021, 4, 769-777.	2.4	39
54	Three-Dimensional Functionalized Boron Nitride Nanosheets/ZnO Superstructures for CO ₂ Capture. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 10276-10282.	4.0	37

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55	Scandium-Doped AlN 1D Hexagonal Nanoprisms: A Class of Room-Temperature Ferromagnetic Materials. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 173-176.	7.2	36
56	Fabrication of Poly(acrylic acid)/Boron Nitride Composite Hydrogels with Excellent Mechanical Properties and Rapid Self-Healing Through Hierarchically Physical Interactions. <i>Nanoscale Research Letters</i> , 2018, 13, 393.	3.1	34
57	Shape-tailorable high-energy asymmetric micro-supercapacitors based on plasma reduced and nitrogen-doped graphene oxide and MoO ₂ nanoparticles. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14328-14336.	5.2	34
58	Transition Metal Dichalcogenide (TMD) Membranes with Ultrasmall Nanosheets for Ultrafast Molecule Separation. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 45453-45459.	4.0	33
59	Repelling Polysulfide Ions by Boron Nitride Nanosheet Coated Separators in Lithium-Sulfur Batteries. <i>ACS Applied Energy Materials</i> , 2019, 2, 2620-2628.	2.5	32
60	One-Step Synthesis of the Pine-Shaped Nanostructure of Aluminum Nitride and Its Photoluminescence Properties. <i>Journal of Physical Chemistry C</i> , 2008, 112, 13353-13358.	1.5	31
61	Functionalized boron nitride membranes with multipurpose and super-stable semi-permeability in solvents. <i>Journal of Materials Chemistry A</i> , 2018, 6, 21104-21109.	5.2	31
62	Layer-by-Layer Assembly Fabrication of Porous Boron Nitride Coated Multifunctional Materials for Water Cleaning. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700392.	1.9	30
63	The key structural features governing the free radicals and catalytic activity of graphite/graphene oxide. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 3112-3121.	1.3	30
64	Advanced 2D-2D heterostructures of transition metal dichalcogenides and nitrogen-rich nitrides for solar water generation. <i>Nano Energy</i> , 2022, 98, 107192.	8.2	30
65	Controlled Design of a Robust Hierarchically Porous and Hollow Carbon Fiber Textile for High-Performance Freestanding Electrodes. <i>Advanced Science</i> , 2019, 6, 1900762.	5.6	29
66	Aramid Nanofiber Membranes for Energy Harvesting from Proton Gradients. <i>Advanced Functional Materials</i> , 2022, 32, 2102080.	7.8	29
67	Solid Phase Exfoliation for Producing Dispersible Transition Metal Dichalcogenides Nanosheets. <i>Advanced Functional Materials</i> , 2020, 30, 2004139.	7.8	27
68	MXene coupled with molybdenum dioxide nanoparticles as 2D-0D pseudocapacitive electrode for high performance flexible asymmetric micro-supercapacitors. <i>Journal of Materiomics</i> , 2020, 6, 138-144.	2.8	27
69	Natural organic matter removal and fouling resistance properties of a boron nitride nanosheet-functionalized thin film nanocomposite membrane and its impact on permeate chlorine demand. <i>Journal of Water Process Engineering</i> , 2020, 34, 101160.	2.6	27
70	Prediction of a Superhard Carbon-Rich C-N Compound Comparable to Diamond. <i>Journal of Physical Chemistry C</i> , 2015, 119, 28614-28619.	1.5	26
71	A facile one-step synthesis of ZnO quantum dots modified poly(triazine imide) nanosheets for enhanced hydrogen evolution under visible light. <i>Chemical Communications</i> , 2016, 52, 13020-13023.	2.2	26
72	Boron Nitride Nanosheets/PNIPAM Hydrogels with Improved Thermo-Responsive Performance. <i>Materials</i> , 2018, 11, 1069.	1.3	26

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73	Ultrafast, Stable Ionic and Molecular Sieving through Functionalized Boron Nitride Membranes. ACS Applied Materials & Interfaces, 2019, 11, 30430-30436.	4.0	25
74	Tailoring the defects of two-dimensional borocarbonitride nanomesh for high energy density micro-supercapacitor. Energy Storage Materials, 2021, 42, 430-437.	9.5	25
75	One-step facile fabrication of mechanical strong porous boron nitride nanosheetsâ€“polymer electrospun nanofibrous membranes for repeatable emulsified oil/water separation. Separation and Purification Technology, 2021, 264, 118446.	3.9	24
76	Structural design and mechanism analysis of hierarchical porous carbon fibers for advanced energy and environmental applications. Journal of Materials Chemistry A, 2021, 10, 10-49.	5.2	23
77	One-step synthesis of AlN branched nanostructures by an improved DC arc discharge plasma method. CrystEngComm, 2010, 12, 511-516.	1.3	22
78	2D Higherâ€“Metal Nitride Nanosheets for Solar Steam Generation. Small, 2022, 18, .	5.2	21
79	Robust Membrane for Osmotic Energy Harvesting from Organic Solutions. ACS Applied Materials & Interfaces, 2020, 12, 52771-52778.	4.0	20
80	Scalable Fabrication of Ti ₃ C ₂ T _x MXene/RGO/Carbon Hybrid Aerogel for Organics Absorption and Energy Conversion. ACS Applied Materials & Interfaces, 2021, 13, 51333-51342.	4.0	20
81	Adhesion and Self-Assembly of Lubricin (PRG4) Brush Layers on Different Substrate Surfaces. Langmuir, 2019, 35, 15834-15848.	1.6	19
82	Nanocavity-in-Multiple Nanogap Plasmonic Coupling Effects from Vertical Sandwich-Like Au@Al ₂ O ₃ @Au Arrays for Surface-Enhanced Raman Scattering. ACS Applied Materials & Interfaces, 2018, 10, 8317-8323.	4.0	18
83	Rational design of 2D super holey metal carbonitride leaf-like nanostructure for efficient oxygen electrocatalysis. Carbon, 2020, 164, 287-295.	5.4	18
84	Nacre-bionic nanocomposite membrane for efficient in-plane dissipation heat harvest under high temperature. Journal of Materiomics, 2021, 7, 219-225.	2.8	18
85	Ultrafast Growth of Thin Hexagonal and Pyramidal Molybdenum Nitride Crystals and Films. , 2019, 1, 383-388.		17
86	Surface modification of boron nitride nanosheets with polycationic electrolytes through ARGET ATRP for enhancing mechanical properties of cellulose film. Materials Letters, 2019, 242, 127-130.	1.3	17
87	Pore-assisted lithium deposition in hierarchically porous and hollow carbon textile for highly stable lithium anode. Journal of Power Sources, 2021, 489, 229464.	4.0	17
88	Facile synthesis of Au/Pd nano-dogbones and their plasmon-enhanced visible-to-NIR light photocatalytic performance. RSC Advances, 2017, 7, 36923-36928.	1.7	16
89	Interfacial Engineering of 3D Hollow Mo-Based Carbide/Nitride Nanostructures. ACS Applied Materials & Interfaces, 2021, 13, 50524-50530.	4.0	16
90	Improving the gas barrier, mechanical and thermal properties of poly(vinyl alcohol) with molybdenum disulfide nanosheets. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 406-414.	2.4	14

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91	Light-Controlled Ionic Transport through Molybdenum Disulfide Membranes. ACS Applied Materials & Interfaces, 2021, 13, 34679-34685.	4.0	14
92	Controllable synthesis of AlN nanostructures and their photoluminescence. CrystEngComm, 2017, 19, 5940-5945.	1.3	13
93	Prediction of superhard B ₂ N ₃ with two-dimensional metallicity. Journal of Materials Chemistry C, 2019, 7, 4527-4532.	2.7	13
94	All Pseudocapacitive Nitrogen-Doped Reduced Graphene Oxide and Polyaniline Nanowire Network for High-Performance Flexible On-Chip Energy Storage. ACS Applied Energy Materials, 2020, 3, 6845-6852.	2.5	13
95	2D Nb ₄ N ₅ Nanosheets Synthesized by a Template Method. Chemistry - an Asian Journal, 2020, 15, 1609-1612.	1.7	13
96	Functionalized MoS ₂ nanosheets enabled nanofiltration membrane with enhanced permeance and fouling resistance. Environmental Technology and Innovation, 2022, 27, 102719.	3.0	13
97	Surface modification of boron nitride nanosheets by polyelectrolytes via atom transfer radical polymerization. Materials Research Express, 2018, 5, 045026.	0.8	12
98	Fast photogenerated electron transfer in N-QDs/PTI/ZnO-QDs ternary heterostructured nanosheets for photocatalytic H ₂ evolution under visible light. Applied Surface Science, 2019, 485, 361-367.	3.1	12
99	Highly Swellable and Stretchable Thermoresponsive Hydrogels Enabled by Functionalized Boron Nitride Nanosheets. Macromolecular Materials and Engineering, 2020, 305, 2000256.	1.7	11
100	Two-dimensional Boron Nitride for Electronics and Energy Applications. Energy and Environmental Materials, 2022, 5, 10-44.	7.3	11
101	2D nanosheet enabled thin film nanocomposite membranes for freshwater production – a review. Materials Advances, 2021, 2, 3519-3537.	2.6	11
102	Simultaneous electrokinetic energy conversion and organic molecular sieving by two-dimensional confined nanochannels. Chemical Engineering Journal, 2022, 446, 136870.	6.6	11
103	Self-Assembly of Lubricin (PRG-4) Brushes on Graphene Oxide Affords Stable 2D-Nanosheets in Concentrated Electrolytes and Complex Fluids. ACS Applied Nano Materials, 2020, 3, 11527-11542.	2.4	9
104	Smart-Responsive Colloidal Capsules as an Emerging Tool to Design a Multifunctional Lubricant Additive. ACS Applied Materials & Interfaces, 2021, 13, 7714-7724.	4.0	8
105	GaN and GaIn Nanoparticles with Tunable Indium Content: Synthesis and Characterization. Chemistry - A European Journal, 2015, 21, 18976-18982.	1.7	7
106	Boron Carbon Nitride (BCN) Nanomaterials: Structures, Synthesis and Energy Applications. Current Graphene Science, 2018, 2, 3-14.	0.5	7
107	Efficient and Green Synthesis of SiOC Nanoparticles at Near-Ambient Conditions by Liquid-Phase Plasma. ACS Sustainable Chemistry and Engineering, 2021, 9, 7728-7736.	3.2	6
108	Anti-oxidation mechanism and interfacial chemistry of BN@CaCO ₃ -SiO ₂ microcapsule-added sodium borate melt on the sliding steel surfaces at elevated temperatures. Applied Surface Science, 2021, 566, 150556.	3.1	5

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109	Highly stable lithium anodes from recycled hemp textile. <i>Chemical Communications</i> , 2022, 58, 1946-1949.	2.2	4
110	Growth of nonpolar InN nanocrystal films by RF plasma-assisted evaporation technique. <i>Applied Surface Science</i> , 2019, 476, 418-421.	3.1	3
111	Cross-linked boron nitride-piperazine amide thin film nanocomposite membranes for rejection and concentration of per- and poly-fluoroalkyl substances (PFAS). <i>Environmental Quality Management</i> , 2022, 31, 425-432.	1.0	3
112	Au icosahedrons as efficient electrocatalyst for glucose-based biofuel cells by strain engineering. <i>Materials Letters</i> , 2020, 263, 127220.	1.3	2
113	Band structure engineering of PTI in C-PTI/ZnO heterostructures for enhanced visible-light-driven H ₂ evolution. <i>Nanotechnology</i> , 2020, 31, 145716.	1.3	2
114	Frontispiece: GaN and Ga _x In _{1-x} N Nanoparticles with Tunable Indium Content: Synthesis and Characterization. <i>Chemistry - A European Journal</i> , 2015, 21, .	1.7	0
115	2D nanomaterials for electrokinetic power generation. , 2020, , 245-270.		0