Zheng Bo

List of Publications by Year
in descending order

109 papers	5,115 citations	101384 36 h-index	95083 68 g-index
113 all docs	113 docs citations	113 times ranked	6467 citing authors

#	Article	IF	Citations
1	Green preparation of reduced graphene oxide for sensing and energy storage applications. Scientific Reports, 2014, 4, 4684.	1.6	433
2	Plasma-enhanced chemical vapor deposition synthesis of vertically oriented graphene nanosheets. Nanoscale, 2013, 5, 5180.	2.8	357
3	Vertically Oriented Graphene Bridging Activeâ€Layer/Currentâ€Collector Interface for Ultrahigh Rate Supercapacitors. Advanced Materials, 2013, 25, 5799-5806.	11.1	270
4	Emerging energy and environmental applications of vertically-oriented graphenes. Chemical Society Reviews, 2015, 44, 2108-2121.	18.7	269
5	Two-birds-one-stone: multifunctional supercapacitors beyond traditional energy storage. Energy and Environmental Science, 2021, 14, 1854-1896.	15.6	252
6	Carbon Nanotube with Chemically Bonded Graphene Leaves for Electronic and Optoelectronic Applications. Journal of Physical Chemistry Letters, 2011, 2, 1556-1562.	2.1	190
7	One-step fabrication and capacitive behavior of electrochemical double layer capacitor electrodes using vertically-oriented graphene directly grown on metal. Carbon, 2012, 50, 4379-4387.	5.4	162
8	Patterning Vertically Oriented Graphene Sheets for Nanodevice Applications. Journal of Physical Chemistry Letters, 2011, 2, 537-542.	2.1	159
9	Growth of carbon nanowalls at atmospheric pressure for one-step gas sensor fabrication. Nanoscale Research Letters, 2011, 6, 202.	3.1	123
10	Understanding growth of carbon nanowalls at atmospheric pressure using normal glow discharge plasma-enhanced chemical vapor deposition. Carbon, 2011, 49, 1849-1858.	5.4	120
11	Multifunctional Solar Waterways: Plasmaâ€Enabled Selfâ€Cleaning Nanoarchitectures for Energyâ€Efficient Desalination. Advanced Energy Materials, 2019, 9, 1901286.	10.2	109
12	Decoration of vertical graphene with tin dioxide nanoparticles for highly sensitive room temperature formaldehyde sensing. Sensors and Actuators B: Chemical, 2018, 256, 1011-1020.	4.0	97
13	High-Mass-Loading Porous Ti₃C₂T_x Films for Ultrahigh-Rate Pseudocapacitors. ACS Energy Letters, 2020, 5, 2266-2274.	8.8	88
14	Density functional theory calculations of NO2 and H2S adsorption on the group 10 transition metal (Ni, Pd and Pt) decorated graphene. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 109, 156-163.	1.3	86
15	Hierarchical vertically oriented graphene as a catalytic counter electrode in dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 188-193.	5.2	85
16	Emerging nanostructured carbon-based non-precious metal electrocatalysts for selective electrochemical CO₂ reduction to CO. Journal of Materials Chemistry A, 2019, 7, 25191-25202.	5.2	82
17	Graphene Array-Based Anti-fouling Solar Vapour Gap Membrane Distillation with High Energy Efficiency. Nano-Micro Letters, 2019, 11, 51.	14.4	79
18	Edge effects in vertically-oriented graphene based electric double-layer capacitors. Journal of Power Sources, 2016, 324, 309-316.	4.0	75

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19	Design of Supercapacitor Electrodes Using Molecular Dynamics Simulations. Nano-Micro Letters, 2018, 10, 33.	14.4	73
20	Three-dimensional hollow urchin Î±-MnO2 for enhanced catalytic activity towards toluene decomposition in post-plasma catalysis. Chemical Engineering Journal, 2020, 402, 126154.	6.6	67
21	MXene-Based Electrodes for Supercapacitor Energy Storage. Energy & Fuels, 2022, 36, 2390-2406.	2.5	67
22	Vertically oriented graphene sheets grown on metallic wires for greener corona discharges: lower power consumption and minimized ozone emission. Energy and Environmental Science, 2011, 4, 2525.	15.6	66
23	Solar-Enhanced Plasma-Catalytic Oxidation of Toluene over a Bifunctional Graphene Fin Foam Decorated with Nanofin-like MnO₂. ACS Catalysis, 2020, 10, 4420-4432.	5.5	64
24	Scalable Production of Integrated Graphene Nanoarchitectures for Ultrafast Solar-Thermal Conversion and Vapor Generation. Matter, 2019, 1, 1017-1032.	5.0	60
25	Graphene nanopetal wire supercapacitors with high energy density and thermal durability. Nano Energy, 2017, 38, 127-136.	8.2	58
26	Performance of vertically oriented graphene supported platinumâ€“ruthenium bimetallic catalyst for methanol oxidation. Journal of Power Sources, 2015, 273, 530-537.	4.0	56
27	Temperature dependence of ion diffusion coefficients in NaCl electrolyte confined within graphene nanochannels. Physical Chemistry Chemical Physics, 2017, 19, 7678-7688.	1.3	52
28	Molecular Origin of Electric Double-Layer Capacitance at Multilayer Graphene Edges. Journal of Physical Chemistry Letters, 2017, 8, 153-160.	2.1	52
29	Kinetic-Dominated Charging Mechanism within Representative Aqueous Electrolyte-based Electric Double-Layer Capacitors. Journal of Physical Chemistry Letters, 2017, 8, 3703-3710.	2.1	46
30	More from Less but Precise: Industry-relevant Pseudocapacitance by Atomically-precise Mass-loading MnO2 within Multifunctional MXene Aerogel. Journal of Power Sources, 2021, 492, 229639.	4.0	45
31	Multifunctional solar bamboo straw: Multiscale 3D membrane for self-sustained solar-thermal water desalination and purification and thermoelectric waste heat recovery and storage. Carbon, 2021, 171, 359-367.	5.4	44
32	Ultrathick MoS₂ Films with Exceptionally High Volumetric Capacitance. Advanced Energy Materials, 2022, 12, .	10.2	44
33	Molecular Insights into Aqueous NaCl Electrolytes Confined within Vertically-oriented Graphenes. Scientific Reports, 2015, 5, 14652.	1.6	43
34	Superstructure-Enabled Anti-Fouling Membrane for Efficient Photothermal Distillation. ACS Sustainable Chemistry and Engineering, 2019, 7, 20151-20158.	3.2	41
35	Hierarchical nanocarbon-MnO2 electrodes for enhanced electrochemical capacitor performance. Energy Storage Materials, 2019, 16, 607-618.	9.5	39
36	Nitrogen dioxide formation in the gliding arc discharge-assisted decomposition of volatile organic compounds. Journal of Hazardous Materials, 2009, 166, 1210-1216.	6.5	38

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37	Insights into the effects of solvent properties in graphene based electric double-layer capacitors with organic electrolytes. Journal of Power Sources, 2016, 334, 162-169.	4.0	38
38	Scale-up analysis and development of gliding arc discharge facility for volatile organic compounds decomposition. Journal of Hazardous Materials, 2008, 155, 494-501.	6.5	37
39	Rational Design of 2D Manganese Phosphate Hydrate Nanosheets as Pseudocapacitive Electrodes. ACS Energy Letters, 2020, 5, 23-30.	8.8	37
40	Phase change material enhanced sustained and energy-efficient solar-thermal water desalination. Applied Energy, 2021, 301, 117463.	5.1	35
41	Spill-SOS: Self-Pumping Siphon-Capillary Oil Recovery. ACS Nano, 2019, 13, 13027-13036.	7.3	34
42	Beyond lotus: Plasma nanostructuring enables efficient energy and water conversion and use. Nano Energy, 2019, 66, 104125.	8.2	34
43	Nanoscale Discharge Electrode for Minimizing Ozone Emission from Indoor Corona Devices. Environmental Science & Technology, 2010, 44, 6337-6342.	4.6	32
44	Tuneable fluidics within graphene nanogaps for water purification and energy storage. Nanoscale Horizons, 2017, 2, 89-98.	4.1	32
45	Plasma-Made Graphene Nanostructures with Molecularly Dispersed F and Na Sites for Solar Desalination of Oil-Contaminated Seawater with Complete In-Water and In-Air Oil Rejection. ACS Applied Materials & Interfaces, 2020, 12, 38512-38521.	4.0	32
46	Nanoconfined fusion of g-C3N4 within edge-rich vertically oriented graphene hierarchical networks for high-performance photocatalytic hydrogen evolution utilizing superhydrophillic and superaerophobic responses in seawater. Applied Catalysis B: Environmental, 2021, 280, 119461.	10.8	32
47	Anion-kinetics-selective graphene anode and cation-energy-selective MXene cathode for high-performance capacitive deionization. Energy Storage Materials, 2022, 50, 395-406.	9.5	32
48	Numerical simulation of hydrodynamic focusing of particles in straight channel flows with the immersed boundary-lattice Boltzmann method. International Journal of Heat and Mass Transfer, 2015, 80, 139-149.	2.5	31
49	Revealing ion transport in supercapacitors with Sub-2 nm two-dimensional graphene channels. Energy Storage Materials, 2020, 31, 64-71.	9.5	31
50	Vertically-oriented graphenes supported Mn3O4 as advanced catalysts in post plasma-catalysis for toluene decomposition. Applied Surface Science, 2018, 436, 570-578.	3.1	30
51	Wettability of vertically-oriented graphenes with different intersheet distances. RSC Advances, 2017, 7, 2667-2675.	1.7	28
52	Influence of wettability on the electrolyte electrosorption within graphene-like nonconfined and confined space. International Journal of Heat and Mass Transfer, 2019, 133, 416-425.	2.5	27
53	Tree-inspired radially aligned, bimodal graphene frameworks for highly efficient and isotropic thermal transport. Nanoscale, 2019, 11, 21249-21258.	2.8	26
54	Reliability of Constant Charge Method for Molecular Dynamics Simulations on EDLCs in Nanometer and Subâ€Nanometer Spaces. ChemElectroChem, 2017, 4, 2486-2493.	1.7	25

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55	Enhanced plasma-catalytic decomposition of toluene over Coâ€“Ce binary metal oxide catalysts with high energy efficiency. RSC Advances, 2019, 9, 7447-7456.	1.7	25
56	Vertically-Oriented Graphene. , 2015, , .		23
57	Novel insights into the unique intrinsic sensing behaviors of 2D nanomaterials for volatile organic compounds: from graphene to MoS₂ and black phosphorous. Journal of Materials Chemistry A, 2021, 9, 14411-14421.	5.2	22
58	Surface-dominant pseudocapacitive supercapacitors with high specific energy and power for energy storage. Journal of Energy Storage, 2021, 42, 103084.	3.9	22
59	Hydrogen Production from Methanol Decomposition in a Gliding Arc Discharge Plasma with High Processing Capacity. Chemistry Letters, 2015, 44, 1315-1317.	0.7	21
60	SnO2 nanoparticles incorporated CuO nanopetals on graphene for high-performance room-temperature NO2 sensor. Chemical Physics Letters, 2020, 750, 137485.	1.2	21
61	Highâ€performance water purification and desalination by solarâ€driven interfacial evaporation and photocatalytic <scp>VOC</scp> decomposition enabled by hierarchical <scp> TiO ₂ â€CuO </scp> nanoarchitecture. International Journal of Energy Research, 2022, 46, 1313-1326.	2.2	21
62	Hierarchical, Verticallyâ€Oriented Carbon Nanowall Foam Supercapacitor using Room Temperature Ionic Liquid Mixture for AC Line Filtering with Ultrahigh Energy Density. ChemElectroChem, 2019, 6, 2167-2173.	1.7	20
63	Solid-state NMR Study of Ion Adsorption and Charge Storage in Graphene Film Supercapacitor Electrodes. Scientific Reports, 2016, 6, 39689.	1.6	17
64	Bifunctional sandwich structure of vertically-oriented graphenes and boron nitride nanosheets for thermal management of LEDs and Li-ion battery. Applied Thermal Engineering, 2019, 150, 1016-1027.	3.0	16
65	The Dependence of Gliding Arc Gas Discharge Characteristics on Reactor Geometrical Configuration. Plasma Chemistry and Plasma Processing, 2007, 27, 691-700.	1.1	15
66	Facile Preparation of Nickel Nanoparticle-Modified Carbon Nanotubes with Application as a Nonenzymatic Electrochemical Glucose Sensor. Analytical Letters, 2016, 49, 568-578.	1.0	14
67	Single Ni supported on Ti3C2O2 for uninterrupted CO2 catalytic hydrogenation to formic acid: A DFT study. Separation and Purification Technology, 2021, 279, 119722.	3.9	14
68	Gel polymer dominated ion charging mechanisms within graphene nanochannels. Journal of Power Sources, 2022, 541, 231684.	4.0	14
69	High Pseudocapacitive Performance of MnO₂ Nanowires on Recyclable Electrodes. ChemSusChem, 2016, 9, 1020-1026.	3.6	13
70	Towards understanding the effects of van der Waals strengths on the electric double-layer structures and capacitive behaviors. Journal of Power Sources, 2017, 366, 218-225.	4.0	13
71	Ab initio characterization and experimental validation on the roles of oxygen-containing groups in graphene based formaldehyde sensors. Analyst, The, 2018, 143, 106-115.	1.7	13
72	Vertical graphene nano-antennas for solar-to-hydrogen energy conversion. Solar Energy, 2020, 208, 379-387.	2.9	13

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73	Photo-electric capacitive deionization enabled by solar-driven nano-ionics on the edges of plasma-made vertical graphenes. Chemical Engineering Journal, 2021, 422, 130156.	6.6	13
74	Mutualistic decomposition pathway of formaldehyde on O-predosed Î´-MnO2. Applied Surface Science, 2019, 498, 143784.	3.1	12
75	Multiâ€pin dc glow discharge <scp>PECVD</scp> for uniform growth of vertically oriented graphene at atmospheric pressure. Physica Status Solidi (B): Basic Research, 2014, 251, 155-161.	0.7	11
76	Wellâ€Aligned Hierarchical Grapheneâ€Based Electrodes for Pseudocapacitors with Outstanding Lowâ€Temperature Stability. ChemElectroChem, 2019, 6, 2788-2795.	1.7	11
77	Cost-effective, environmentally-sustainable and scale-up synthesis of vertically oriented graphenes from waste oil and its supercapacitor applications. Waste Disposal & Sustainable Energy, 2021, 3, 31-39.	1.1	11
78	Nanotexturing-enhanced heat transfer and interfacial evaporation for energy-efficient solar-thermal water desalination. International Journal of Heat and Mass Transfer, 2022, 186, 122462.	2.5	11
79	Dimensional Analysis of Detrimental Ozone Generation by Negative Wire-to-Plate Corona Discharge in Both Dry and Humid Air. Ozone: Science and Engineering, 2013, 35, 31-37.	1.4	10
80	Graphene Supercapacitors: Vertically Oriented Graphene Bridging Active-Layer/Current-Collector Interface for Ultrahigh Rate Supercapacitors (Adv. Mater. 40/2013). Advanced Materials, 2013, 25, 5798-5798.	11.1	10
81	Substrate Effects in Grapheneâ€Based Electric Doubleâ€Layer Capacitors: The Pivotal Interplays between Ions and Solvents. ChemElectroChem, 2017, 4, 2966-2974.	1.7	10
82	Multi-linear antenna microwave plasma assisted large-area growth of 6 Ã— 6 in.2 vertically oriented graphenes with high growth rate. Review of Scientific Instruments, 2020, 91, 076105.	0.6	10
83	Combinatorial atomistic-to-AI prediction and experimental validation of heating effects in 350 F supercapacitor modules. International Journal of Heat and Mass Transfer, 2021, 171, 121075.	2.5	10
84	Simultaneous removal of ethyl acetate, benzene and toluene with gliding arc gas discharge. Journal of Zhejiang University: Science A, 2008, 9, 695-701.	1.3	9
85	Note: Gliding arc discharges with phase-chopped voltage supply for enhancement of energy efficiency in volatile organic compound decomposition. Review of Scientific Instruments, 2013, 84, 016105.	0.6	9
86	Highly-branched vertically-oriented graphene nanosheets with dense open graphitic edge planes as Pt support for methanol oxidation. Physica Status Solidi (B): Basic Research, 2014, 251, 829-837.	0.7	9
87	Note: Continuous synthesis of uniform vertical graphene on cylindrical surfaces. Review of Scientific Instruments, 2011, 82, 086116.	0.6	8
88	Note: Rapid reduction of graphene oxide paper by glow discharge plasma. Review of Scientific Instruments, 2015, 86, 056101.	0.6	8
89	Highly Thermo-Conductive Three-Dimensional Graphene Aqueous Medium. Nano-Micro Letters, 2020, 12, 138.	14.4	7
90	Techno-economic analysis of a solar thermochemical cycle-based direct coal liquefaction system for low-carbon oil production. Energy, 2022, 239, 122167.	4.5	7

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91	Solar Energy Conversion: Multifunctional Solar Waterways: Plasmaâ€Enabled Selfâ€Cleaning Nanoarchitectures for Energyâ€Efficient Desalination (Adv. Energy Mater. 30/2019). Advanced Energy Materials, 2019, 9, 1970119.	10.2	6
92	Ion Dynamics of Waterâ€inâ€Salt Electrolyte with Organic Solvents in Nanoporous Supercapacitor Electrodes. ChemElectroChem, 2020, 7, 2048-2054.	1.7	6
93	Entropy generation analysis in supercapacitor modules based on a three-dimensional coupled thermal model. Energy, 2022, 244, 123218.	4.5	6
94	Aligned Ti3C2TX Aerogel with High Rate Performance, Power Density and Sub-Zero-Temperature Stability. Energies, 2022, 15, 1191.	1.6	6
95	Re-carbon, up-carbon, de-carbon: Plasma-electrified roll-to-roll cleaner production of vertical graphenes and syngas from greenhouse gas mixes. Carbon, 2022, 197, 301-310.	5.4	6
96	The Properties of Vertically-Oriented Graphene. , 2015, , 11-18.		4
97	Covalently interconnected carbon nanotubes for enhanced charge transport in pseudocapacitors. Physica Status Solidi (B): Basic Research, 2015, 252, 2236-2244.	0.7	3
98	PECVD Synthesis of Vertically-Oriented Graphene: Mechanism and Plasma Sources. , 2015, , 19-34.		3
99	Hierarchical Petal-on-Petal MnO₂/Vertical Graphene Foam for Postplasma Catalytic Decomposition of Toluene with High Efficiency and Ultralow Pressure Drop. Industrial & Engineering Chemistry Research, 0, , .	1.8	3
100	Tuning and monitoring of nitrogen dioxide fixation on Cu decorated graphene: a density functional theory study. Journal of Physics Condensed Matter, 2020, 32, 355001.	0.7	3
101	Sensing mechanism of the nano-confined space constructed by graphene. Nanotechnology, 2021, 32, 375502.	1.3	2
102	PECVD Synthesis of Vertically-OrientedÂGraphene: Precursor and Temperature Effects. , 2015, , 35-54.		2
103	Regulation of Electrodeâ€“Electrolyte Interactions for Improved Heat Recovery of a Thermo-Induced Electric Double-Layer Capacitor. Energy & Fuels, 2022, 36, 3304-3312.	2.5	2
104	DC and Microwave Plasmas for Synthesis of Vertically Oriented Graphene. IEEE Transactions on Plasma Science, 2014, 42, 2796-2797.	0.6	1
105	Interfacial charge transport behavior and thermal profiles of vertically oriented grapheneâ€bridged supercapacitors. Physica Status Solidi (B): Basic Research, 2017, 254, 1600804.	0.7	1
106	Reliability of Constant Charge Method for Molecular Dynamics Simulations on EDLCs in Nanometer and Sub-Nanometer Spaces. ChemElectroChem, 2017, 4, 2427-2427.	1.7	1
107	Hierarchical, Verticallyâ€Oriented Carbon Nanowall Foam Supercapacitor Using Room Temperature Ionic Liquid Mixture for AC Line Filtering with Ultrahigh Energy Density. ChemElectroChem, 2019, 6, 2123-2123.	1.7	1
108	Atmospheric PECVD Growth of Vertically-OrientedÂGraphene. , 2015, , 55-65.		0

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109	Interfacial charge transport behavior and thermal profiles of vertically oriented grapheneâ€bridged supercapacitors (Phys. Status Solidi B 6/2017). Physica Status Solidi (B): Basic Research, 2017, 254, 1770232.	0.7	0