

Zheng Bo

List of Publications by Year in descending order

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109
papers

5,115
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101384

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all docs

113
docs citations

113
times ranked

6467
citing authors

#	ARTICLE	IF	CITATIONS
1	Techno-economic analysis of a solar thermochemical cycle-based direct coal liquefaction system for low-carbon oil production. <i>Energy</i> , 2022, 239, 122167.	4.5	7
2	High-performance water purification and desalination by solar-driven interfacial evaporation and photocatalytic VOC decomposition enabled by hierarchical TiO_2/CuO nanoarchitecture. <i>International Journal of Energy Research</i> , 2022, 46, 1313-1326.	2.2	21
3	Nanotexturing-enhanced heat transfer and interfacial evaporation for energy-efficient solar-thermal water desalination. <i>International Journal of Heat and Mass Transfer</i> , 2022, 186, 122462.	2.5	11
4	Ultrathick MoS_2 Films with Exceptionally High Volumetric Capacitance. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	44
5	Entropy generation analysis in supercapacitor modules based on a three-dimensional coupled thermal model. <i>Energy</i> , 2022, 244, 123218.	4.5	6
6	Aligned $\text{Ti}_3\text{C}_2\text{TX}$ Aerogel with High Rate Performance, Power Density and Sub-Zero-Temperature Stability. <i>Energies</i> , 2022, 15, 1191.	1.6	6
7	MXene-Based Electrodes for Supercapacitor Energy Storage. <i>Energy & Fuels</i> , 2022, 36, 2390-2406.	2.5	67
8	Regulation of Electrode-Electrolyte Interactions for Improved Heat Recovery of a Thermo-Induced Electric Double-Layer Capacitor. <i>Energy & Fuels</i> , 2022, 36, 3304-3312.	2.5	2
9	Anion-kinetics-selective graphene anode and cation-energy-selective MXene cathode for high-performance capacitive deionization. <i>Energy Storage Materials</i> , 2022, 50, 395-406.	9.5	32
10	Gel polymer dominated ion charging mechanisms within graphene nanochannels. <i>Journal of Power Sources</i> , 2022, 541, 231684.	4.0	14
11	Re-carbon, up-carbon, de-carbon: Plasma-electrified roll-to-roll cleaner production of vertical graphenes and syngas from greenhouse gas mixes. <i>Carbon</i> , 2022, 197, 301-310.	5.4	6
12	Nanoconfined fusion of g-C ₃ N ₄ within edge-rich vertically oriented graphene hierarchical networks for high-performance photocatalytic hydrogen evolution utilizing superhydrophilic and superaerophobic responses in seawater. <i>Applied Catalysis B: Environmental</i> , 2021, 280, 119461.	10.8	32
13	Multifunctional solar bamboo straw: Multiscale 3D membrane for self-sustained solar-thermal water desalination and purification and thermoelectric waste heat recovery and storage. <i>Carbon</i> , 2021, 171, 359-367.	5.4	44
14	Novel insights into the unique intrinsic sensing behaviors of 2D nanomaterials for volatile organic compounds: from graphene to MoS_2 and black phosphorous. <i>Journal of Materials Chemistry A</i> , 2021, 9, 14411-14421.	5.2	22
15	Cost-effective, environmentally-sustainable and scale-up synthesis of vertically oriented graphenes from waste oil and its supercapacitor applications. <i>Waste Disposal & Sustainable Energy</i> , 2021, 3, 31-39.	1.1	11
16	More from Less but Precise: Industry-relevant Pseudocapacitance by Atomically-precise Mass-loading MnO_2 within Multifunctional MXene Aerogel. <i>Journal of Power Sources</i> , 2021, 492, 229639.	4.0	45
17	Sensing mechanism of the nano-confined space constructed by graphene. <i>Nanotechnology</i> , 2021, 32, 375502.	1.3	2
18	Combinatorial atomistic-to-AI prediction and experimental validation of heating effects in 350 F supercapacitor modules. <i>International Journal of Heat and Mass Transfer</i> , 2021, 171, 121075.	2.5	10

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19	Photo-electric capacitive deionization enabled by solar-driven nano-ionics on the edges of plasma-made vertical graphenes. <i>Chemical Engineering Journal</i> , 2021, 422, 130156.	6.6	13
20	Surface-dominant pseudocapacitive supercapacitors with high specific energy and power for energy storage. <i>Journal of Energy Storage</i> , 2021, 42, 103084.	3.9	22
21	Phase change material enhanced sustained and energy-efficient solar-thermal water desalination. <i>Applied Energy</i> , 2021, 301, 117463.	5.1	35
22	Single Ni supported on Ti ₃ C ₂ O ₂ for uninterrupted CO ₂ catalytic hydrogenation to formic acid: A DFT study. <i>Separation and Purification Technology</i> , 2021, 279, 119722.	3.9	14
23	Two-birds-one-stone: multifunctional supercapacitors beyond traditional energy storage. <i>Energy and Environmental Science</i> , 2021, 14, 1854-1896.	15.6	252
24	Rational Design of 2D Manganese Phosphate Hydrate Nanosheets as Pseudocapacitive Electrodes. <i>ACS Energy Letters</i> , 2020, 5, 23-30.	8.8	37
25	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. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 38512-38521.	4.0	32
26	Multi-linear antenna microwave plasma assisted large-area growth of 6 Å–6 in.2 vertically oriented graphenes with high growth rate. <i>Review of Scientific Instruments</i> , 2020, 91, 076105.	0.6	10
27	Vertical graphene nano-antennas for solar-to-hydrogen energy conversion. <i>Solar Energy</i> , 2020, 208, 379-387.	2.9	13
28	Revealing ion transport in supercapacitors with Sub-2 nm two-dimensional graphene channels. <i>Energy Storage Materials</i> , 2020, 31, 64-71.	9.5	31
29	High-Mass-Loading Porous Ti ₃ C ₂ T _x Films for Ultrahigh-Rate Pseudocapacitors. <i>ACS Energy Letters</i> , 2020, 5, 2266-2274.	8.8	88
30	SnO ₂ nanoparticles incorporated CuO nanopetals on graphene for high-performance room-temperature NO ₂ sensor. <i>Chemical Physics Letters</i> , 2020, 750, 137485.	1.2	21
31	Solar-Enhanced Plasma-Catalytic Oxidation of Toluene over a Bifunctional Graphene Fin Foam Decorated with Nanofin-like MnO ₂ . <i>ACS Catalysis</i> , 2020, 10, 4420-4432.	5.5	64
32	Highly Thermo-Conductive Three-Dimensional Graphene Aqueous Medium. <i>Nano-Micro Letters</i> , 2020, 12, 138.	14.4	7
33	Three-dimensional hollow urchin-like MnO ₂ for enhanced catalytic activity towards toluene decomposition in post-plasma catalysis. <i>Chemical Engineering Journal</i> , 2020, 402, 126154.	6.6	67
34	Ion Dynamics of Water in Salt Electrolyte with Organic Solvents in Nanoporous Supercapacitor Electrodes. <i>ChemElectroChem</i> , 2020, 7, 2048-2054.	1.7	6
35	Tuning and monitoring of nitrogen dioxide fixation on Cu decorated graphene: a density functional theory study. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 355001.	0.7	3
36	Hierarchical nanocarbon-MnO ₂ electrodes for enhanced electrochemical capacitor performance. <i>Energy Storage Materials</i> , 2019, 16, 607-618.	9.5	39

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37	Mutualistic decomposition pathway of formaldehyde on O-predosed γ -MnO ₂ . Applied Surface Science, 2019, 498, 143784.	3.1	12
38	Spill-SOS: Self-Pumping Siphon-Capillary Oil Recovery. ACS Nano, 2019, 13, 13027-13036.	7.3	34
39	Solar Energy Conversion: Multifunctional Solar Waterways: Plasma-Enabled Self-Cleaning Nanoarchitectures for Energy-Efficient Desalination (Adv. Energy Mater. 30/2019). Advanced Energy Materials, 2019, 9, 1970119.	10.2	6
40	Scalable Production of Integrated Graphene Nanoarchitectures for Ultrafast Solar-Thermal Conversion and Vapor Generation. Matter, 2019, 1, 1017-1032.	5.0	60
41	Beyond lotus: Plasma nanostructuring enables efficient energy and water conversion and use. Nano Energy, 2019, 66, 104125.	8.2	34
42	Density functional theory calculations of NO ₂ and H ₂ S 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
43	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
44	Multifunctional Solar Waterways: Plasma-Enabled Self-Cleaning Nanoarchitectures for Energy-Efficient Desalination. Advanced Energy Materials, 2019, 9, 1901286.	10.2	109
45	Graphene Array-Based Anti-fouling Solar Vapour Gap Membrane Distillation with High Energy Efficiency. Nano-Micro Letters, 2019, 11, 51.	14.4	79
46	Well-Aligned Hierarchical Graphene-Based Electrodes for Pseudocapacitors with Outstanding Low-Temperature Stability. ChemElectroChem, 2019, 6, 2788-2795.	1.7	11
47	Enhanced plasma-catalytic decomposition of toluene over Co-Ce binary metal oxide catalysts with high energy efficiency. RSC Advances, 2019, 9, 7447-7456.	1.7	25
48	Hierarchical, Vertically-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
49	Superstructure-Enabled Anti-Fouling Membrane for Efficient Photothermal Distillation. ACS Sustainable Chemistry and Engineering, 2019, 7, 20151-20158.	3.2	41
50	Tree-inspired radially aligned, bimodal graphene frameworks for highly efficient and isotropic thermal transport. Nanoscale, 2019, 11, 21249-21258.	2.8	26
51	Emerging nanostructured carbon-based non-precious metal electrocatalysts for selective electrochemical CO ₂ reduction to CO. Journal of Materials Chemistry A, 2019, 7, 25191-25202.	5.2	82
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	Hierarchical, Vertically-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
54	Design of Supercapacitor Electrodes Using Molecular Dynamics Simulations. Nano-Micro Letters, 2018, 10, 33.	14.4	73

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55	Vertically-oriented graphenes supported Mn ₃ O ₄ as advanced catalysts in post plasma-catalysis for toluene decomposition. <i>Applied Surface Science</i> , 2018, 436, 570-578.	3.1	30
56	Decoration of vertical graphene with tin dioxide nanoparticles for highly sensitive room temperature formaldehyde sensing. <i>Sensors and Actuators B: Chemical</i> , 2018, 256, 1011-1020.	4.0	97
57	<i>Ab initio</i> characterization and experimental validation on the roles of oxygen-containing groups in graphene based formaldehyde sensors. <i>Analyst</i> , 2018, 143, 106-115.	1.7	13
58	Tuneable fluidics within graphene nanogaps for water purification and energy storage. <i>Nanoscale Horizons</i> , 2017, 2, 89-98.	4.1	32
59	Wettability of vertically-oriented graphenes with different intersheet distances. <i>RSC Advances</i> , 2017, 7, 2667-2675.	1.7	28
60	Temperature dependence of ion diffusion coefficients in NaCl electrolyte confined within graphene nanochannels. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 7678-7688.	1.3	52
61	Interfacial charge transport behavior and thermal profiles of vertically oriented graphene-bridged supercapacitors. <i>Physica Status Solidi (B): Basic Research</i> , 2017, 254, 1600804.	0.7	1
62	Graphene nanopetal wire supercapacitors with high energy density and thermal durability. <i>Nano Energy</i> , 2017, 38, 127-136.	8.2	58
63	Reliability of Constant Charge Method for Molecular Dynamics Simulations on EDLCs in Nanometer and Sub-Nanometer Spaces. <i>ChemElectroChem</i> , 2017, 4, 2486-2493.	1.7	25
64	Molecular Origin of Electric Double-Layer Capacitance at Multilayer Graphene Edges. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 153-160.	2.1	52
65	Reliability of Constant Charge Method for Molecular Dynamics Simulations on EDLCs in Nanometer and Sub-Nanometer Spaces. <i>ChemElectroChem</i> , 2017, 4, 2427-2427.	1.7	1
66	Towards understanding the effects of van der Waals strengths on the electric double-layer structures and capacitive behaviors. <i>Journal of Power Sources</i> , 2017, 366, 218-225.	4.0	13
67	Interfacial charge transport behavior and thermal profiles of vertically oriented graphene-bridged supercapacitors (<i>Phys. Status Solidi B</i> 6/2017). <i>Physica Status Solidi (B): Basic Research</i> , 2017, 254, 1770232.	0.7	0
68	Substrate Effects in Graphene-Based Electric Double-Layer Capacitors: The Pivotal Interplays between Ions and Solvents. <i>ChemElectroChem</i> , 2017, 4, 2966-2974.	1.7	10
69	Kinetic-Dominated Charging Mechanism within Representative Aqueous Electrolyte-based Electric Double-Layer Capacitors. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3703-3710.	2.1	46
70	Solid-state NMR Study of Ion Adsorption and Charge Storage in Graphene Film Supercapacitor Electrodes. <i>Scientific Reports</i> , 2016, 6, 39689.	1.6	17
71	Edge effects in vertically-oriented graphene based electric double-layer capacitors. <i>Journal of Power Sources</i> , 2016, 324, 309-316.	4.0	75
72	Insights into the effects of solvent properties in graphene based electric double-layer capacitors with organic electrolytes. <i>Journal of Power Sources</i> , 2016, 334, 162-169.	4.0	38

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73	High Pseudocapacitive Performance of MnO ₂ Nanowires on Recyclable Electrodes. ChemSusChem, 2016, 9, 1020-1026.	3.6	13
74	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
75	Molecular Insights into Aqueous NaCl Electrolytes Confined within Vertically-oriented Graphenes. Scientific Reports, 2015, 5, 14652.	1.6	43
76	Hydrogen Production from Methanol Decomposition in a Gliding Arc Discharge Plasma with High Processing Capacity. Chemistry Letters, 2015, 44, 1315-1317.	0.7	21
77	Covalently interconnected carbon nanotubes for enhanced charge transport in pseudocapacitors. Physica Status Solidi (B): Basic Research, 2015, 252, 2236-2244.	0.7	3
78	PECVD Synthesis of Vertically-Oriented Graphene: Mechanism and Plasma Sources. , 2015, , 19-34.		3
79	Atmospheric PECVD Growth of Vertically-Oriented Graphene. , 2015, , 55-65.		0
80	Emerging energy and environmental applications of vertically-oriented graphenes. Chemical Society Reviews, 2015, 44, 2108-2121.	18.7	269
81	Note: Rapid reduction of graphene oxide paper by glow discharge plasma. Review of Scientific Instruments, 2015, 86, 056101.	0.6	8
82	Vertically-Oriented Graphene. , 2015, , .		23
83	Performance of vertically oriented graphene supported platinum-ruthenium bimetallic catalyst for methanol oxidation. Journal of Power Sources, 2015, 273, 530-537.	4.0	56
84	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
85	PECVD Synthesis of Vertically-Oriented Graphene: Precursor and Temperature Effects. , 2015, , 35-54.		2
86	The Properties of Vertically-Oriented Graphene. , 2015, , 11-18.		4
87	Multi-pin dc glow discharge PECVD for uniform growth of vertically oriented graphene at atmospheric pressure. Physica Status Solidi (B): Basic Research, 2014, 251, 155-161.	0.7	11
88	DC and Microwave Plasmas for Synthesis of Vertically Oriented Graphene. IEEE Transactions on Plasma Science, 2014, 42, 2796-2797.	0.6	1
89	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
90	Green preparation of reduced graphene oxide for sensing and energy storage applications. Scientific Reports, 2014, 4, 4684.	1.6	433

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91	Hierarchical vertically oriented graphene as a catalytic counter electrode in dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 188-193.	5.2	85
92	Note: Gliding arc discharges with phase-chopped voltage supply for enhancement of energy efficiency in volatile organic compound decomposition. <i>Review of Scientific Instruments</i> , 2013, 84, 016105.	0.6	9
93	Plasma-enhanced chemical vapor deposition synthesis of vertically oriented graphene nanosheets. <i>Nanoscale</i> , 2013, 5, 5180.	2.8	357
94	Vertically Oriented Graphene Bridging Active-Layer/Current-Collector Interface for Ultrahigh Rate Supercapacitors. <i>Advanced Materials</i> , 2013, 25, 5799-5806.	11.1	270
95	Dimensional Analysis of Detrimental Ozone Generation by Negative Wire-to-Plate Corona Discharge in Both Dry and Humid Air. <i>Ozone: Science and Engineering</i> , 2013, 35, 31-37.	1.4	10
96	Graphene Supercapacitors: Vertically Oriented Graphene Bridging Active-Layer/Current-Collector Interface for Ultrahigh Rate Supercapacitors (<i>Adv. Mater.</i> 40/2013). <i>Advanced Materials</i> , 2013, 25, 5798-5798.	11.1	10
97	One-step fabrication and capacitive behavior of electrochemical double layer capacitor electrodes using vertically-oriented graphene directly grown on metal. <i>Carbon</i> , 2012, 50, 4379-4387.	5.4	162
98	Vertically oriented graphene sheets grown on metallic wires for greener corona discharges: lower power consumption and minimized ozone emission. <i>Energy and Environmental Science</i> , 2011, 4, 2525.	15.6	66
99	Patterning Vertically Oriented Graphene Sheets for Nanodevice Applications. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 537-542.	2.1	159
100	Carbon Nanotube with Chemically Bonded Graphene Leaves for Electronic and Optoelectronic Applications. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 1556-1562.	2.1	190
101	Growth of carbon nanowalls at atmospheric pressure for one-step gas sensor fabrication. <i>Nanoscale Research Letters</i> , 2011, 6, 202.	3.1	123
102	Understanding growth of carbon nanowalls at atmospheric pressure using normal glow discharge plasma-enhanced chemical vapor deposition. <i>Carbon</i> , 2011, 49, 1849-1858.	5.4	120
103	Note: Continuous synthesis of uniform vertical graphene on cylindrical surfaces. <i>Review of Scientific Instruments</i> , 2011, 82, 086116.	0.6	8
104	Nanoscale Discharge Electrode for Minimizing Ozone Emission from Indoor Corona Devices. <i>Environmental Science & Technology</i> , 2010, 44, 6337-6342.	4.6	32
105	Nitrogen dioxide formation in the gliding arc discharge-assisted decomposition of volatile organic compounds. <i>Journal of Hazardous Materials</i> , 2009, 166, 1210-1216.	6.5	38
106	Scale-up analysis and development of gliding arc discharge facility for volatile organic compounds decomposition. <i>Journal of Hazardous Materials</i> , 2008, 155, 494-501.	6.5	37
107	Simultaneous removal of ethyl acetate, benzene and toluene with gliding arc gas discharge. <i>Journal of Zhejiang University: Science A</i> , 2008, 9, 695-701.	1.3	9
108	The Dependence of Gliding Arc Gas Discharge Characteristics on Reactor Geometrical Configuration. <i>Plasma Chemistry and Plasma Processing</i> , 2007, 27, 691-700.	1.1	15

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109	Hierarchical Petal-on-Petal MnO ₂ /Vertical Graphene Foam for Postplasma Catalytic Decomposition of Toluene with High Efficiency and Ultralow Pressure Drop. Industrial & Engineering Chemistry Research, 0, , .	1.8	3