

Cao Guan

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106
papers

11,333
citations

54
h-index

106
g-index

108
ext. papers

13,383
ext. citations

12.1
avg, IF

6.78
L-index

#	Paper	IF	Citations
106	Rational Design of Metal-Organic Framework Derived Hollow NiCo ₂ O ₄ Arrays for Flexible Supercapacitor and Electrocatalysis. <i>Advanced Energy Materials</i> , 2017 , 7, 1602391	21.8	650
105	Hollow Mo-doped CoP nanoarrays for efficient overall water splitting. <i>Nano Energy</i> , 2018 , 48, 73-80	17.1	418
104	A new type of porous graphite foams and their integrated composites with oxide/polymer core/shell nanowires for supercapacitors: structural design, fabrication, and full supercapacitor demonstrations. <i>Nano Letters</i> , 2014 , 14, 1651-8	11.5	395
103	Iron oxide-decorated carbon for supercapacitor anodes with ultrahigh energy density and outstanding cycling stability. <i>ACS Nano</i> , 2015 , 9, 5198-207	16.7	375
102	Ultrathin MoS ₂ Nanosheets@Metal Organic Framework-Derived N-Doped Carbon Nanowall Arrays as Sodium Ion Battery Anode with Superior Cycling Life and Rate Capability. <i>Advanced Functional Materials</i> , 2017 , 27, 1702116	15.6	373
101	A Flexible Quasi-Solid-State Nickel-Zinc Battery with High Energy and Power Densities Based on 3D Electrode Design. <i>Advanced Materials</i> , 2016 , 28, 8732-8739	24	367
100	Synthesis of free-standing metal sulfide nanoarrays via anion exchange reaction and their electrochemical energy storage application. <i>Small</i> , 2014 , 10, 766-73	11	367
99	Hybrid structure of cobalt monoxide nanowire @ nickel hydroxidenitrate nanoflake aligned on nickel foam for high-rate supercapacitor. <i>Energy and Environmental Science</i> , 2011 , 4, 4496	35.4	365
98	Hollow Co O Nanosphere Embedded in Carbon Arrays for Stable and Flexible Solid-State Zinc-Air Batteries. <i>Advanced Materials</i> , 2017 , 29, 1704117	24	325
97	Solution synthesis of metal oxides for electrochemical energy storage applications. <i>Nanoscale</i> , 2014 , 6, 5008-48	7.7	321
96	Rationally Designed Hierarchical TiO ₂ @Fe ₂ O ₃ Hollow Nanostructures for Improved Lithium Ion Storage. <i>Advanced Energy Materials</i> , 2013 , 3, 737-743	21.8	274
95	Single Co Atoms Anchored in Porous N-Doped Carbon for Efficient Zinc-Air Battery Cathodes. <i>ACS Catalysis</i> , 2018 , 8, 8961-8969	13.1	250
94	Highly stable and reversible lithium storage in SnO ₂ nanowires surface coated with a uniform hollow shell by atomic layer deposition. <i>Nano Letters</i> , 2014 , 14, 4852-8	11.5	242
93	A general strategy toward graphene@metal oxide core-shell nanostructures for high-performance lithium storage. <i>Energy and Environmental Science</i> , 2011 , 4, 4954	35.4	241
92	A high energy and power Li-ion capacitor based on a TiO ₂ nanobelt array anode and a graphene hydrogel cathode. <i>Small</i> , 2015 , 11, 1470-7	11	225
91	Nanoporous walls on macroporous foam: rational design of electrodes to push areal pseudocapacitance. <i>Advanced Materials</i> , 2012 , 24, 4186-90	24	222
90	High-Performance Flexible Solid-State Ni/Fe Battery Consisting of Metal Oxides Coated Carbon Cloth/Carbon Nanofiber Electrodes. <i>Advanced Energy Materials</i> , 2016 , 6, 1601034	21.8	213

89	Cactus-Like NiCoP/NiCo-OH 3D Architecture with Tunable Composition for High-Performance Electrochemical Capacitors. <i>Advanced Functional Materials</i> , 2018 , 28, 1800036	15.6	206
88	Sulfur-doped cobalt phosphide nanotube arrays for highly stable hybrid supercapacitor. <i>Nano Energy</i> , 2017 , 39, 162-171	17.1	202
87	Metal Phosphides and Phosphates-based Electrodes for Electrochemical Supercapacitors. <i>Small</i> , 2017 , 13, 1701530	11	197
86	Porous Hydroxide Nanosheets on Preformed Nanowires by Electrodeposition: Branched Nanoarrays for Electrochemical Energy Storage. <i>Chemistry of Materials</i> , 2012 , 24, 3793-3799	9.6	192
85	Metal-organic framework derived hollow CoS nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. <i>Nanoscale Horizons</i> , 2017 , 2, 342-348	10.8	189
84	Cobalt oxide and N-doped carbon nanosheets derived from a single two-dimensional metal-organic framework precursor and their application in flexible asymmetric supercapacitors. <i>Nanoscale Horizons</i> , 2017 , 2, 99-105	10.8	183
83	MOF-derived nanohybrids for electrocatalysis and energy storage: current status and perspectives. <i>Chemical Communications</i> , 2018 , 54, 5268-5288	5.8	177
82	Rational Design of Self-Supported NiS Nanosheets Array for Advanced Asymmetric Supercapacitor with a Superior Energy Density. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 496-504	9.5	176
81	Surface-Charge-Mediated Formation of H-TiO @Ni(OH) Heterostructures for High-Performance Supercapacitors. <i>Advanced Materials</i> , 2017 , 29, 1604164	24	169
80	Hollow core-shell nanostructure supercapacitor electrodes: gap matters. <i>Energy and Environmental Science</i> , 2012 , 5, 9085	35.4	169
79	Controllable MnCo ₂ S ₄ nanostructures for high performance hybrid supercapacitors. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 7494-7506	13	157
78	Decorating Co/Co _x N nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. <i>Energy Storage Materials</i> , 2019 , 16, 243-250	19.4	157
77	3D-Printed MOF-Derived Hierarchically Porous Frameworks for Practical High-Energy Density LiO ₂ Batteries. <i>Advanced Functional Materials</i> , 2019 , 29, 1806658	15.6	138
76	Flexible Asymmetric Supercapacitor Based on Structure-Optimized Mn ₃ O ₄ /Reduced Graphene Oxide Nanohybrid Paper with High Energy and Power Density. <i>Advanced Functional Materials</i> , 2015 , 25, 7291-7299	15.6	137
75	Rational Construction of Hollow Core-Branch CoSe Nanoarrays for High-Performance Asymmetric Supercapacitor and Efficient Oxygen Evolution. <i>Small</i> , 2018 , 14, 1700979	11	130
74	Ni-Doped Cobalt-Cobalt Nitride Heterostructure Arrays for High-Power Supercapacitors. <i>ACS Energy Letters</i> , 2018 , 3, 2462-2469	20.1	129
73	Integrated Hierarchical Carbon Flake Arrays with Hollow P-Doped CoSe ₂ Nanoclusters as an Advanced Bifunctional Catalyst for Zn-Air Batteries. <i>Advanced Functional Materials</i> , 2018 , 28, 1804846	15.6	126
72	Hierarchical Micro-Nano Sheet Arrays of Nickel-Cobalt Double Hydroxides for High-Rate Ni-Zn Batteries. <i>Advanced Science</i> , 2019 , 6, 1802002	13.6	118

71	Uncovering loss mechanisms in silver nanoparticle-blended plasmonic organic solar cells. <i>Nature Communications</i> , 2013 , 4, 2004	17.4	105
70	Heterojunction engineering of MoSe ₂ /MoS ₂ with electronic modulation towards synergetic hydrogen evolution reaction and supercapacitance performance. <i>Chemical Engineering Journal</i> , 2019 , 359, 1419-1426	14.7	104
69	N-doped porous carbon nanoplates embedded with CoS ₂ vertically anchored on carbon cloths for flexible and ultrahigh microwave absorption. <i>Carbon</i> , 2020 , 163, 348-359	10.4	95
68	Conformally deposited NiO on a hierarchical carbon support for high-power and durable asymmetric supercapacitors. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 23283-23288	13	82
67	Recent Development of Advanced Electrode Materials by Atomic Layer Deposition for Electrochemical Energy Storage. <i>Advanced Science</i> , 2016 , 3, 1500405	13.6	78
66	Energy-Saving Synthesis of MOF-Derived Hierarchical and Hollow Co(VO)-Co(OH) Composite Leaf Arrays for Supercapacitor Electrode Materials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 18440-18444	9.5	78
65	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. <i>Chemical Engineering Journal</i> , 2019 , 369, 988-995	14.7	77
64	Hybrid Fe ₂ O ₃ Nanoparticle Clusters/rGO Paper as an Effective Negative Electrode for Flexible Supercapacitors. <i>Chemistry of Materials</i> , 2016 , 28, 7296-7303	9.6	77
63	3D Graphene-Nickel Hydroxide Hydrogel Electrode for High-Performance Supercapacitor. <i>Electrochimica Acta</i> , 2016 , 196, 653-660	6.7	75
62	Integrated photoelectrochemical energy storage: solar hydrogen generation and supercapacitor. <i>Scientific Reports</i> , 2012 , 2, 981	4.9	75
61	Hierarchically porous three-dimensional electrodes of CoMoO ₄ and ZnCoO ₄ and their high anode performance for lithium ion batteries. <i>Nanoscale</i> , 2014 , 6, 10556-61	7.7	72
60	Composition-Graded Zn _x Cd _{1-x} Core/Shell Nanowire Array Electrodes for Photoelectrochemical Hydrogen Generation. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 3802-3807	3.8	72
59	Ultrafine Molybdenum Carbide Nanocrystals Confined in Carbon Foams via a Colloid-Confinement Route for Efficient Hydrogen Production. <i>Small Methods</i> , 2018 , 2, 1700396	12.8	69
58	Synthesis of amorphous hydroxyl-rich Co ₃ O ₄ for flexible high-rate supercapacitor. <i>Chemical Engineering Journal</i> , 2020 , 396, 125364	14.7	66
57	Atomic layer deposition of Co ₃ O ₄ on carbon nanotubes/carbon cloth for high-capacitance and ultrastable supercapacitor electrode. <i>Nanotechnology</i> , 2015 , 26, 094001	3.4	66
56	2D Metal-Organic Frameworks Derived Nanocarbon Arrays for Substrate Enhancement in Flexible Supercapacitors. <i>Small</i> , 2018 , 14, e1702641	11	63
55	3D TiO ₂ @Ni(OH) ₂ Core-shell Arrays with Tunable Nanostructure for Hybrid Supercapacitor Application. <i>Scientific Reports</i> , 2015 , 5, 13940	4.9	62
54	Atomic-layer-deposition-assisted formation of carbon nanoflakes on metal oxides and energy storage application. <i>Small</i> , 2014 , 10, 300-7	11	56

53	Metal-organic framework-derived integrated nanoarrays for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 9009-9018	13	54
52	Nanoflakes of Ni-Co LDH and BiO Assembled in 3D Carbon Fiber Network for High-Performance Aqueous Rechargeable Ni/Bi Battery. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 26008-26015	9.5	54
51	Highly stable and flexible Li-ion battery anodes based on TiO ₂ coated 3D carbon nanostructures. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 15394-15398	13	53
50	Recent developments of advanced micro-supercapacitors: design, fabrication and applications. <i>Npj Flexible Electronics</i> , 2020 , 4,	10.7	53
49	Three Dimensionally Free-Formable Graphene Foam with Designed Structures for Energy and Environmental Applications. <i>ACS Nano</i> , 2020 , 14, 937-947	16.7	50
48	Regulating Dendrite-Free Zinc Deposition by 3D Zincophilic Nitrogen-Doped Vertical Graphene for High-Performance Flexible Zn-Ion Batteries. <i>Advanced Functional Materials</i> , 2021 , 31, 2103922	15.6	50
47	(Ni,Co)Se /NiCo-LDH Core/Shell Structural Electrode with the Cactus-Like (Ni,Co)Se Core for Asymmetric Supercapacitors. <i>Small</i> , 2019 , 15, e1803895	11	50
46	Enlarged Interlayer Spacing in Cobalt-Manganese Layered Double Hydroxide Guiding Transformation to Layered Structure for High Supercapacitance. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 23236-23243	9.5	48
45	Recent Advances on Self-Supported Arrayed Bifunctional Oxygen Electrocatalysts for Flexible Solid-State Zn-Air Batteries. <i>Small</i> , 2020 , 16, e2002902	11	47
44	A novel hollowed CoO-in-CoSnO ₂ nanostructure with enhanced lithium storage capabilities. <i>Nanoscale</i> , 2014 , 6, 13824-30	7.7	43
43	Pt decorated 3D vertical graphene nanosheet arrays for efficient methanol oxidation and hydrogen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 22004-22011	13	42
42	Energy-level engineered hollow N-doped Ni _{1.03} for Zn-Air batteries. <i>Energy Storage Materials</i> , 2020 , 25, 202-209	19.4	42
41	MOF-Derived Vertically Aligned Mesoporous Co ₃ O ₄ Nanowires for Ultrahigh Capacity Lithium-Ion Batteries Anodes. <i>Advanced Materials Interfaces</i> , 2018 , 5, 1800222	4.6	42
40	Mesoporous aluminium manganese cobalt oxide with pentahedron structures for energy storage devices. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 18417-18427	13	36
39	PtCo bimetallic nanoparticles encapsulated in N-doped carbon nanorod arrays for efficient electrocatalysis. <i>Carbon</i> , 2019 , 142, 206-216	10.4	36
38	Facile Activation of Commercial Carbon Felt as a Low-Cost Free-Standing Electrode for Flexible Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 42503-42512	9.5	36
37	Microwave Assisted hydrothermal synthesis of nanocrystal Ni(OH) ₂ for supercapacitor applications. <i>CrystEngComm</i> , 2016 , 18, 3256-3264	3.3	33
36	Strain rate shift for constitutive behaviour of sintered silver nanoparticles under nanoindentation. <i>Mechanics of Materials</i> , 2021 , 158, 103881	3.3	33

35	All-solid-state sponge-like squeezable zinc-air battery. <i>Energy Storage Materials</i> , 2019 , 23, 375-382	19.4	32
34	Rational Construction of a WS ₂ /CoS ₂ Heterostructure Electrocatalyst for Efficient Hydrogen Evolution at All pH Values. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 4474-4480	8.3	32
33	Single-Atom Tungsten-Doped CoP Nanoarrays as a High-Efficiency pH-Universal Catalyst for Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 14825-14832	8.3	32
32	Co/Zn bimetallic oxides derived from metal organic frameworks for high performance electrochemical energy storage. <i>Electrochimica Acta</i> , 2018 , 291, 177-187	6.7	31
31	3D hierarchical SnO ₂ @Ni(OH) ₂ core-shell nanowire arrays on carbon cloth for energy storage application. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 9538-9542	13	30
30	Confined Fe ₂ O ₃ Nanoparticles on Graphite Foam as High-Rate and Stable Lithium-Ion Battery Anode. <i>Particle and Particle Systems Characterization</i> , 2016 , 33, 487-492	3.1	29
29	Open hollow CoPt clusters embedded in carbon nanoflake arrays for highly efficient alkaline water splitting. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 20214-20223	13	29
28	3D-Printed highly stretchable conducting polymer electrodes for flexible supercapacitors. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 19649-19658	13	27
27	MOF-Derived Bifunctional CoSe Nanoparticles Embedded in N-Doped Carbon Nanosheet Arrays as Efficient Sulfur Hosts for Lithium-Sulfur Batteries. <i>Nano Letters</i> , 2021 , 21, 8579-8586	11.5	26
26	The Atomic Circus: Small Electron Beams Spotlight Advanced Materials Down to the Atomic Scale. <i>Advanced Materials</i> , 2018 , 30, e1802402	24	26
25	Robust, High-Density Zinc Oxide Nanoarrays by Nanoimprint Lithography-Assisted Area-Selective Atomic Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 23729-23734	3.8	25
24	Recent progress on hollow array architectures and their applications in electrochemical energy storage. <i>Nanoscale Horizons</i> , 2020 , 5, 1188-1199	10.8	24
23	Space-confinement and chemisorption co-involved in encapsulation of sulfur for lithium-sulfur batteries with exceptional cycling stability. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 24602-24611	13	23
22	Atomic-layer-deposition alumina induced carbon on porous Ni(x)Co(1-x)O nanonets for enhanced pseudocapacitive and Li-ion storage performance. <i>Nanotechnology</i> , 2015 , 26, 014001	3.4	20
21	Carbon Nanoarrays Embedded with Metal Compounds for High-Performance Flexible Supercapacitors. <i>Batteries and Supercaps</i> , 2020 , 3, 93-100	5.6	19
20	SnS ₂ nanosheets arrays sandwiched by N-doped carbon and TiO ₂ for high-performance Na-ion storage. <i>Green Energy and Environment</i> , 2018 , 3, 42-49	5.7	17
19	Rational design of iron single atom anchored on nitrogen doped carbon as a high-performance electrocatalyst for all-solid-state flexible zinc-air batteries. <i>Chemical Engineering Journal</i> , 2021 , 405, 125956	14.7	16
18	3D printing-assisted gyroidal graphite foam for advanced supercapacitors. <i>Chemical Engineering Journal</i> , 2021 , 416, 127885	14.7	14

17	Electrospun Nanofibers for New Generation Flexible Energy Storage. <i>Energy and Environmental Materials</i> , 2020 ,	13	13
16	Bamboo-derived porous carbons for Zn-ion hybrid supercapacitors. <i>Materials Research Bulletin</i> , 2021 , 139, 111281	5.1	13
15	Fabrication of 3D-Printed Ceramic Structures for Portable Solar Desalination Devices. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 23220-23229	9.5	12
14	Polypyrrole nanowires coated with a hollow shell for enhanced electrochemical performance. <i>Materials Research Bulletin</i> , 2018 , 100, 116-119	5.1	11
13	Bifunctional oxygen evolution and supercapacitor electrode with integrated architecture of NiFe-layered double hydroxides and hierarchical carbon framework. <i>Nanotechnology</i> , 2019 , 30, 325402	3.4	10
12	Recent advances in architecture design of nanoarrays for flexible solid-state aqueous batteries. <i>Nano Futures</i> , 2020 , 4, 032002	3.6	10
11	Iron Oxide Nanoneedles Anchored on N-Doped Carbon Nanoarrays as an Electrode for High-Performance Hybrid Supercapacitor. <i>ACS Applied Energy Materials</i> , 2020 , 3, 12162-12171	6.1	10
10	Phospho-oxynitride Layer Protected Cobalt Phosphonitride Nanowire Arrays for High-Rate and Stable Supercapacitors. <i>ACS Applied Energy Materials</i> , 2019 , 2, 616-626	6.1	10
9	In-situ formation of isolated iron sites coordinated on nitrogen-doped carbon coated carbon cloth as self-supporting electrode for flexible aluminum-air battery. <i>Chemical Engineering Journal</i> , 2021 , 421, 129973	14.7	9
8	Structure-Enhanced Mechanically Robust Graphite Foam with Ultrahigh MnO Loading for Supercapacitors. <i>Research</i> , 2020 , 2020, 7304767	7.8	8
7	Hybrid CoO Nanowires Coated with Uniform Polypyrrole Nanolayers for High-Performance Energy Storage Devices. <i>Nanomaterials</i> , 2019 , 9,	5.4	6
6	Amorphous FeOOH Decorated CoSe ₂ Nanorod Heterostructured Arrays for Efficient Water Oxidation. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2001310	4.6	6
5	3D Printing of Next-generation Electrochemical Energy Storage Devices: from Multiscale to Multimaterial. <i>Energy and Environmental Materials</i> ,	13	4
4	Ultrafast-charging quasi-solid-state fiber-shaped zinc-ion hybrid supercapacitors with superior flexibility. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 17292-17299	13	4
3	Charge Moment Tensor and its Application to a Rotational Charged Rigid Body in a Uniform Magnetic Field. <i>Journal of Electromagnetic Waves and Applications</i> , 2008 , 22, 2179-2190	1.3	2
2	Additive Manufacturing Solidification Methodologies for Ink Formulation. <i>Additive Manufacturing</i> , 2022 , 102939	6.1	1
1	Metal Oxides Nanoarray Electrodes for Flexible Supercapacitors 2022 , 205-233		