Cao Guan

List of Publications by Year in Descending Order

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	Metal Oxides Nanoarray Electrodes for Flexible Supercapacitors **2022**, 205-233		
105	Additive Manufacturing Solidification Methodologies for Ink Formulation. *Additive Manufacturing*, **2022**, 102939	6.1	1
104	MOF-Derived Bifunctional CoSe Nanoparticles Embedded in N-Doped Carbon Nanosheet Arrays as Efficient Sulfur Hosts for Lithium-Sulfur Batteries. *Nano Letters*, **2021**, 21, 8579-8586	11.5	26
103	Fabrication of 3D-Printed Ceramic Structures for Portable Solar Desalination Devices. *ACS Applied Materials & Interfaces*, **2021**, 13, 23220-23229	9.5	12
102	Regulating Dendrite-Free Zinc Deposition by 3D Zincopilic Nitrogen-Doped Vertical Graphene for High-Performance Flexible Zn-Ion Batteries. *Advanced Functional Materials*, **2021**, 31, 2103922	15.6	50
101	Rational design of iron single atom anchored on nitrogen doped carbon as a high-performance electrocatalyst for all-solid-state flexible zinc-air batteries. *Chemical Engineering Journal*, **2021**, 405, 125956	14.7	16
100	3D printing-assisted gyroidal graphite foam for advanced supercapacitors. *Chemical Engineering Journal*, **2021**, 416, 127885	14.7	14
99	Amorphous FeOOH Decorated CoSe 2 Nanorod Heterostructured Arrays for Efficient Water Oxidation. *Advanced Materials Interfaces*, **2021**, 8, 2001310	4.6	6
98	3D-Printed highly stretchable conducting polymer electrodes for flexible supercapacitors. *Journal of Materials Chemistry A*, **2021**, 9, 19649-19658	13	27
97	Bamboo-derived porous carbons for Zn-ion hybrid supercapacitors. *Materials Research Bulletin*, **2021**, 139, 111281	5.1	13
96	Strain rate shift for constitutive behaviour of sintered silver nanoparticles under nanoindentation. *Mechanics of Materials*, **2021**, 158, 103881	3.3	33
95	In-situ formation of isolated iron sites coordinated on nitrogen-doped carbon coated carbon cloth as self-supporting electrode for flexible aluminum-air battery. *Chemical Engineering Journal*, **2021**, 421, 129973	14.7	9
94	Ultrafast-charging quasi-solid-state fiber-shaped zinc-ion hybrid supercapacitors with superior flexibility. *Journal of Materials Chemistry A*, **2021**, 9, 17292-17299	13	4
93	Synthesis of amorphous hydroxyl-rich Co3O4 for flexible high-rate supercapacitor. *Chemical Engineering Journal*, **2020**, 396, 125364	14.7	66
92	N-doped porous carbon nanoplates embedded with CoS2 vertically anchored on carbon cloths for flexible and ultrahigh microwave absorption. *Carbon*, **2020**, 163, 348-359	10.4	95
91	Recent progress on hollow array architectures and their applications in electrochemical energy storage. *Nanoscale Horizons*, **2020**, 5, 1188-1199	10.8	24
90	Recent advances in architecture design of nanoarrays for flexible solid-state aqueous batteries. *Nano Futures*, **2020**, 4, 032002	3.6	10

89	Recent Advances on Self-Supported Arrayed Bifunctional Oxygen Electrocatalysts for Flexible Solid-State Zn-Air Batteries. *Small*, **2020**, 16, e2002902	11	47
88	Rational Construction of a WS2/CoS2 Heterostructure Electrocatalyst for Efficient Hydrogen Evolution at All pH Values. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 4474-4480	8.3	32
87	Structure-Enhanced Mechanically Robust Graphite Foam with Ultrahigh MnO Loading for Supercapacitors. *Research*, **2020**, 2020, 7304767	7.8	8
86	Three Dimensionally Free-Formable Graphene Foam with Designed Structures for Energy and Environmental Applications. *ACS Nano*, **2020**, 14, 937-947	16.7	50
85	Carbon Nanoarrays Embedded with Metal Compounds for High-Performance Flexible Supercapacitors. *Batteries and Supercaps*, **2020**, 3, 93-100	5.6	19
84	Electrospun Nanofibers for New Generation Flexible Energy Storage. *Energy and Environmental Materials*, **2020**,	13	13
83	Recent developments of advanced micro-supercapacitors: design, fabrication and applications. *Npj Flexible Electronics*, **2020**, 4,	10.7	53
82	Iron Oxide Nanoneedles Anchored on N-Doped Carbon Nanoarrays as an Electrode for High-Performance Hybrid Supercapacitor. *ACS Applied Energy Materials*, **2020**, 3, 12162-12171	6.1	10
81	Single-Atom Tungsten-Doped CoP Nanoarrays as a High-Efficiency pH-Universal Catalyst for Hydrogen Evolution Reaction. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 14825-14832	8.3	32
80	Energy-level engineered hollow N-doped NiS1.03 for Zn–Air batteries. *Energy Storage Materials*, **2020**, 25, 202-209	19.4	42
79	Enlarged Interlayer Spacing in Cobalt-Manganese Layered Double Hydroxide Guiding Transformation to Layered Structure for High Supercapacitance. *ACS Applied Materials & Interfaces*, **2019**, 11, 23236-23243	9.5	48
78	All-solid-state sponge-like squeezable zinc-air battery. *Energy Storage Materials*, **2019**, 23, 375-382	19.4	32
77	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. *Chemical Engineering Journal*, **2019**, 369, 988-995	14.7	77
76	Hybrid CoO Nanowires Coated with Uniform Polypyrrole Nanolayers for High-Performance Energy Storage Devices. *Nanomaterials*, **2019**, 9,	5.4	6
75	Bifunctional oxygen evolution and supercapacitor electrode with integrated architecture of NiFe-layered double hydroxides and hierarchical carbon framework. *Nanotechnology*, **2019**, 30, 325402	3.4	10
74	Hierarchical Micro-Nano Sheet Arrays of Nickel-Cobalt Double Hydroxides for High-Rate Ni-Zn Batteries. *Advanced Science*, **2019**, 6, 1802002	13.6	118
73	Decorating Co/CoNx nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. *Energy Storage Materials*, **2019**, 16, 243-250	19.4	157
72	Mesoporous aluminium manganese cobalt oxide with pentahedron structures for energy storage devices. *Journal of Materials Chemistry A*, **2019**, 7, 18417-18427	13	36

71	Phospho-oxynitride Layer Protected Cobalt Phosphonitride Nanowire Arrays for High-Rate and Stable Supercapacitors. *ACS Applied Energy Materials*, **2019**, 2, 616-626	6.1	10
70	Heterojunction engineering of MoSe2/MoS2 with electronic modulation towards synergetic hydrogen evolution reaction and supercapacitance performance. *Chemical Engineering Journal*, **2019**, 359, 1419-1426	14.7	104
69	3D-Printed MOF-Derived Hierarchically Porous Frameworks for Practical High-Energy Density Li–O2 Batteries. *Advanced Functional Materials*, **2019**, 29, 1806658	15.6	138
68	PtCo bimetallic nanoparticles encapsulated in N-doped carbon nanorod arrays for efficient electrocatalysis. *Carbon*, **2019**, 142, 206-216	10.4	36
67	(Ni,Co)Se /NiCo-LDH Core/Shell Structural Electrode with the Cactus-Like (Ni,Co)Se Core for Asymmetric Supercapacitors. *Small*, **2019**, 15, e1803895	11	50
66	Metal–organic framework-derived integrated nanoarrays for overall water splitting. *Journal of Materials Chemistry A*, **2018**, 6, 9009-9018	13	54
65	Rational Construction of Hollow Core-Branch CoSe Nanoarrays for High-Performance Asymmetric Supercapacitor and Efficient Oxygen Evolution. *Small*, **2018**, 14, 1700979	11	130
64	Hollow Mo-doped CoP nanoarrays for efficient overall water splitting. *Nano Energy*, **2018**, 48, 73-80	17.1	418
63	MOF-derived nanohybrids for electrocatalysis and energy storage: current status and perspectives. *Chemical Communications*, **2018**, 54, 5268-5288	5.8	177
62	Cactus-Like NiCoP/NiCo-OH 3D Architecture with Tunable Composition for High-Performance Electrochemical Capacitors. *Advanced Functional Materials*, **2018**, 28, 1800036	15.6	206
61	Ultrafine Molybdenum Carbide Nanocrystals Confined in Carbon Foams via a Colloid-Confinement Route for Efficient Hydrogen Production. *Small Methods*, **2018**, 2, 1700396	12.8	69
60	2D Metal-Organic Frameworks Derived Nanocarbon Arrays for Substrate Enhancement in Flexible Supercapacitors. *Small*, **2018**, 14, e1702641	11	63
59	SnS2 nanosheets arrays sandwiched by N-doped carbon and TiO2 for high-performance Na-ion storage. *Green Energy and Environment*, **2018**, 3, 42-49	5.7	17
58	Single Co Atoms Anchored in Porous N-Doped Carbon for Efficient Zinc–Air Battery Cathodes. *ACS Catalysis*, **2018**, 8, 8961-8969	13.1	250
57	Integrated Hierarchical Carbon Flake Arrays with Hollow P-Doped CoSe2 Nanoclusters as an Advanced Bifunctional Catalyst for Zn–Air Batteries. *Advanced Functional Materials*, **2018**, 28, 1804846	15.6	126
56	Polypyrrole nanowires coated with a hollow shell for enhanced electrochemical performance. *Materials Research Bulletin*, **2018**, 100, 116-119	5.1	11
55	Facile Activation of Commercial Carbon Felt as a Low-Cost Free-Standing Electrode for Flexible Supercapacitors. *ACS Applied Materials & Interfaces*, **2018**, 10, 42503-42512	9.5	36
54	Co/Zn bimetallic oxides derived from metal organic frameworks for high performance electrochemical energy storage. *Electrochimica Acta*, **2018**, 291, 177-187	6.7	31

53	Open hollow CoPt clusters embedded in carbon nanoflake arrays for highly efficient alkaline water splitting. *Journal of Materials Chemistry A*, **2018**, 6, 20214-20223	13	29
52	The Atomic Circus: Small Electron Beams Spotlight Advanced Materials Down to the Atomic Scale. *Advanced Materials*, **2018**, 30, e1802402	24	26
51	Ni-Doped CobaltCobalt Nitride Heterostructure Arrays for High-Power Supercapacitors. *ACS Energy Letters*, **2018**, 3, 2462-2469	20.1	129
50	Energy-Saving Synthesis of MOF-Derived Hierarchical and Hollow Co(VO)-Co(OH) Composite Leaf Arrays for Supercapacitor Electrode Materials. *ACS Applied Materials & Interfaces*, **2018**, 10, 18440-18444	9.5	78
49	MOF-Derived Vertically Aligned Mesoporous Co3O4 Nanowires for Ultrahigh Capacity Lithium-Ion Batteries Anodes. *Advanced Materials Interfaces*, **2018**, 5, 1800222	4.6	42
48	Cobalt oxide and N-doped carbon nanosheets derived from a single two-dimensional metal-organic framework precursor and their application in flexible asymmetric supercapacitors. *Nanoscale Horizons*, **2017**, 2, 99-105	10.8	183
47	Rational Design of Metal-Organic Framework Derived Hollow NiCo2O4 Arrays for Flexible Supercapacitor and Electrocatalysis. *Advanced Energy Materials*, **2017**, 7, 1602391	21.8	650
46	Controllable MnCo2S4 nanostructures for high performance hybrid supercapacitors. *Journal of Materials Chemistry A*, **2017**, 5, 7494-7506	13	157
45	Rational Design of Self-Supported NiS Nanosheets Array for Advanced Asymmetric Supercapacitor with a Superior Energy Density. *ACS Applied Materials & Interfaces*, **2017**, 9, 496-504	9.5	176
44	Space-confinement and chemisorption co-involved in encapsulation of sulfur for lithiumSulfur batteries with exceptional cycling stability. *Journal of Materials Chemistry A*, **2017**, 5, 24602-24611	13	23
43	Pt decorated 3D vertical graphene nanosheet arrays for efficient methanol oxidation and hydrogen evolution reactions. *Journal of Materials Chemistry A*, **2017**, 5, 22004-22011	13	42
42	Hollow Co O Nanosphere Embedded in Carbon Arrays for Stable and Flexible Solid-State Zinc-Air Batteries. *Advanced Materials*, **2017**, 29, 1704117	24	325
41	Metal Phosphides and Phosphates-based Electrodes for Electrochemical Supercapacitors. *Small*, **2017**, 13, 1701530	11	197
40	Nanoflakes of Ni-Co LDH and BiO Assembled in 3D Carbon Fiber Network for High-Performance Aqueous Rechargeable Ni/Bi Battery. *ACS Applied Materials & Interfaces*, **2017**, 9, 26008-26015	9.5	54
39	Ultrathin MoS2 Nanosheets@Metal Organic Framework-Derived N-Doped Carbon Nanowall Arrays as Sodium Ion Battery Anode with Superior Cycling Life and Rate Capability. *Advanced Functional Materials*, **2017**, 27, 1702116	15.6	373
38	Metal-organic framework derived hollow CoS nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. *Nanoscale Horizons*, **2017**, 2, 342-348	10.8	189
37	Sulfur-doped cobalt phosphide nanotube arrays for highly stable hybrid supercapacitor. *Nano Energy*, **2017**, 39, 162-171	17.1	202
36	Surface-Charge-Mediated Formation of H-TiO @Ni(OH) Heterostructures for High-Performance Supercapacitors. *Advanced Materials*, **2017**, 29, 1604164	24	169

35	A Flexible Quasi-Solid-State Nickel-Zinc Battery with High Energy and Power Densities Based on 3D Electrode Design. *Advanced Materials*, **2016**, 28, 8732-8739	24	367
34	High-Performance Flexible Solid-State Ni/Fe Battery Consisting of Metal Oxides Coated Carbon Cloth/Carbon Nanofiber Electrodes. *Advanced Energy Materials*, **2016**, 6, 1601034	21.8	213
33	Confined Fe2O3 Nanoparticles on Graphite Foam as High-Rate and Stable Lithium-Ion Battery Anode. *Particle and Particle Systems Characterization*, **2016**, 33, 487-492	3.1	29
32	3D Graphene-Nickel Hydroxide Hydrogel Electrode for High-Performance Supercapacitor. *Electrochimica Acta*, **2016**, 196, 653-660	6.7	75
31	Microwave‐assisted hydrothermal synthesis of nanocrystal α‐Ni(OH)2 for supercapacitor applications. *CrystEngComm*, **2016**, 18, 3256-3264	3.3	33
30	Hybrid Fe2O3 Nanoparticle Clusters/rGO Paper as an Effective Negative Electrode for Flexible Supercapacitors. *Chemistry of Materials*, **2016**, 28, 7296-7303	9.6	77
29	Recent Development of Advanced Electrode Materials by Atomic Layer Deposition for Electrochemical Energy Storage. *Advanced Science*, **2016**, 3, 1500405	13.6	78
28	Highly stable and flexible Li-ion battery anodes based on TiO2 coated 3D carbon nanostructures. *Journal of Materials Chemistry A*, **2015**, 3, 15394-15398	13	53
27	Iron oxide-decorated carbon for supercapacitor anodes with ultrahigh energy density and outstanding cycling stability. *ACS Nano*, **2015**, 9, 5198-207	16.7	375
26	3D hierarchical SnO2@Ni(OH)2 core‐shell nanowire arrays on carbon cloth for energy storage application. *Journal of Materials Chemistry A*, **2015**, 3, 9538-9542	13	30
25	Conformally deposited NiO on a hierarchical carbon support for high-power and durable asymmetric supercapacitors. *Journal of Materials Chemistry A*, **2015**, 3, 23283-23288	13	82
24	A high energy and power Li-ion capacitor based on a TiO2 nanobelt array anode and a graphene hydrogel cathode. *Small*, **2015**, 11, 1470-7	11	225
23	3D TiO2@Ni(OH)2 Core-shell Arrays with Tunable Nanostructure for Hybrid Supercapacitor Application. *Scientific Reports*, **2015**, 5, 13940	4.9	62
22	Flexible Asymmetric Supercapacitor Based on Structure-Optimized Mn3O4/Reduced Graphene Oxide Nanohybrid Paper with High Energy and Power Density. *Advanced Functional Materials*, **2015**, 25, 7291-7299	15.6	137
21	Atomic-layer-deposition alumina induced carbon on porous Ni(x)Co(1-x)O nanonets for enhanced pseudocapacitive and Li-ion storage performance. *Nanotechnology*, **2015**, 26, 014001	3.4	20
20	Atomic layer deposition of Co3O4 on carbon nanotubes/carbon cloth for high-capacitance and ultrastable supercapacitor electrode. *Nanotechnology*, **2015**, 26, 094001	3.4	66
19	Highly stable and reversible lithium storage in SnO2 nanowires surface coated with a uniform hollow shell by atomic layer deposition. *Nano Letters*, **2014**, 14, 4852-8	11.5	242
18	Hierarchically porous three-dimensional electrodes of $CoMoO_4$ and $ZnCo_2O_4$ and their high anode performance for lithium ion batteries. *Nanoscale*, **2014**, 6, 10556-61	7.7	72

17	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. *Nano Letters*, **2014**, 14, 1651-8	11.5	395
16	A novel hollowed CoO-in-CoSnO□nanostructure with enhanced lithium storage capabilities. *Nanoscale*, **2014**, 6, 13824-30	7.7	43
15	Atomic-layer-deposition-assisted formation of carbon nanoflakes on metal oxides and energy storage application. *Small*, **2014**, 10, 300-7	11	56
14	Synthesis of free-standing metal sulfide nanoarrays via anion exchange reaction and their electrochemical energy storage application. *Small*, **2014**, 10, 766-73	11	367
13	Solution synthesis of metal oxides for electrochemical energy storage applications. *Nanoscale*, **2014**, 6, 5008-48	7.7	321
12	Uncovering loss mechanisms in silver nanoparticle-blended plasmonic organic solar cells. *Nature Communications*, **2013**, 4, 2004	17.4	105
11	Rationally Designed Hierarchical TiO2@Fe2O3 Hollow Nanostructures for Improved Lithium Ion Storage. *Advanced Energy Materials*, **2013**, 3, 737-743	21.8	274
10	Hollow core□shell nanostructure supercapacitor electrodes: gap matters. *Energy and Environmental Science*, **2012**, 5, 9085	35.4	169
9	Integrated photoelectrochemical energy storage: solar hydrogen generation and supercapacitor. *Scientific Reports*, **2012**, 2, 981	4.9	75
8	Porous Hydroxide Nanosheets on Preformed Nanowires by Electrodeposition: Branched Nanoarrays for Electrochemical Energy Storage. *Chemistry of Materials*, **2012**, 24, 3793-3799	9.6	192
7	Robust, High-Density Zinc Oxide Nanoarrays by Nanoimprint Lithography-Assisted Area-Selective Atomic Layer Deposition. *Journal of Physical Chemistry C*, **2012**, 116, 23729-23734	3.8	25
6	Composition-Graded ZnxCd1□[email□protected] Core□Shell Nanowire Array Electrodes for Photoelectrochemical Hydrogen Generation. *Journal of Physical Chemistry C*, **2012**, 116, 3802-3807	3.8	72
5	Nanoporous walls on macroporous foam: rational design of electrodes to push areal pseudocapacitance. *Advanced Materials*, **2012**, 24, 4186-90	24	222
4	Hybrid structure of cobalt monoxide nanowire @ nickel hydroxidenitrate nanoflake aligned on nickel foam for high-rate supercapacitor. *Energy and Environmental Science*, **2011**, 4, 4496	35.4	365
3	A general strategy toward graphene@metal oxide core□shell nanostructures for high-performance lithium storage. *Energy and Environmental Science*, **2011**, 4, 4954	35.4	241
2	Charge Moment Tensor and its Application to a Rotational Charged Rigid Body in a Uniform Magnetic Field. *Journal of Electromagnetic Waves and Applications*, **2008**, 22, 2179-2190	1.3	2
1	3D Printing of Next-generation Electrochemical Energy Storage Devices: from Multiscale to Multimaterial. *Energy and Environmental Materials*,	13	4