Cao Guan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4534996/publications.pdf

Version: 2024-02-01

107 papers	15,289 citations	17440 63 h-index	26613 107 g-index
108 all docs	108 docs citations	108 times ranked	14933 citing authors

#	Article	IF	Citations
1	Rational Design of Metalâ€Organic Framework Derived Hollow NiCo₂O₄ Arrays for Flexible Supercapacitor and Electrocatalysis. Advanced Energy Materials, 2017, 7, 1602391.	19.5	874
2	Hollow Mo-doped CoP nanoarrays for efficient overall water splitting. Nano Energy, 2018, 48, 73-80.	16.0	608
3	A Flexible Quasiâ€Solidâ€State Nickelâ€“Zinc Battery with High Energy and Power Densities Based on 3D Electrode Design. Advanced Materials, 2016, 28, 8732-8739.	21.0	479
4	Ultrathin MoS₂ Nanosheets@Metal Organic Frameworkâ€Derived Nâ€Doped Carbon Nanowall Arrays as Sodium Ion Battery Anode with Superior Cycling Life and Rate Capability. Advanced Functional Materials, 2017, 27, 1702116.	14.9	447
5	Iron Oxide-Decorated Carbon for Supercapacitor Anodes with Ultrahigh Energy Density and Outstanding Cycling Stability. ACS Nano, 2015, 9, 5198-5207.	14.6	441
6	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, 1651-1658.	9.1	428
7	Synthesis of Freeâ€Standing Metal Sulfide Nanoarrays via Anion Exchange Reaction and Their Electrochemical Energy Storage Application. Small, 2014, 10, 766-773.	10.0	413
8	Hollow Co₃O₄ Nanosphere Embedded in Carbon Arrays for Stable and Flexible Solidâ€State Zincâ€“Air Batteries. Advanced Materials, 2017, 29, 1704117.	21.0	407
9	Hybrid structure of cobalt monoxide nanowire @ nickel hydroxidenitrate nanoflake aligned on nickel foam for high-rate supercapacitor. Energy and Environmental Science, 2011, 4, 4496.	30.8	386
10	Single Co Atoms Anchored in Porous N-Doped Carbon for Efficient Zincâ€Air Battery Cathodes. ACS Catalysis, 2018, 8, 8961-8969.	11.2	364
11	Solution synthesis of metal oxides for electrochemical energy storage applications. Nanoscale, 2014, 6, 5008-5048.	5.6	363
12	Metal Phosphides and Phosphatesâ€based Electrodes for Electrochemical Supercapacitors. Small, 2017, 13, 1701530.	10.0	318
13	Rationally Designed Hierarchical TiO₂@Fe₂O₃ Hollow Nanostructures for Improved Lithium Ion Storage. Advanced Energy Materials, 2013, 3, 737-743.	19.5	296
14	Cactusâ€Like NiCoP/NiCoâ€OH 3D Architecture with Tunable Composition for Highâ€Performance Electrochemical Capacitors. Advanced Functional Materials, 2018, 28, 1800036.	14.9	274
15	Sulfur-doped cobalt phosphide nanotube arrays for highly stable hybrid supercapacitor. Nano Energy, 2017, 39, 162-171.	16.0	273
16	Highly Stable and Reversible Lithium Storage in SnO₂ Nanowires Surface Coated with a Uniform Hollow Shell by Atomic Layer Deposition. Nano Letters, 2014, 14, 4852-4858.	9.1	269
17	Highâ€Performance Flexible Solidâ€State Ni/Fe Battery Consisting of Metal Oxides Coated Carbon Cloth/Carbon Nanofiber Electrodes. Advanced Energy Materials, 2016, 6, 1601034.	19.5	262
18	A High Energy and Power Liâ€Ion Capacitor Based on a TiO₂ Nanobelt Array Anode and a Graphene Hydrogel Cathode. Small, 2015, 11, 1470-1477.	10.0	256

#	Article	IF	Citations
19	A general strategy toward graphene@metal oxide coreâ€“shell nanostructures for high-performance lithium storage. Energy and Environmental Science, 2011, 4, 4954.	30.8	255
20	Metalâ€“organic framework derived hollow CoS₂ nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. Nanoscale Horizons, 2017, 2, 342-348.	8.0	247
21	Decorating Co/CoNx nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. Energy Storage Materials, 2019, 16, 243-250.	18.0	244
22	Nanoporous Walls on Macroporous Foam: Rational Design of Electrodes to Push Areal Pseudocapacitance. Advanced Materials, 2012, 24, 4186-4190.	21.0	239
23	MOF-derived nanohybrids for electrocatalysis and energy storage: current status and perspectives. Chemical Communications, 2018, 54, 5268-5288.	4.1	237
24	Cobalt oxide and N-doped carbon nanosheets derived from a single two-dimensional metalâ€“organic framework precursor and their application in flexible asymmetric supercapacitors. Nanoscale Horizons, 2017, 2, 99-105.	8.0	227
25	Rational Design of Self-Supported Ni₃S₂ Nanosheets Array for Advanced Asymmetric Supercapacitor with a Superior Energy Density. ACS Applied Materials & Interfaces, 2017, 9, 496-504.	8.0	216
26	Surfaceâ€Chargeâ€Mediated Formation of Hâ€TiO₂@Ni(OH)₂ Heterostructures for Highâ€Performance Supercapacitors. Advanced Materials, 2017, 29, 1604164.	21.0	203
27	(Ni,Co)Se₂/NiCoâ€LDH Core/Shell Structural Electrode with the Cactusâ€Like (Ni,Co)Se₂ Core for Asymmetric Supercapacitors. Small, 2019, 15, e1803895.	10.0	203
28	Hierarchical Microâ€Nano Sheet Arrays of Nickelâ€“Cobalt Double Hydroxides for Highâ€Rate Niâ€“Zn Batteries. Advanced Science, 2019, 6, 1802002.	11.2	202
29	Porous Hydroxide Nanosheets on Preformed Nanowires by Electrodeposition: Branched Nanoarrays for Electrochemical Energy Storage. Chemistry of Materials, 2012, 24, 3793-3799.	6.7	201
30	Controllable MnCo₂S₄ nanostructures for high performance hybrid supercapacitors. Journal of Materials Chemistry A, 2017, 5, 7494-7506.	10.3	198
31	3Dâ€Printed MOFâ€Derived Hierarchically Porous Frameworks for Practical Highâ€Energy Density Liâ€“O₂ Batteries. Advanced Functional Materials, 2019, 29, 1806658.	14.9	197
32	Regulating Dendriteâ€Free Zinc Deposition by 3D Zincopilic Nitrogenâ€Doped Vertical Graphene for Highâ€Performance Flexible Znâ€Ion Batteries. Advanced Functional Materials, 2021, 31, 2103922.	14.9	194
33	Integrated Hierarchical Carbon Flake Arrays with Hollow Pâ€Doped CoSe₂ Nanoclusters as an Advanced Bifunctional Catalyst for Znâ€“Air Batteries. Advanced Functional Materials, 2018, 28, 1804846.	14.9	192
34	Hollow coreâ€“shell nanostructure supercapacitor electrodes: gap matters. Energy and Environmental Science, 2012, 5, 9085.	30.8	184
35	Ni-Doped Cobaltâ€“Cobalt Nitride Heterostructure Arrays for High-Power Supercapacitors. ACS Energy Letters, 2018, 3, 2462-2469.	17.4	182
36	N-doped porous carbon nanoplates embedded with CoS2 vertically anchored on carbon cloths for flexible and ultrahigh microwave absorption. Carbon, 2020, 163, 348-359.	10.3	173

#	Article	IF	Citations
37	Rational Construction of Hollow Coreâ€Branch CoSe₂ Nanoarrays for Highâ€Performance Asymmetric Supercapacitor and Efficient Oxygen Evolution. Small, 2018, 14, 1700979.	10.0	172
38	Heterojunction engineering of MoSe2/MoS2 with electronic modulation towards synergetic hydrogen evolution reaction and supercapacitance performance. Chemical Engineering Journal, 2019, 359, 1419-1426.	12.7	160
39	Recent developments of advanced micro-supercapacitors: design, fabrication and applications. Npj Flexible Electronics, 2020, 4, .	10.7	147
40	Flexible Asymmetric Supercapacitor Based on Structureâ€Optimized Mn₃O₄/Reduced Graphene Oxide Nanohybrid Paper with High Energy and Power Density. Advanced Functional Materials, 2015, 25, 7291-7299.	14.9	146
41	MOF-Derived Bifunctional Co_{0.85}Se Nanoparticles Embedded in N-Doped Carbon Nanosheet Arrays as Efficient Sulfur Hosts for Lithiumâ€“Sulfur Batteries. Nano Letters, 2021, 21, 8579-8586.	9.1	143
42	Synthesis of amorphous hydroxyl-rich Co3O4 for flexible high-rate supercapacitor. Chemical Engineering Journal, 2020, 396, 125364.	12.7	124
43	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. Chemical Engineering Journal, 2019, 369, 988-995.	12.7	121
44	Uncovering loss mechanisms in silver nanoparticle-blended plasmonic organic solar cells. Nature Communications, 2013, 4, 2004.	12.8	118
45	Energy-Saving Synthesis of MOF-Derived Hierarchical and Hollow Co(VO₃)₂-Co(OH)₂ Composite Leaf Arrays for Supercapacitor Electrode Materials. ACS Applied Materials & Interfaces, 2018, 10, 18440-18444.	8.0	107
46	Conformally deposited NiO on a hierarchical carbon support for high-power and durable asymmetric supercapacitors. Journal of Materials Chemistry A, 2015, 3, 23283-23288.	10.3	103
47	Three Dimensionally Free-Formable Graphene Foam with Designed Structures for Energy and Environmental Applications. ACS Nano, 2020, 14, 937-947.	14.6	101
48	Hybrid Fe₂O₃ Nanoparticle Clusters/rGO Paper as an Effective Negative Electrode for Flexible Supercapacitors. Chemistry of Materials, 2016, 28, 7296-7303.	6.7	95
49	Recent Advances on Selfâ€Supported Arrayed Bifunctional Oxygen Electrocatalysts for Flexible Solidâ€State Znâ€“Air Batteries. Small, 2020, 16, e2002902.	10.0	95
50	Recent Development of Advanced Electrode Materials by Atomic Layer Deposition for Electrochemical Energy Storage. Advanced Science, 2016, 3, 1500405.	11.2	93
51	Integrated photoelectrochemical energy storage: solar hydrogen generation and supercapacitor. Scientific Reports, 2012, 2, 981.	3.3	85
52	Enlarged Interlayer Spacing in Cobaltâ€“Manganese Layered Double Hydroxide Guiding Transformation to Layered Structure for High Supercapacitance. ACS Applied Materials & Interfaces, 2019, 11, 23236-23243.	8.0	85
53	Atomic layer deposition of Co₃O₄ on carbon nanotubes/carbon cloth for high-capacitance and ultrastable supercapacitor electrode. Nanotechnology, 2015, 26, 094001.	2.6	84
54	3D-Printed highly stretchable conducting polymer electrodes for flexible supercapacitors. Journal of Materials Chemistry A, 2021, 9, 19649-19658.	10.3	84

#	Article	IF	Citations
55	3D Graphene-Nickel Hydroxide Hydrogel Electrode for High-Performance Supercapacitor. Electrochimica Acta, 2016, 196, 653-660.	5.2	83
56	Ultrafine Molybdenum Carbide Nanocrystals Confined in Carbon Foams via a Colloidâ€Confinement Route for Efficient Hydrogen Production. Small Methods, 2018, 2, 1700396.	8.6	83
57	Composition-Graded Zn_xCd_{_{1â€“x}}Se@ZnO Coreâ€“Shell Nanowire Array Electrodes for Photoelectrochemical Hydrogen Generation. Journal of Physical Chemistry C, 2012, 116, 3802-3807.	3.1	81
58	2D Metalâ€“Organic Frameworks Derived Nanocarbon Arrays for Substrate Enhancement in Flexible Supercapacitors. Small, 2018, 14, e1702641.	10.0	80
59	Hierarchically porous three-dimensional electrodes of CoMoO₄and ZnCo₂O₄and their high anode performance for lithium ion batteries. Nanoscale, 2014, 6, 10556.	5.6	77
60	Metalâ€“organic framework-derived integrated nanoarrays for overall water splitting. Journal of Materials Chemistry A, 2018, 6, 9009-9018.	10.3	74
61	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.	6.7	73
62	Nanoflakes of Niâ€“Co LDH and Bi₂O₃ Assembled in 3D Carbon Fiber Network for High-Performance Aqueous Rechargeable Ni/Bi Battery. ACS Applied Materials & Interfaces, 2017, 9, 26008-26015.	8.0	71
63	3D TiO2@Ni(OH)2 Core-shell Arrays with Tunable Nanostructure for Hybrid Supercapacitor Application. Scientific Reports, 2015, 5, 13940.	3.3	68
64	Strain rate shift for constitutive behaviour of sintered silver nanoparticles under nanoindentation. Mechanics of Materials, 2021, 158, 103881.	3.2	67
65	Highly stable and flexible Li-ion battery anodes based on TiO₂ coated 3D carbon nanostructures. Journal of Materials Chemistry A, 2015, 3, 15394-15398.	10.3	65
66	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.	6.7	63
67	Facile Activation of Commercial Carbon Felt as a Low-Cost Free-Standing Electrode for Flexible Supercapacitors. ACS Applied Materials & Interfaces, 2018, 10, 42503-42512.	8.0	62
68	Energy-level engineered hollow N-doped NiS1.03 for Znâ€“Air batteries. Energy Storage Materials, 2020, 25, 202-209.	18.0	62
69	Bamboo-derived porous carbons for Zn-ion hybrid supercapacitors. Materials Research Bulletin, 2021, 139, 111281.	5.2	62
70	Atomicâ€Layerâ€Depositionâ€Assisted Formation of Carbon Nanoflakes on Metal Oxides and Energy Storage Application. Small, 2014, 10, 300-307.	10.0	60
71	Co/Zn bimetallic oxides derived from metal organic frameworks for high performance electrochemical energy storage. Electrochimica Acta, 2018, 291, 177-187.	5.2	60
72	MOFâ€Derived Vertically Aligned Mesoporous Co₃O₄ Nanowires for Ultrahigh Capacity Lithiumâ€Ion Batteries Anodes. Advanced Materials Interfaces, 2018, 5, 1800222.	3.7	58

#	Article	IF	Citations
73	Electrospun Nanofibers for New Generation Flexible Energy Storage. Energy and Environmental Materials, 2021, 4, 502-521.	12.8	57
74	PtCo bimetallic nanoparticles encapsulated in N-doped carbon nanorod arrays for efficient electrocatalysis. Carbon, 2019, 142, 206-216.	10.3	56
75	A novel hollowed CoO-in-CoSnO₃ nanostructure with enhanced lithium storage capabilities. Nanoscale, 2014, 6, 13824-13830.	5.6	52
76	Pt decorated 3D vertical graphene nanosheet arrays for efficient methanol oxidation and hydrogen evolution reactions. Journal of Materials Chemistry A, 2017, 5, 22004-22011.	10.3	49
77	Mesoporous aluminium manganese cobalt oxide with pentahedron structures for energy storage devices. Journal of Materials Chemistry A, 2019, 7, 18417-18427.	10.3	49
78	Recent progress on hollow array architectures and their applications in electrochemical energy storage. Nanoscale Horizons, 2020, 5, 1188-1199.	8.0	48
79	All-solid-state sponge-like squeezable zinc-air battery. Energy Storage Materials, 2019, 23, 375-382.	18.0	47
80	Microwave â€“ assisted hydrothermal synthesis of nanocrystal Î²-Ni(OH)₂for supercapacitor applications. CrystEngComm, 2016, 18, 3256-3264.	2.6	42
81	Open hollow Coâ€“Pt clusters embedded in carbon nanoflake arrays for highly efficient alkaline water splitting. Journal of Materials Chemistry A, 2018, 6, 20214-20223.	10.3	42
82	Fabrication of 3D-Printed Ceramic Structures for Portable Solar Desalination Devices. ACS Applied Materials & Interfaces, 2021, 13, 23220-23229.	8.0	42
83	3D hierarchical SnO₂@Ni(OH)₂ coreâ€“shell nanowire arrays on carbon cloth for energy storage application. Journal of Materials Chemistry A, 2015, 3, 9538-9542.	10.3	33
84	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.	12.7	33
85	3D printing-assisted gyroidal graphite foam for advanced supercapacitors. Chemical Engineering Journal, 2021, 416, 127885.	12.7	32
86	Ultrafast-charging quasi-solid-state fiber-shaped zinc-ion hybrid supercapacitors with superior flexibility. Journal of Materials Chemistry A, 2021, 9, 17292-17299.	10.3	31
87	Confined Fe₂O₃ Nanoparticles on Graphite Foam as Highâ€Rate and Stable Lithiumâ€Ion Battery Anode. Particle and Particle Systems Characterization, 2016, 33, 487-492.	2.3	29
88	Vanadium metalâ€organic frameworkâ€derived multifunctional fibers for asymmetric supercapacitor, piezoresistive sensor, and electrochemical water splitting. SmartMat, 2022, 3, 608-618.	10.7	29
89	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.	5.1	28
90	The Atomic Circus: Small Electron Beams Spotlight Advanced Materials Down to the Atomic Scale. Advanced Materials, 2018, 30, e1802402.	21.0	27

#	Article	IF	Citations
91	Robust, High-Density Zinc Oxide Nanoarrays by Nanoimprint Lithography-Assisted Area-Selective Atomic Layer Deposition. Journal of Physical Chemistry C, 2012, 116, 23729-23734.	3.1	26
92	Carbon Nanoarrays Embedded with Metal Compounds for Highâ€Performance Flexible Supercapacitors. Batteries and Supercaps, 2020, 3, 93-100.	4.7	25
93	3D Printing of Nextâ€generation Electrochemical Energy Storage Devices: from Multiscale to Multimaterial. Energy and Environmental Materials, 2022, 5, 427-438.	12.8	25
94	Space-confinement and chemisorption co-involved in encapsulation of sulfur for lithiumâ€“sulfur batteries with exceptional cycling stability. Journal of Materials Chemistry A, 2017, 5, 24602-24611.	10.3	24
95	Structure-Enhanced Mechanically Robust Graphite Foam with Ultrahigh MnO ₂ Loading for Supercapacitors. Research, 2020, 2020, 7304767.	5.7	24
96	SnS2 nanosheets arrays sandwiched by N-doped carbon and TiO2 for high-performance Na-ion storage. Green Energy and Environment, 2018, 3, 42-49.	8.7	22
97	Atomic-layer-deposition alumina induced carbon on porous Ni_xCo_{1 â^' x}O nanonets for enhanced pseudocapacitive and Li-ion storage performance. Nanotechnology, 2015, 26, 014001.	2.6	21
98	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.	12.7	21
99	Amorphous FeOOH Decorated CoSe₂ Nanorod Heterostructured Arrays for Efficient Water Oxidation. Advanced Materials Interfaces, 2021, 8, .	3.7	20
100	Phospho-oxynitride Layer Protected Cobalt Phosphonitride Nanowire Arrays for High-Rate and Stable Supercapacitors. ACS Applied Energy Materials, 2019, 2, 616-626.	5.1	16
101	Recent advances in architecture design of nanoarrays for flexible solid-state aqueous batteries. Nano Futures, 2020, 4, 032002.	2.2	15
102	Polypyrrole nanowires coated with a hollow shell for enhanced electrochemical performance. Materials Research Bulletin, 2018, 100, 116-119.	5.2	14
103	Bifunctional oxygen evolution and supercapacitor electrode with integrated architecture of NiFe-layered double hydroxides and hierarchical carbon framework. Nanotechnology, 2019, 30, 325402.	2.6	14
104	Additive manufacturing solidification methodologies for ink formulation. Additive Manufacturing, 2022, 56, 102939.	3.0	13
105	Hybrid CoO Nanowires Coated with Uniform Polypyrrole Nanolayers for High-Performance Energy Storage Devices. Nanomaterials, 2019, 9, 586.	4.1	12
106	Manipulating room-temperature phosphorescencevialone-pair electrons and empty-orbital arrangements and hydrogen bond adjustment. Journal of Materials Chemistry C, 2022, 10, 8854-8859.	5.5	5
107	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.	1.6	2