Zongkui Kou

List of Publications by Year in Descending Order

114 papers	6,027 citations	45 h-index	75 g-index
119 ext. papers	7,920 ext. citations	13.2 avg, IF	6.42 L-index

#	Paper	IF	Citations
114	Nurturing the marriages of single atoms with atomic clusters and nanoparticles for better heterogeneous electrocatalysis **2022**, 1, 51-87		12
113	Rational design of electrospun nanofiber-typed electrocatalysts for water splitting: A review. *Chemical Engineering Journal*, **2022**, 428, 131133	14.7	20
112	A chainmail effect of ultrathin N-doped carbon shell on NiP nanorod arrays for efficient hydrogen evolution reaction catalysis. *Journal of Colloid and Interface Science*, **2022**, 607, 281-289	9.3	3
111	Duetting electronic structure modulation of Ru atoms in RuSe2@NC enables more moderate H* adsorption and water dissociation for hydrogen evolution reaction. *Journal of Materials Chemistry A* , **2022**, 10, 7637-7644	13	1
110	Edge stimulated hydrogen evolution reaction on monodispersed MXene quantum dots. *Chemical Engineering Journal*, **2022**, 442, 136119	14.7	3
109	Quench-Induced Surface Engineering Boosts Alkaline Freshwater and Seawater Oxygen Evolution Reaction of Porous NiCo O Nanowires. *Small*, **2021**, e2106187	11	2
108	Dispersed FeO nanoparticles decorated with CoSiO hollow spheres for enhanced oxygen evolution reaction.. *Journal of Colloid and Interface Science*, **2021**, 611, 235-245	9.3	2
107	Fundamentals, advances and challenges of transition metal compounds-based supercapacitors. *Chemical Engineering Journal*, **2021**, 412, 128611	14.7	62
106	Dynamic Surface Chemistry of Catalysts in Oxygen Evolution Reaction. *Small Science*, **2021**, 1, 2100011		28
105	In-situ surface self-reconstruction in ternary transition metal dichalcogenide nanorod arrays enables efficient electrocatalytic oxygen evolution. *Journal of Energy Chemistry*, **2021**, 55, 10-16	12	17
104	Fiber-in-tube and particle-in-tube hierarchical nanostructures enable high energy density of MnO-based asymmetric supercapacitors. *Journal of Colloid and Interface Science*, **2021**, 582, 543-551	9.3	12
103	Boosting Faradic efficiency of dinitrogen reduction on the negatively charged Mo sites modulated via interstitial Fe doping into a Mo2C nanowall catalyst. *Chemical Engineering Journal*, **2021**, 417, 127924	14.7	3
102	Efficient Hydrogen Evolution of Oxidized Ni-N Defective Sites for Alkaline Freshwater and Seawater Electrolysis. *Advanced Materials*, **2021**, 33, e2003846	24	65
101	Electrocatalytically inactive copper improves the water adsorption/dissociation on NiS for accelerated alkaline and neutral hydrogen evolution. *Nanoscale*, **2021**, 13, 2456-2464	7.7	8
100	Synergizing aliovalent doping and interface in heterostructured NiV nitride@oxyhydroxide core-shell nanosheet arrays enables efficient oxygen evolution. *Nano Energy*, **2021**, 85, 105961	17.1	26
99	Quasi-Paired Pt Atomic Sites on Mo C Promoting Selective Four-Electron Oxygen Reduction. *Advanced Science*, **2021**, 8, e2101344	13.6	10
98	Black Phosphorus@TiCT MXene Composites with Engineered Chemical Bonds for Commercial-Level Capacitive Energy Storage. *ACS Nano*, **2021**,	16.7	17

97	Electrospun One-Dimensional Electrocatalysts for Oxygen Reduction Reaction: Insights into Structure-Activity Relationship. *ACS Applied Materials & Interfaces*, **2021**, 13, 37961-37978	9.5	15
96	Controlling atomic phosphorous-mounting surfaces of ultrafine W2C nanoislands monodispersed on the carbon frameworks for enhanced hydrogen evolution. *Chinese Journal of Catalysis*, **2021**, 42, 1798-1807	11.3	4
95	Manipulating Interfaces of Electrocatalysts Down to Atomic Scales: Fundamentals, Strategies, and Electrocatalytic Applications.. *Small Methods*, **2021**, 5, e2001010	12.8	16
94	Key issues facing electrospun carbon nanofibers in energy applications: on-going approaches and challenges. *Nanoscale*, **2020**, 12, 13225-13248	7.7	38
93	Cobalt-doping in hierarchical Ni3S2 nanorod arrays enables high areal capacitance. *Journal of Materials Chemistry A*, **2020**, 8, 13114-13120	13	28
92	Bronze-type vanadium dioxide holey nanobelts as high performing cathode material for aqueous aluminium-ion batteries. *Journal of Materials Chemistry A*, **2020**, 8, 12716-12722	13	21
91	Potential-Dependent Phase Transition and Mo-Enriched Surface Reconstruction of β-CoOOH in a Heterostructured Co-Mo2C Precatalyst Enable Water Oxidation. *ACS Catalysis*, **2020**, 10, 4411-4419	13.1	88
90	Surface nitridation of nickel-cobalt alloy nanocactoids raises the performance of water oxidation and splitting. *Applied Catalysis B: Environmental*, **2020**, 270, 118889	21.8	60
89	Zn Pre-Intercalation Stabilizes the Tunnel Structure of MnO Nanowires and Enables Zinc-Ion Hybrid Supercapacitor of Battery-Level Energy Density. *Small*, **2020**, 16, e2000091	11	69
88	Synergizing Mo Single Atoms and Mo C Nanoparticles on CNTs Synchronizes Selectivity and Activity of Electrocatalytic N Reduction to Ammonia. *Advanced Materials*, **2020**, 32, e2002177	24	93
87	Ammonia-etching-assisted nanotailoring of manganese silicate boosts faradaic capacity for high-performance hybrid supercapacitors. *Sustainable Energy and Fuels*, **2020**, 4, 2220-2228	5.8	18
86	Single atom catalysts: a surface heterocompound perspective. *Nanoscale Horizons*, **2020**, 5, 757-764	10.8	23
85	Single Atom Electrocatalysis: Heterogeneous Single Atom Electrocatalysis, Where "Singles" Are "Married" (Adv. Energy Mater. 9/2020). *Advanced Energy Materials*, **2020**, 10, 2070037	21.8	5
84	Heterogeneous Single Atom Electrocatalysis, Where "Singles" Are "Married". *Advanced Energy Materials*, **2020**, 10, 1903181	21.8	64
83	Assembling of Bi atoms on TiO nanorods boosts photoelectrochemical water splitting of semiconductors. *Nanoscale*, **2020**, 12, 4302-4308	7.7	24
82	Boosted electrochemical ammonia synthesis by high-percentage metallic transition metal dichalcogenide quantum dots. *Nanoscale*, **2020**, 12, 10964-10971	7.7	14
81	All-in-one stretchable coaxial-fiber strain sensor integrated with high-performing supercapacitor. *Energy Storage Materials*, **2020**, 25, 124-130	19.4	67
80	Hollow structure engineering of FeCo alloy nanoparticles electrospun in nitrogen-doped carbon enables high performance flexible all-solid-state zinc–air batteries. *Sustainable Energy and Fuels*, **2020**, 4, 1747-1753	5.8	26

79	A surface precleaning strategy intensifies the interface coupling of the Bi2O3/TiO2 heterostructure for enhanced photoelectrochemical detection properties. *Materials Chemistry Frontiers*, **2020**, 4, 638-644	7.8	6
78	Combinational Design of Electronic Structure and Nanoarray Architecture Achieves a Low-Overpotential Oxygen Electrode for Aprotic Lithium□Oxygen Batteries. *Small Methods*, **2020**, 4, 1900619	12.8	7
77	Stitching of Zn(OH)VO□2HO 2D Nanosheets by 1D Carbon Nanotubes Boosts Ultrahigh Rate for Wearable Quasi-Solid-State Zinc-Ion Batteries. *ACS Nano*, **2020**, 14, 842-853	16.7	104
76	Cage-confinement pyrolysis route to size-controlled molybdenum-based oxygen electrode catalysts: From isolated atoms to clusters and nanoparticles. *Nano Energy*, **2020**, 67, 104288	17.1	65
75	A sacrificial Zn strategy enables anchoring of metal single atoms on the exposed surface of holey 2D molybdenum carbide nanosheets for efficient electrocatalysis. *Journal of Materials Chemistry A*, **2020**, 8, 3071-3082	13	38
74	Direct Observation of Stable Negative Capacitance in SrTiO3@BaTiO3 Heterostructure. *Advanced Electronic Materials*, **2020**, 6, 1901005	6.4	14
73	Coupled cobalt silicate nanobelt-on-nanobelt hierarchy structure with reduced graphene oxide for enhanced supercapacitive performance. *Journal of Power Sources*, **2020**, 448, 227407	8.9	62
72	Fabrication and theoretical investigation of cobaltosic sulfide nanosheets for flexible aqueous Zn/Co batteries. *Nano Energy*, **2020**, 68, 104314	17.1	34
71	Nanohollow Carbon for Rechargeable Batteries: Ongoing Progresses and Challenges. *Nano-Micro Letters*, **2020**, 12, 183	19.5	26
70	Synergizing in-grown Ni3N/Ni heterostructured core and ultrathin Ni3N surface shell enables self-adaptive surface reconfiguration and efficient oxygen evolution reaction. *Nano Energy*, **2020**, 78, 105355	17.1	56
69	Flexible supercapacitor of high areal performance with vanadium/cobalt oxides on carbon nanofibers as a binder-free membrane electrode. *Chemical Engineering Journal*, **2020**, 402, 126294	14.7	38
68	Porous NiCo2S4/FeOOH nanowire arrays with rich sulfide/hydroxide interfaces enable high OER activity. *Nano Energy*, **2020**, 78, 105230	17.1	60
67	Boosting Zn-Ion Storage Performance of Bronze-Type VO Ni-Mediated Electronic Structure Engineering. *ACS Applied Materials & Interfaces*, **2020**, 12, 36110-36118	9.5	34
66	Encapsulating Oxygen-Deficient TiNb24O62 Microspheres by N-Doped Carbon Nanolayer Boosts Capacity and Stability of Lithium-Ion Battery. *Batteries and Supercaps*, **2020**, 3, 1360-1369	5.6	4
65	Lithiophilic polymer interphase anchored on laser-punched 3D holey Cu matrix enables uniform lithium nucleation leading to super-stable lithium metal anodes. *Energy Storage Materials*, **2020**, 29, 84-91	19.4	28
64	P□e bond oxygen reduction catalysts toward high-efficiency metal□air batteries and fuel cells. *Journal of Materials Chemistry A*, **2020**, 8, 9121-9127	13	26
63	In situ coupled amorphous cobalt nitride with nitrogen-doped graphene aerogel as a trifunctional electrocatalyst towards Zn-air battery deriven full water splitting. *Applied Catalysis B: Environmental*, **2019**, 259, 118100	21.8	76
62	Copper Single Atoms Anchored in Porous Nitrogen-Doped Carbon as Efficient pH-Universal Catalysts for the Nitrogen Reduction Reaction. *ACS Catalysis*, **2019**, 9, 10166-10173	13.1	168

61	Realizing the extraction of carbon from WC for in situ formation of W/WC heterostructures with efficient photoelectrochemical hydrogen evolution. *Nanoscale Horizons*, **2019**, 4, 196-201	10.8	21
60	Surface-engineered cobalt oxide nanowires as multifunctional electrocatalysts for efficient Zn-Air batteries-driven overall water splitting. *Energy Storage Materials*, **2019**, 23, 1-7	19.4	26
59	All-solid-state sponge-like squeezable zinc-air battery. *Energy Storage Materials*, **2019**, 23, 375-382	19.4	32
58	Rational Design of Holey 2D Nonlayered Transition Metal Carbide/Nitride Heterostructure Nanosheets for Highly Efficient Water Oxidation. *Advanced Energy Materials*, **2019**, 9, 1803768	21.8	143
57	1.3 V superwide potential window sponsored by Na-Mn-O plates as cathodes towards aqueous rechargeable sodium-ion batteries. *Chemical Engineering Journal*, **2019**, 370, 742-748	14.7	23
56	Twinned Tungsten Carbonitride Nanocrystals Boost Hydrogen Evolution Activity and Stability. *Small*, **2019**, 15, e1900248	11	44
55	Hierarchical Micro-Nano Sheet Arrays of Nickel-Cobalt Double Hydroxides for High-Rate Ni-Zn Batteries. *Advanced Science*, **2019**, 6, 1802002	13.6	118
54	Z-scheme carbon-bridged Bi2O3/TiO2 nanotube arrays to boost photoelectrochemical detection performance. *Applied Catalysis B: Environmental*, **2019**, 248, 255-263	21.8	62
53	In situ electrochemical oxidation of electrodeposited Ni-based nanostructure promotes alkaline hydrogen production. *Nanotechnology*, **2019**, 30, 474001	3.4	4
52	CuCoS Nanosheets@N-Doped Carbon Nanofibers by Sulfurization at Room Temperature as Bifunctional Electrocatalysts in Flexible Quasi-Solid-State Zn-Air Batteries. *Advanced Science*, **2019**, 6, 1900628	13.6	81
51	Significant Role of Al in Ternary Layered Double Hydroxides for Enhancing Electrochemical Performance of Flexible Asymmetric Supercapacitor. *Advanced Functional Materials*, **2019**, 29, 1903879	15.6	144
50	In situ-grown compressed NiCo2S4 barrier layer for efficient and durable polysulfide entrapment. *NPG Asia Materials*, **2019**, 11,	10.3	14
49	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
48	Flexible and Wearable All-Solid-State Al-Air Battery Based on Iron Carbide Encapsulated in Electrospun Porous Carbon Nanofibers. *ACS Applied Materials & Interfaces*, **2019**, 11, 1988-1995	9.5	38
47	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
46	3D-Printed MOF-Derived Hierarchically Porous Frameworks for Practical High-Energy Density Li–O2 Batteries. *Advanced Functional Materials*, **2019**, 29, 1806658	15.6	138
45	All-Solid-State Fiber Supercapacitors with Ultrahigh Volumetric Energy Density and Outstanding Flexibility. *Advanced Energy Materials*, **2019**, 9, 1802753	21.8	140
44	2D carbide nanomeshes and their assembling into 3D microflowers for efficient water splitting. *Applied Catalysis B: Environmental*, **2019**, 243, 678-685	21.8	92

43	NiFe Layered Double-Hydroxide Nanosheets on a Cactuslike (Ni,Co)Se2 Support for Water Oxidation. *ACS Applied Nano Materials*, **2019**, 2, 325-333	5.6	11
42	Electronic Structure Control of Tungsten Oxide Activated by Ni for Ultrahigh-Performance Supercapacitors. *Small*, **2018**, 14, e1800381	11	38
41	TePtFe Nanotubes as High-Performing Bifunctional Electrocatalysts for the Oxygen Reduction Reaction and Hydrogen Evolution Reaction. *ChemSusChem*, **2018**, 11, 1328-1333	8.3	17
40	Transforming Two-Dimensional Boron Carbide into Boron and Chlorine Dual-Doped Carbon Nanotubes by Chlorination for Efficient Oxygen Reduction. *ACS Energy Letters*, **2018**, 3, 184-190	20.1	57
39	In Situ Exfoliating and Generating Active Sites on Graphene Nanosheets Strongly Coupled with Carbon Fiber toward Self-Standing Bifunctional Cathode for Rechargeable Zn–Air Batteries. *Advanced Energy Materials*, **2018**, 8, 1703539	21.8	99
38	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
37	Defect and pyridinic nitrogen engineering of carbon-based metal-free nanomaterial toward oxygen reduction. *Nano Energy*, **2018**, 52, 307-314	17.1	114
36	Distorted niobium-self-doped graphene in-situ grown from 2D niobium carbide for catalyzing oxygen reduction. *Carbon*, **2018**, 139, 1144-1151	10.4	12
35	2D Dual-Metal Zeolitic-Imidazolate-Framework-(ZIF)-Derived Bifunctional Air Electrodes with Ultrahigh Electrochemical Properties for Rechargeable Zinc–Air Batteries. *Advanced Functional Materials*, **2018**, 28, 1705048	15.6	269
34	Open hollow Co–Pt clusters embedded in carbon nanoflake arrays for highly efficient alkaline water splitting. *Journal of Materials Chemistry A*, **2018**, 6, 20214-20223	13	29
33	MOF-Derived Vertically Aligned Mesoporous Co3O4 Nanowires for Ultrahigh Capacity Lithium-Ion Batteries Anodes. *Advanced Materials Interfaces*, **2018**, 5, 1800222	4.6	42
32	Molybdenum Carbide-Derived Chlorine-Doped Ordered Mesoporous Carbon with Few-Layered Graphene Walls for Energy Storage Applications. *ACS Applied Materials & Interfaces*, **2017**, 9, 3702-3712	9.5	63
31	Smart reconstruction of dual-carbon decorated MnO for anode with high-capacity and ultralong-life lithium storage properties. *Carbon*, **2017**, 115, 95-104	10.4	102
30	A Generic Conversion Strategy: From 2D Metal Carbides (MxCy) to M-Self-Doped Graphene toward High-Efficiency Energy Applications. *Advanced Functional Materials*, **2017**, 27, 1604904	15.6	59
29	Phytic acid-derivative transition metal phosphides encapsulated in N,P-codoped carbon: an efficient and durable hydrogen evolution electrocatalyst in a wide pH range. *Nanoscale*, **2017**, 9, 3555-3560	7.7	158
28	The role of iron nitrides in the Fe-N-C catalysis system towards the oxygen reduction reaction. *Nanoscale*, **2017**, 9, 7641-7649	7.7	73
27	General Strategy for the Synthesis of Transition-Metal Phosphide/N-Doped Carbon Frameworks for Hydrogen and Oxygen Evolution. *ACS Applied Materials & Interfaces*, **2017**, 9, 16187-16193	9.5	135
26	Constructing carbon-cohered high-index (222) faceted tantalum carbide nanocrystals as a robust hydrogen evolution catalyst. *Nano Energy*, **2017**, 36, 374-380	17.1	47

25	Top-Down Strategy to Synthesize Mesoporous Dual Carbon Armored MnO Nanoparticles for Lithium-Ion Battery Anodes. *ACS Applied Materials & Interfaces*, **2017**, 9, 12680-12686	9.5	83
24	Engineered Graphene Materials: Synthesis and Applications for Polymer Electrolyte Membrane Fuel Cells. *Advanced Materials*, **2017**, 29, 1601741	24	118
23	In situ constructing of ultrastable ceramic@graphene core-shell architectures as advanced metal catalyst supports toward oxygen reduction. *Journal of Energy Chemistry*, **2017**, 26, 1160-1167	12	11
22	Iron-Doped Nickel Phosphide Nanosheet Arrays: An Efficient Bifunctional Electrocatalyst for Water Splitting. *ACS Applied Materials & Interfaces*, **2017**, 9, 26001-26007	9.5	158
21	RuP -Based Catalysts with Platinum-like Activity and Higher Durability for the Hydrogen Evolution Reaction at All pH Values. *Angewandte Chemie - International Edition*, **2017**, 56, 11559-11564	16.4	429
20	Na□Mn□@C yolk□shell nanorods as an ultrahigh electrochemical performance anode for lithium ion batteries. *Journal of Materials Chemistry A*, **2017**, 5, 18509-18517	13	18
19	Na-Mn-O Nanocrystals as a High Capacity and Long Life Anode Material for Li-Ion Batteries. *Advanced Energy Materials*, **2017**, 7, 1602092	21.8	42
18	N-P-O co-doped high performance 3D graphene prepared through red phosphorous-assisted □utting-thin□technique: A universal synthesis and multifunctional applications. *Nano Energy*, **2016**, 28, 346-355	17.1	181
17	Self-Organized 3D Porous Graphene Dual-Doped with Biomass-Sponsored Nitrogen and Sulfur for Oxygen Reduction and Evolution. *ACS Applied Materials & Interfaces*, **2016**, 8, 29408-29418	9.5	127
16	Observable Electrochemical Oxidation of Carbon Promoted by Platinum Nanoparticles. *ACS Applied Materials & Interfaces*, **2016**, 8, 3940-7	9.5	29
15	Three-Dimensionally Costabilized Metal Catalysts toward an Oxygen Reduction Reaction. *Langmuir*, **2016**, 32, 2236-44	4	14
14	Enhancing the Specific Activity of Metal Catalysts Toward Oxygen Reduction by Introducing Proton Conductor. *Nano*, **2016**, 11, 1650055	1.1	4
13	MoC quantum dot embedded chitosan-derived nitrogen-doped carbon for efficient hydrogen evolution in a broad pH range. *Chemical Communications*, **2016**, 52, 12753-12756	5.8	112
12	Intrinsically microporous polymer slows down fuel cell catalyst corrosion. *Electrochemistry Communications*, **2015**, 59, 72-76	5.1	23
11	Core-shell graphene@amorphous carbon composites supported platinum catalysts for oxygen reduction reaction. *Chinese Journal of Catalysis*, **2015**, 36, 490-495	11.3	8
10	Ultrathin carbon layer stabilized metal catalysts towards oxygen reduction. *Journal of Materials Chemistry A*, **2015**, 3, 14007-14014	13	48
9	Graphene from amorphous titanium carbide by chlorination under 200 □C and atmospheric pressures. *Scientific Reports*, **2014**, 4, 5494	4.9	14
8	Simultaneous sulfonation and reduction of graphene oxide as highly efficient supports for metal nanocatalysts. *Carbon*, **2014**, 66, 312-319	10.4	98

7	Vertically mounting molybdenum disulfide nanosheets on dimolybdenum carbide nanomeshes enables efficient hydrogen evolution. *Nano Research*,1	10	5
6	Tunable Ru-Ru 2 P heterostructures with charge redistribution for efficient pH-universal hydrogen evolution. *Informa Materi y*,	23.1	7
5	Swapping Catalytic Active Sites from Cationic Ni to Anionic S in Nickel Sulfide Enables More Efficient Alkaline Hydrogen Generation. *Advanced Energy Materials*,2103359	21.8	8
4	Nanoframes of Co3O4 Mo2N Heterointerfaces Enable High-Performance Bifunctionality toward Both Electrocatalytic HER and OER. *Advanced Functional Materials*,2107382	15.6	26
3	Single-Atom Catalysts: Advances and Challenges in Metal-Support Interactions for Enhanced Electrocatalysis. *Electrochemical Energy Reviews*,1	29.3	15
2	Fundamentals, On-Going Advances and Challenges of Electrochemical Carbon Dioxide Reduction. *Electrochemical Energy Reviews*,1	29.3	3
1	Constructing a stable cobalt-nitrogen-carbon air cathode from coordinatively unsaturated zeolitic-imidazole frameworks for rechargeable zinc-air batteries. *Nano Research*,1	10	0