Yan Jiao

List of Publications by Year
in descending order

117 papers	34,424 citations	12303 69 h-index	17055 122 g-index
128 all docs	128 docs citations	128 times ranked	25251 citing authors

#	Article	IF	Citations
1	Design of electrocatalysts for oxygen- and hydrogen-involving energy conversion reactions. Chemical Society Reviews, 2015, 44, 2060-2086.	18.7	4,323
2	Sulfur and Nitrogen Dualâ€Doped Mesoporous Graphene Electrocatalyst for Oxygen Reduction with Synergistically Enhanced Performance. Angewandte Chemie - International Edition, 2012, 51, 11496-11500.	7.2	1,898
3	Hydrogen evolution by a metal-free electrocatalyst. Nature Communications, 2014, 5, 3783.	5.8	1,851
4	Advancing the Electrochemistry of the Hydrogenâ€Evolution Reaction through Combining Experiment and Theory. Angewandte Chemie - International Edition, 2015, 54, 52-65.	7.2	1,616
5	Emerging Two-Dimensional Nanomaterials for Electrocatalysis. Chemical Reviews, 2018, 118, 6337-6408.	23.0	1,552
6	Molecule-Level g-C₃N₄ Coordinated Transition Metals as a New Class of Electrocatalysts for Oxygen Electrode Reactions. Journal of the American Chemical Society, 2017, 139, 3336-3339.	6.6	1,094
7	The Hydrogen Evolution Reaction in Alkaline Solution: From Theory, Single Crystal Models, to Practical Electrocatalysts. Angewandte Chemie - International Edition, 2018, 57, 7568-7579.	7.2	1,018
8	Single Atom (Pd/Pt) Supported on Graphitic Carbon Nitride as an Efficient Photocatalyst for Visible-Light Reduction of Carbon Dioxide. Journal of the American Chemical Society, 2016, 138, 6292-6297.	6.6	985
9	Nanoporous Graphitic-C₃N₄@Carbon Metal-Free Electrocatalysts for Highly Efficient Oxygen Reduction. Journal of the American Chemical Society, 2011, 133, 20116-20119.	6.6	958
10	Toward Design of Synergistically Active Carbon-Based Catalysts for Electrocatalytic Hydrogen Evolution. ACS Nano, 2014, 8, 5290-5296.	7.3	947
11	Origin of the Electrocatalytic Oxygen Reduction Activity of Graphene-Based Catalysts: A Roadmap to Achieve the Best Performance. Journal of the American Chemical Society, 2014, 136, 4394-4403.	6.6	946
12	Activity origin and catalyst design principles forÂelectrocatalytic hydrogen evolution on heteroatom-dopedÂgraphene. Nature Energy, 2016, 1, .	19.8	927
13	Twoâ€Step Boron and Nitrogen Doping in Graphene for Enhanced Synergistic Catalysis. Angewandte Chemie - International Edition, 2013, 52, 3110-3116.	7.2	863
14	High Electrocatalytic Hydrogen Evolution Activity of an Anomalous Ruthenium Catalyst. Journal of the American Chemical Society, 2016, 138, 16174-16181.	6.6	852
15	Understanding the Roadmap for Electrochemical Reduction of CO₂ to Multi-Carbon Oxygenates and Hydrocarbons on Copper-Based Catalysts. Journal of the American Chemical Society, 2019, 141, 7646-7659.	6.6	711
16	Building Up a Picture of the Electrocatalytic Nitrogen Reduction Activity of Transition Metal Single-Atom Catalysts. Journal of the American Chemical Society, 2019, 141, 9664-9672.	6.6	642
17	Surface and Interface Engineering in Copper-Based Bimetallic Materials for Selective CO2 Electroreduction. CheM, 2018, 4, 1809-1831.	5.8	587
18	Engineering surface atomic structure of single-crystal cobalt (II) oxide nanorods for superior electrocatalysis. Nature Communications, 2016, 7, 12876.	5.8	568

#	Article	IF	Citations
19	Hybrid Graphene and Graphitic Carbon Nitride Nanocomposite: Gap Opening, Electronâ€"Hole Puddle, Interfacial Charge Transfer, and Enhanced Visible Light Response. Journal of the American Chemical Society, 2012, 134, 4393-4397.	6.6	565
20	Nanostructured Metalâ€Free Electrochemical Catalysts for Highly Efficient Oxygen Reduction. Small, 2012, 8, 3550-3566.	5.2	559
21	Tailoring Acidic Oxygen Reduction Selectivity on Single-Atom Catalysts via Modification of First and Second Coordination Spheres. Journal of the American Chemical Society, 2021, 143, 7819-7827.	6.6	463
22	Molecular Scaffolding Strategy with Synergistic Active Centers To Facilitate Electrocatalytic CO₂ Reduction to Hydrocarbon/Alcohol. Journal of the American Chemical Society, 2017, 139, 18093-18100.	6.6	439
23	Coordination Tunes Selectivity: Twoâ€Electron Oxygen Reduction on Highâ€Loading Molybdenum Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2020, 59, 9171-9176.	7.2	379
24	Activating cobalt(II) oxide nanorods for efficient electrocatalysis by strain engineering. Nature Communications, 2017, 8, 1509.	5.8	361
25	Graphdiyne: a versatile nanomaterial for electronics and hydrogen purification. Chemical Communications, 2011, 47, 11843.	2.2	329
26	Heteroatom-Doped Transition Metal Electrocatalysts for Hydrogen Evolution Reaction. ACS Energy Letters, 2019, 4, 805-810.	8.8	323
27	Polydopamineâ€Inspired, Dual Heteroatomâ€Doped Carbon Nanotubes for Highly Efficient Overall Water Splitting. Advanced Energy Materials, 2017, 7, 1602068.	10.2	319
28	Single-Crystal Nitrogen-Rich Two-Dimensional Mo₅N₆ Nanosheets for Efficient and Stable Seawater Splitting. ACS Nano, 2018, 12, 12761-12769.	7.3	317
29	2D MoNâ€VN Heterostructure To Regulate Polysulfides for Highly Efficient Lithiumâ€Sulfur Batteries. Angewandte Chemie - International Edition, 2018, 57, 16703-16707.	7.2	313
30	Charge Mediated Semiconducting-to-Metallic Phase Transition in Molybdenum Disulfide Monolayer and Hydrogen Evolution Reaction in New 1Tâ€² Phase. Journal of Physical Chemistry C, 2015, 119, 13124-13128.	1.5	295
31	Short-Range Ordered Iridium Single Atoms Integrated into Cobalt Oxide Spinel Structure for Highly Efficient Electrocatalytic Water Oxidation. Journal of the American Chemical Society, 2021, 143, 5201-5211.	6.6	287
32	Charge State Manipulation of Cobalt Selenide Catalyst for Overall Seawater Electrolysis. Advanced Energy Materials, 2018, 8, 1801926.	10.2	264
33	Engineering of Carbonâ€Based Electrocatalysts for Emerging Energy Conversion: From Fundamentality to Functionality. Advanced Materials, 2015, 27, 5372-5378.	11.1	246
34	Electronic and Structural Engineering of Carbonâ€Based Metalâ€Free Electrocatalysts for Water Splitting. Advanced Materials, 2019, 31, e1803625.	11.1	229
35	Selective Catalysis Remedies Polysulfide Shuttling in Lithiumâ€Sulfur Batteries. Advanced Materials, 2021, 33, e2101006.	11.1	229
36	NiO as a Bifunctional Promoter for RuO₂ toward Superior Overall Water Splitting. Small, 2018, 14, e1704073.	5.2	214

#	Article	IF	Citations
37	Stabilizing Cu²⁺ Ions by Solid Solutions to Promote CO₂ Electroreduction to Methane. Journal of the American Chemical Society, 2022, 144, 2079-2084.	6.6	188
38	Topotactically Transformed Polygonal Mesopores on Ternary Layered Double Hydroxides Exposing Underâ€Coordinated Metal Centers for Accelerated Water Dissociation. Advanced Materials, 2020, 32, e2006784.	11.1	186
39	Strain Effect in Bimetallic Electrocatalysts in the Hydrogen Evolution Reaction. ACS Energy Letters, 2018, 3, 1198-1204.	8.8	183
40	Constructing tunable dual active sites on two-dimensional C3N4@MoN hybrid for electrocatalytic hydrogen evolution. Nano Energy, 2018, 53, 690-697.	8.2	175
41	Nonâ€metal Singleâ€lodineâ€Atom Electrocatalysts for the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2019, 58, 12252-12257.	7.2	175
42	Selectivity Control for Electrochemical CO₂ Reduction by Charge Redistribution on the Surface of Copper Alloys. ACS Catalysis, 2019, 9, 9411-9417.	5.5	172
43	The Controllable Reconstruction of Biâ€MOFs for Electrochemical CO₂ Reduction through Electrolyte and Potential Mediation. Angewandte Chemie - International Edition, 2021, 60, 18178-18184.	7.2	170
44	Isolated Boron Sites for Electroreduction of Dinitrogen to Ammonia. ACS Catalysis, 2020, 10, 1847-1854.	5.5	161
45	Negative Charging of Transitionâ€Metal Phosphides via Strong Electronic Coupling for Destabilization of Alkaline Water. Angewandte Chemie - International Edition, 2019, 58, 11796-11800.	7.2	155
46	Intermediate Modulation on Noble Metal Hybridized to 2D Metal-Organic Framework for Accelerated Water Electrocatalysis. CheM, 2019, 5, 2429-2441.	5.8	150
47	Interfacial nickel nitride/sulfide as a bifunctional electrode for highly efficient overall water/seawater electrolysis. Journal of Materials Chemistry A, 2019, 7, 8117-8121.	5.2	150
48	Electronâ€State Confinement of Polysulfides for Highly Stable Sodiumâ€"Sulfur Batteries. Advanced Materials, 2020, 32, e1907557.	11.1	150
49	Revealing Principles for Design of Lean-Electrolyte Lithium Metal Anode via In Situ Spectroscopy. Journal of the American Chemical Society, 2020, 142, 2012-2022.	6.6	142
50	A computational study on Pt and Ru dimers supported on graphene for the hydrogen evolution reaction: new insight into the alkaline mechanism. Journal of Materials Chemistry A, 2019, 7, 3648-3654.	5.2	134
51	Metal-free graphitic carbon nitride as mechano-catalyst for hydrogen evolution reaction. Journal of Catalysis, 2015, 332, 149-155.	3.1	127
52	Selectivity roadmap for electrochemical CO2 reduction on copper-based alloy catalysts. Nano Energy, 2020, 71, 104601.	8.2	116
53	Geometric Modulation of Local CO Flux in Ag@Cu₂O Nanoreactors for Steering the CO₂RR Pathway toward Highâ€Efficacy Methane Production. Advanced Materials, 2021, 33, e2101741.	11.1	116
54	Carbon nanodot decorated graphitic carbon nitride: new insights into the enhanced photocatalytic water splitting from ab initio studies. Physical Chemistry Chemical Physics, 2015, 17, 31140-31144.	1.3	105

#	Article	IF	Citations
55	Polydopamine-inspired nanomaterials for energy conversion and storage. Journal of Materials Chemistry A, 2018, 6, 21827-21846.	5.2	103
56	Molecular Scalpel to Chemically Cleave Metalâ€“Organic Frameworks for Induced Phase Transition. Journal of the American Chemical Society, 2021, 143, 6681-6690.	6.6	103
57	Coordination Tunes Selectivity: Twoâ€Electron Oxygen Reduction on Highâ€Loading Molybdenum Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 9256-9261.	1.6	98
58	Modelling carbon membranes for gas and isotope separation. Physical Chemistry Chemical Physics, 2013, 15, 4832.	1.3	95
59	Highly Selective Twoâ€Electron Electrocatalytic CO₂ Reduction on Singleâ€Atom Cu Catalysts. Small Structures, 2021, 2, 2000058.	6.9	93
60	Targeted Synergy between Adjacent Co Atoms on Graphene Oxide as an Efficient New Electrocatalyst for Liâ€“CO₂ Batteries. Advanced Functional Materials, 2019, 29, 1904206.	7.8	86
61	Studying the Conversion Mechanism to Broaden Cathode Options in Aqueous Zincâ€Ion Batteries. Angewandte Chemie - International Edition, 2021, 60, 25114-25121.	7.2	84
62	Asymmetrically Decorated, Doped Porous Graphene As an Effective Membrane for Hydrogen Isotope Separation. Journal of Physical Chemistry C, 2012, 116, 6672-6676.	1.5	81
63	A density functional theory study on CO2 capture and activation by graphene-like boron nitride with boron vacancy. Catalysis Today, 2011, 175, 271-275.	2.2	80
64	Reversible electrochemical oxidation of sulfur in ionic liquid for high-voltage Alâˆ’S batteries. Nature Communications, 2021, 12, 5714.	5.8	80
65	A Mo5N6 electrocatalyst for efficient Na2S electrodeposition in room-temperature sodium-sulfur batteries. Nature Communications, 2021, 12, 7195.	5.8	80
66	Die Wasserstoffentwicklungsreaktion in alkalischer LÃ¶sung: Von der Theorie und Einkristallmodellen zu praktischen Elektrokatalysatoren. Angewandte Chemie, 2018, 130, 7690-7702.	1.6	78
67	Role of oxygen-bound reaction intermediates in selective electrochemical CO₂ reduction. Energy and Environmental Science, 2021, 14, 3912-3930.	15.6	74
68	Metal-doped graphitic carbon nitride (g-C3N4) as selective NO2 sensors: A first-principles study. Applied Surface Science, 2018, 455, 1116-1122.	3.1	71
69	Impact of Interfacial Electron Transfer on Electrochemical CO₂ Reduction on Graphitic Carbon Nitride/Doped Graphene. Small, 2019, 15, e1804224.	5.2	69
70	H₂ purification by functionalized graphdiyne â€“ role of nitrogen doping. Journal of Materials Chemistry A, 2015, 3, 6767-6771.	5.2	67
71	A density functional theory study of CO2 and N2 adsorption on aluminium nitride single walled nanotubes. Journal of Materials Chemistry, 2010, 20, 10426.	6.7	62
72	Electrocatalytically Switchable CO₂ Capture: First Principle Computational Exploration of Carbon Nanotubes with Pyridinic Nitrogen. ChemSusChem, 2014, 7, 435-441.	3.6	62

#	Article	IF	Citations
73	Syngas production from electrocatalytic CO₂ reduction with high energetic efficiency and current density. Journal of Materials Chemistry A, 2019, 7, 7675-7682.	5.2	62
74	Promoting ethylene production over a wide potential window on Cu crystallites induced and stabilized via current shock and charge delocalization. Nature Communications, 2021, 12, 6823.	5.8	61
75	Adsorption of Carbon Dioxide and Nitrogen on Single-Layer Aluminum Nitride Nanostructures Studied by Density Functional Theory. Journal of Physical Chemistry C, 2010, 114, 7846-7849.	1.5	53
76	Catalytic Oxidation of K₂S via Atomic Co and Pyridinic N Synergy in Potassiumâ€“Sulfur Batteries. Journal of the American Chemical Society, 2021, 143, 16902-16907.	6.6	53
77	Enhanced chemical trapping and catalytic conversion of polysulfides by diatomite/MXene hybrid interlayer for stable Li-S batteries. Journal of Energy Chemistry, 2021, 62, 590-598.	7.1	46
78	Modelling CO 2 adsorption and separation on experimentally-realized B 40 fullerene. Computational Materials Science, 2015, 108, 38-41.	1.4	40
79	Studying the Conversion Mechanism to Broaden Cathode Options in Aqueous Zincâ€Ion Batteries. Angewandte Chemie, 2021, 133, 25318-25325.	1.6	34
80	Directional and Adaptive Oil Selfâ€Transport on a Multiâ€Bioinspired Grooved Conical Spine. Advanced Functional Materials, 2022, 32, .	7.8	34
81	CO2 reduction by single copper atom supported on g-C3N4 with asymmetrical active sites. Applied Surface Science, 2021, 540, 148293.	3.1	33
82	Strain effect on the catalytic activities of B- and B/N-doped black phosphorene for electrochemical conversion of CO to valuable chemicals. Journal of Materials Chemistry A, 2020, 8, 11986-11995.	5.2	31
83	Three-Dimensional Carbon Electrocatalysts for CO₂ or CO Reduction. ACS Catalysis, 2021, 11, 533-541.	5.5	29
84	From mouse to mouseâ€ear cress: Nanomaterials as vehicles in plant biotechnology. Exploration, 2021, 1, 9-20.	5.4	27
85	Local Environment Determined Reactant Adsorption Configuration for Enhanced Electrocatalytic Acetone Hydrogenation to Propane. Angewandte Chemie - International Edition, 2022, 61, .	7.2	26
86	Strain engineering of selective chemical adsorption on monolayer black phosphorous. Applied Surface Science, 2020, 503, 144033.	3.1	25
87	Directing the selectivity of CO₂ electroreduction to target C₂ products <i>via</i> non-metal doping on Cu surfaces. Journal of Materials Chemistry A, 2021, 9, 6345-6351.	5.2	25
88	C₃ production from CO₂ reduction by concerted *CO trimerization on a single-atom alloy catalyst. Journal of Materials Chemistry A, 2022, 10, 5998-6006.	5.2	25
89	Nonâ€metal Singleâ€Iodineâ€Atom Electrocatalysts for the Hydrogen Evolution Reaction. Angewandte Chemie, 2019, 131, 12380-12385.	1.6	23
90	Negative Charging of Transitionâ€Metal Phosphides via Strong Electronic Coupling for Destabilization of Alkaline Water. Angewandte Chemie, 2019, 131, 11922-11926.	1.6	22

#	Article	IF	Citations
91	Spatial-confinement induced electroreduction of CO and CO₂ to diols on densely-arrayed Cu nanopyramids. Chemical Science, 2021, 12, 8079-8087.	3.7	22
92	An Oxygenophilic Atomic Dispersed Feï£¿Nï£¿C Catalyst for Leanâ€Oxygen Seawater Batteries. Advanced Energy Materials, 2021, 11, 2100683.	10.2	22
93	The Controllable Reconstruction of Biâ€MOFs for Electrochemical CO₂ Reduction through Electrolyte and Potential Mediation. Angewandte Chemie, 2021, 133, 18326-18332.	1.6	20
94	Key to C₂ production: selective Câ€“C coupling for electrochemical CO₂ reduction on copper alloy surfaces. Chemical Communications, 2021, 57, 9526-9529.	2.2	20
95	Self-Propelled and Electrobraking Synergetic Liquid Manipulator toward Microsampling and Bioanalysis. ACS Applied Materials & Interfaces, 2021, 13, 14741-14751.	4.0	17
96	Anomalous Câˆ’C Coupling on Underâ€Coordinated Cu (111): A Case Study of Cu Nanopyramids for CO₂ Reduction Reaction by Molecular Modelling. ChemSusChem, 2021, 14, 671-678.	3.6	16
97	Two dimensional electrocatalyst engineering <i>via</i> heteroatom doping for electrocatalytic nitrogen reduction. Chemical Communications, 2020, 56, 14154-14162.	2.2	16
98	Hydrogenated dual-shell sodium titanate cubes for sodium-ion batteries with optimized ion transportation. Journal of Materials Chemistry A, 2020, 8, 15829-15833.	5.2	14
99	Versatile two-dimensional stanene-based membrane for hydrogen purification. International Journal of Hydrogen Energy, 2017, 42, 5577-5583.	3.8	13
100	2D MoNâ€VN Heterostructure To Regulate Polysulfides for Highly Efficient Lithiumâ€Sulfur Batteries. Angewandte Chemie, 2018, 130, 16945-16949.	1.6	13
101	Achieving efficient N2 electrochemical reduction by stabilizing the N2H* intermediate with the frustrated Lewis pairs. Journal of Energy Chemistry, 2022, 66, 628-634.	7.1	13
102	Molybdenum-ironâ€“cobalt oxyhydroxide with rich oxygen vacancies for the oxygen evolution reaction. Nanoscale, 2022, 14, 10873-10879.	2.8	12
103	Factors influencing the deposition of hydroxyapatite coating onto hollow glass microspheres. Materials Science and Engineering C, 2013, 33, 2744-2751.	3.8	11
104	A one-pot self-assembled AgNW aerogel electrode with ultra-high electric conductivity for intrinsically 500% super-stretchable high-performance Znâ€“Ag batteries. Journal of Materials Chemistry A, 2022, 10, 10780-10789.	5.2	11
105	Calculations of helium separation via uniform pores of stanene-based membranes. Beilstein Journal of Nanotechnology, 2015, 6, 2470-2476.	1.5	9
106	Theoretical considerations on activity of the electrochemical CO2 reduction on metal single-atom catalysts with asymmetrical active sites. Catalysis Today, 2022, 397-399, 574-580.	2.2	9
107	CO₂ reduction to CH₄ on Cu-doped phosphorene: a first-principles study. Nanoscale, 2021, 13, 20541-20549.	2.8	9
108	Process intensification for Fe/Mn-nitrogen-doped carbon-based catalysts toward efficient oxygen reduction reaction of Zn-air battery. Chemical Engineering Science, 2022, 259, 117811.	1.9	8

#	Article	IF	Citations
109	Contemporaneous oxidation state manipulation to accelerate intermediate desorption for overall water electrolysis. Chemical Communications, 2019, 55, 8313-8316.	2.2	7
110	RÃ¼cktitelbild: Sulfur and Nitrogen Dual-Doped Mesoporous Graphene Electrocatalyst for Oxygen Reduction with Synergistically Enhanced Performance (Angew. Chem. 46/2012). Angewandte Chemie, 2012, 124, 11808-11808.	1.6	6
111	The Ampoule Method: A Pathway towards Controllable Synthesis of Electrocatalysts for Water Electrolysis. Chemistry - A European Journal, 2020, 26, 3898-3905.	1.7	5
112	Stability of Engineered Ferritin Nanovaccines Investigated by Combined Molecular Simulation and Experiments. Journal of Physical Chemistry B, 2021, 125, 3830-3842.	1.2	5
113	Local Environment Determined Reactant Adsorption Configuration for Enhanced Electrocatalytic Acetone Hydrogenation to Propane. Angewandte Chemie, 0, , .	1.6	4
114	Carbene Ligands Enabled Câ€“N Coupling for Methylamine Electrosynthesis: A Computational Study. Energy & Fuels, 2022, 36, 7213-7218.	2.5	4
115	Electrocatalytically Switchable CO2Capture: First Principle Computational Exploration of Carbon Nanotubes with Pyridinic Nitrogen. ChemSusChem, 2014, 7, 317-317.	3.6	1
116	Titelbild: 2D MoNâ€VN Heterostructure To Regulate Polysulfides for Highly Efficient Lithiumâ€Sulfur Batteries (Angew. Chem. 51/2018). Angewandte Chemie, 2018, 130, 16809-16809.	1.6	1
117	Frontispiece: The Ampoule Method: A Pathway towards Controllable Synthesis of Electrocatalysts for Water Electrolysis. Chemistry - A European Journal, 2020, 26, .	1.7	0