Yan Jiao

List of Publications by Year
in descending order

117 papers	34,424 citations	12322 69 h-index	17090 122 g-index
128 all docs	128 docs citations	128 times ranked	25251 citing authors

#	Article	IF	Citations
1	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
2	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
3	Local Environment Determined Reactant Adsorption Configuration for Enhanced Electrocatalytic Acetone Hydrogenation to Propane. Angewandte Chemie - International Edition, 2022, 61, .	7.2	26
4	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
5	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
6	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
7	Directional and Adaptive Oil Selfâ€Transport on a Multiâ€Bioinspired Grooved Conical Spine. Advanced Functional Materials, 2022, 32, .	7.8	34
8	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
9	Molybdenum-ironâ€"cobalt oxyhydroxide with rich oxygen vacancies for the oxygen evolution reaction. Nanoscale, 2022, 14, 10873-10879.	2.8	12
10	Carbene Ligands Enabled Câ€"N Coupling for Methylamine Electrosynthesis: A Computational Study. Energy & Fuels, 2022, 36, 7213-7218.	2.5	4
11	CO2 reduction by single copper atom supported on g-C3N4 with asymmetrical active sites. Applied Surface Science, 2021, 540, 148293.	3.1	33
12	Highly Selective Twoâ€Electron Electrocatalytic CO₂ Reduction on Singleâ€Atom Cu Catalysts. Small Structures, 2021, 2, 2000058.	6.9	93
13	Anomalous Câ^'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
14	Role of oxygen-bound reaction intermediates in selective electrochemical CO₂ reduction. Energy and Environmental Science, 2021, 14, 3912-3930.	15.6	74
15	Spatial-confinement induced electroreduction of CO and CO₂ to diols on densely-arrayed Cu nanopyramids. Chemical Science, 2021, 12, 8079-8087.	3.7	22
16	Self-Propelled and Electrobraking Synergetic Liquid Manipulator toward Microsampling and Bioanalysis. ACS Applied Materials & Interfaces, 2021, 13, 14741-14751.	4.0	17
17	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
18	Stability of Engineered Ferritin Nanovaccines Investigated by Combined Molecular Simulation and Experiments. Journal of Physical Chemistry B, 2021, 125, 3830-3842.	1.2	5

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19	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
20	An Oxygenophilic Atomic Dispersed Feï£¿Nï£¿C Catalyst for Leanâ€Oxygen Seawater Batteries. Advanced Energy Materials, 2021, 11, 2100683.	10.2	22
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	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
23	The Controllable Reconstruction of Biâ€MOFs for Electrochemical CO₂ Reduction through Electrolyte and Potential Mediation. Angewandte Chemie, 2021, 133, 18326-18332.	1.6	20
24	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
25	Selective Catalysis Remedies Polysulfide Shuttling in Lithiumâ€Sulfur Batteries. Advanced Materials, 2021, 33, e2101006.	11.1	229
26	From mouse to mouseâ€ear cress: Nanomaterials as vehicles in plant biotechnology. Exploration, 2021, 1, 9-20.	5.4	27
27	Studying the Conversion Mechanism to Broaden Cathode Options in Aqueous Zincâ€Ion Batteries. Angewandte Chemie, 2021, 133, 25318-25325.	1.6	34
28	Studying the Conversion Mechanism to Broaden Cathode Options in Aqueous Zincâ€Ion Batteries. Angewandte Chemie - International Edition, 2021, 60, 25114-25121.	7.2	84
29	Reversible electrochemical oxidation of sulfur in ionic liquid for high-voltage Alâ^'S batteries. Nature Communications, 2021, 12, 5714.	5.8	80
30	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
31	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
32	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
33	Three-Dimensional Carbon Electrocatalysts for CO₂ or CO Reduction. ACS Catalysis, 2021, 11, 533-541.	5.5	29
34	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
35	CO₂ reduction to CH₄ on Cu-doped phosphorene: a first-principles study. Nanoscale, 2021, 13, 20541-20549.	2.8	9
36	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

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37	A Mo5N6 electrocatalyst for efficient Na2S electrodeposition in room-temperature sodium-sulfur batteries. Nature Communications, 2021, 12, 7195.	5.8	80
38	Strain engineering of selective chemical adsorption on monolayer black phosphorous. Applied Surface Science, 2020, 503, 144033.	3.1	25
39	The Ampoule Method: A Pathway towards Controllable Synthesis of Electrocatalysts for Water Electrolysis. Chemistry - A European Journal, 2020, 26, 3898-3905.	1.7	5
40	Isolated Boron Sites for Electroreduction of Dinitrogen to Ammonia. ACS Catalysis, 2020, 10, 1847-1854.	5.5	161
41	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
42	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
43	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
44	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
45	Coordination Tunes Selectivity: Twoâ€Electron Oxygen Reduction on Highâ€Loading Molybdenum Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 9256-9261.	1.6	98
46	Electronâ€State Confinement of Polysulfides for Highly Stable Sodiumâ€“Sulfur Batteries. Advanced Materials, 2020, 32, e1907557.	11.1	150
47	Selectivity roadmap for electrochemical CO2 reduction on copper-based alloy catalysts. Nano Energy, 2020, 71, 104601.	8.2	116
48	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
49	Two dimensional electrocatalyst engineering <i>via</i> heteroatom doping for electrocatalytic nitrogen reduction. Chemical Communications, 2020, 56, 14154-14162.	2.2	16
50	Frontispiece: The Ampoule Method: A Pathway towards Controllable Synthesis of Electrocatalysts for Water Electrolysis. Chemistry - A European Journal, 2020, 26, .	1.7	0
51	Intermediate Modulation on Noble Metal Hybridized to 2D Metal-Organic Framework for Accelerated Water Electrocatalysis. CheM, 2019, 5, 2429-2441.	5.8	150
52	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
53	Selectivity Control for Electrochemical CO₂ Reduction by Charge Redistribution on the Surface of Copper Alloys. ACS Catalysis, 2019, 9, 9411-9417.	5.5	172
54	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

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55	Impact of Interfacial Electron Transfer on Electrochemical CO₂ Reduction on Graphitic Carbon Nitride/Doped Graphene. Small, 2019, 15, e1804224.	5.2	69
56	Negative Charging of Transitionâ€Metal Phosphides via Strong Electronic Coupling for Destabilization of Alkaline Water. Angewandte Chemie, 2019, 131, 11922-11926.	1.6	22
57	Contemporaneous oxidation state manipulation to accelerate intermediate desorption for overall water electrolysis. Chemical Communications, 2019, 55, 8313-8316.	2.2	7
58	Nonâ€metal Singleâ€Iodineâ€Atom Electrocatalysts for the Hydrogen Evolution Reaction. Angewandte Chemie, 2019, 131, 12380-12385.	1.6	23
59	Nonâ€metal Singleâ€Iodineâ€Atom Electrocatalysts for the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2019, 58, 12252-12257.	7.2	175
60	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
61	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
62	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
63	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
64	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
65	Heteroatom-Doped Transition Metal Electrocatalysts for Hydrogen Evolution Reaction. ACS Energy Letters, 2019, 4, 805-810.	8.8	323
66	Electronic and Structural Engineering of Carbonâ€Based Metalâ€Free Electrocatalysts for Water Splitting. Advanced Materials, 2019, 31, e1803625.	11.1	229
67	Die Wasserstoffentwicklungsreaktion in alkalischer LÃ¶sung: Von der Theorie und Einkristallmodellen zu praktischen Elektrokatalysatoren. Angewandte Chemie, 2018, 130, 7690-7702.	1.6	78
68	Strain Effect in Bimetallic Electrocatalysts in the Hydrogen Evolution Reaction. ACS Energy Letters, 2018, 3, 1198-1204.	8.8	183
69	NiO as a Bifunctional Promoter for RuO₂ toward Superior Overall Water Splitting. Small, 2018, 14, e1704073.	5.2	214
70	Emerging Two-Dimensional Nanomaterials for Electrocatalysis. Chemical Reviews, 2018, 118, 6337-6408.	23.0	1,552
71	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
72	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

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73	Single-Crystal Nitrogen-Rich Two-Dimensional Mo₅N₆ Nanosheets for Efficient and Stable Seawater Splitting. ACS Nano, 2018, 12, 12761-12769.	7.3	317
74	Constructing tunable dual active sites on two-dimensional C3N4@MoN hybrid for electrocatalytic hydrogen evolution. Nano Energy, 2018, 53, 690-697.	8.2	175
75	2D MoNâ€VN Heterostructure To Regulate Polysulfides for Highly Efficient Lithiumâ€Sulfur Batteries. Angewandte Chemie, 2018, 130, 16945-16949.	1.6	13
76	2D MoNâ€VN Heterostructure To Regulate Polysulfides for Highly Efficient Lithiumâ€Sulfur Batteries. Angewandte Chemie - International Edition, 2018, 57, 16703-16707.	7.2	313
77	Polydopamine-inspired nanomaterials for energy conversion and storage. Journal of Materials Chemistry A, 2018, 6, 21827-21846.	5.2	103
78	Charge State Manipulation of Cobalt Selenide Catalyst for Overall Seawater Electrolysis. Advanced Energy Materials, 2018, 8, 1801926.	10.2	264
79	Surface and Interface Engineering in Copper-Based Bimetallic Materials for Selective CO2 Electroreduction. CheM, 2018, 4, 1809-1831.	5.8	587
80	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
81	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
82	Polydopamineâ€Inspired, Dual Heteroatomâ€Doped Carbon Nanotubes for Highly Efficient Overall Water Splitting. Advanced Energy Materials, 2017, 7, 1602068.	10.2	319
83	Activating cobalt(II) oxide nanorods for efficient electrocatalysis by strain engineering. Nature Communications, 2017, 8, 1509.	5.8	361
84	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
85	Versatile two-dimensional stanene-based membrane for hydrogen purification. International Journal of Hydrogen Energy, 2017, 42, 5577-5583.	3.8	13
86	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
87	High Electrocatalytic Hydrogen Evolution Activity of an Anomalous Ruthenium Catalyst. Journal of the American Chemical Society, 2016, 138, 16174-16181.	6.6	852
88	Activity origin and catalyst design principles forÂelectrocatalytic hydrogen evolution on heteroatom-dopedÂgraphene. Nature Energy, 2016, 1, .	19.8	927
89	Engineering surface atomic structure of single-crystal cobalt (II) oxide nanorods for superior electrocatalysis. Nature Communications, 2016, 7, 12876.	5.8	568
90	Engineering of Carbonâ€Based Electrocatalysts for Emerging Energy Conversion: From Fundamentality to Functionality. Advanced Materials, 2015, 27, 5372-5378.	11.1	246

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91	Calculations of helium separation via uniform pores of stanene-based membranes. Beilstein Journal of Nanotechnology, 2015, 6, 2470-2476.	1.5	9
92	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
93	Design of electrocatalysts for oxygen- and hydrogen-involving energy conversion reactions. Chemical Society Reviews, 2015, 44, 2060-2086.	18.7	4,323
94	Modelling CO 2 adsorption and separation on experimentally-realized B 40 fullerene. Computational Materials Science, 2015, 108, 38-41.	1.4	40
95	H₂ purification by functionalized graphdiyne â€" role of nitrogen doping. Journal of Materials Chemistry A, 2015, 3, 6767-6771.	5.2	67
96	Metal-free graphitic carbon nitride as mechano-catalyst for hydrogen evolution reaction. Journal of Catalysis, 2015, 332, 149-155.	3.1	127
97	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
98	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
99	Electrocatalytically Switchable CO2Capture: First Principle Computational Exploration of Carbon Nanotubes with Pyridinic Nitrogen. ChemSusChem, 2014, 7, 317-317.	3.6	1
100	Electrocatalytically Switchable CO₂ Capture: First Principle Computational Exploration of Carbon Nanotubes with Pyridinic Nitrogen. ChemSusChem, 2014, 7, 435-441.	3.6	62
101	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
102	Hydrogen evolution by a metal-free electrocatalyst. Nature Communications, 2014, 5, 3783.	5.8	1,851
103	Toward Design of Synergistically Active Carbon-Based Catalysts for Electrocatalytic Hydrogen Evolution. ACS Nano, 2014, 8, 5290-5296.	7.3	947
104	Modelling carbon membranes for gas and isotope separation. Physical Chemistry Chemical Physics, 2013, 15, 4832.	1.3	95
105	Factors influencing the deposition of hydroxyapatite coating onto hollow glass microspheres. Materials Science and Engineering C, 2013, 33, 2744-2751.	3.8	11
106	Twoâ€Step Boron and Nitrogen Doping in Graphene for Enhanced Synergistic Catalysis. Angewandte Chemie - International Edition, 2013, 52, 3110-3116.	7.2	863
107	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
108	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

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109	Nanostructured Metalâ€Free Electrochemical Catalysts for Highly Efficient Oxygen Reduction. Small, 2012, 8, 3550-3566.	5.2	559
110	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
111	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
112	Graphdiyne: a versatile nanomaterial for electronics and hydrogen purification. Chemical Communications, 2011, 47, 11843.	2.2	329
113	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
114	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
115	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
116	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
117	Local Environment Determined Reactant Adsorption Configuration for Enhanced Electrocatalytic Acetone Hydrogenation to Propane. Angewandte Chemie, 0, , .	1.6	4