Cheng Tang

List of Publications by Year
in descending order

108 papers	16,028 citations	20817 60 h-index	27406 106 g-index
113 all docs	113 docs citations	113 times ranked	13427 citing authors

#	Article	IF	Citations
1	A Review of Electrocatalytic Reduction of Dinitrogen to Ammonia under Ambient Conditions. Advanced Energy Materials, 2018, 8, 1800369.	19.5	950
2	Nanocarbon for Oxygen Reduction Electrocatalysis: Dopants, Edges, and Defects. Advanced Materials, 2017, 29, 1604103.	21.0	701
3	How to explore ambient electrocatalytic nitrogen reduction reliably and insightfully. Chemical Society Reviews, 2019, 48, 3166-3180.	38.1	670
4	Topological Defects in Metalâ€Free Nanocarbon for Oxygen Electrocatalysis. Advanced Materials, 2016, 28, 6845-6851.	21.0	629
5	Defect Engineering toward Atomic Coâ€“N<i>_x</i>â€“C in Hierarchical Graphene for Rechargeable Flexible Solid Znâ€Air Batteries. Advanced Materials, 2017, 29, 1703185.	21.0	614
6	Spatially Confined Hybridization of Nanometerâ€Sized NiFe Hydroxides into Nitrogenâ€Doped Graphene Frameworks Leading to Superior Oxygen Evolution Reactivity. Advanced Materials, 2015, 27, 4516-4522.	21.0	612
7	Nitrogenâ€Doped Aligned Carbon Nanotube/Graphene Sandwiches: Facile Catalytic Growth on Bifunctional Natural Catalysts and Their Applications as Scaffolds for Highâ€Rate Lithiumâ€Sulfur Batteries. Advanced Materials, 2014, 26, 6100-6105.	21.0	534
8	A Review of Preciousâ€Metalâ€Free Bifunctional Oxygen Electrocatalysts: Rational Design and Applications in Znâˆ’Air Batteries. Advanced Functional Materials, 2018, 28, 1803329.	14.9	524
9	Two-Dimensional Mosaic Bismuth Nanosheets for Highly Selective Ambient Electrocatalytic Nitrogen Reduction. ACS Catalysis, 2019, 9, 2902-2908.	11.2	467
10	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.	13.7	463
11	Multiscale Principles To Boost Reactivity in Gas-Involving Energy Electrocatalysis. Accounts of Chemical Research, 2018, 51, 881-889.	15.6	437
12	Nitrogen Vacancies on 2D Layered W₂N₃: A Stable and Efficient Active Site for Nitrogen Reduction Reaction. Advanced Materials, 2019, 31, e1902709.	21.0	387
13	Coordination Tunes Selectivity: Twoâ€Electron Oxygen Reduction on Highâ€Loading Molybdenum Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2020, 59, 9171-9176.	13.8	379
14	CaOâ€Templated Growth of Hierarchical Porous Graphene for Highâ€Power Lithiumâ€“Sulfur Battery Applications. Advanced Functional Materials, 2016, 26, 577-585.	14.9	355
15	Electrocatalytic Refinery for Sustainable Production of Fuels and Chemicals. Angewandte Chemie - International Edition, 2021, 60, 19572-19590.	13.8	341
16	Bifunctional Transition Metal Hydroxysulfides: Roomâ€Temperature Sulfurization and Their Applications in Znâ€“Air Batteries. Advanced Materials, 2017, 29, 1702327.	21.0	334
17	A porphyrin covalent organic framework cathode for flexible Znâ€“air batteries. Energy and Environmental Science, 2018, 11, 1723-1729.	30.8	298
18	A review of nanocarbons in energy electrocatalysis: Multifunctional substrates and highly active sites. Journal of Energy Chemistry, 2017, 26, 1077-1093.	12.9	287

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19	Stable and Highly Efficient Hydrogen Evolution from Seawater Enabled by an Unsaturated Nickel Surface Nitride. Advanced Materials, 2021, 33, e2007508.	21.0	278
20	Tailoring Selectivity of Electrochemical Hydrogen Peroxide Generation by Tunable Pyrrolicâ€Nitrogenâ€Carbon. Advanced Energy Materials, 2020, 10, 2000789.	19.5	247
21	Hard Carbon Anodes for Nextâ€Generation Liâ€Ion Batteries: Review and Perspective. Advanced Energy Materials, 2021, 11, 2101650.	19.5	213
22	Atomic Modulation and Structure Design of Carbons for Bifunctional Electrocatalysis in Metalâ€“Air Batteries. Advanced Materials, 2019, 31, e1803800.	21.0	208
23	A perspective on sustainable energy materials for lithium batteries. SusMat, 2021, 1, 38-50.	14.9	208
24	A Nanosized CoNi Hydroxide@Hydroxysulfide Coreâ€“Shell Heterostructure for Enhanced Oxygen Evolution. Advanced Materials, 2019, 31, e1805658.	21.0	203
25	Efficient Nitrogen Fixation to Ammonia through Integration of Plasma Oxidation with Electrocatalytic Reduction. Angewandte Chemie - International Edition, 2021, 60, 14131-14137.	13.8	190
26	Advanced energy materials for flexible batteries in energy storage: A review. SmartMat, 2020, 1, .	10.7	186
27	In Situ Fragmented Bismuth Nanoparticles for Electrocatalytic Nitrogen Reduction. Advanced Energy Materials, 2020, 10, 2001289.	19.5	184
28	Monolithic-structured ternary hydroxides as freestanding bifunctional electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2016, 4, 7245-7250.	10.3	178
29	3D Mesoporous van der Waals Heterostructures for Trifunctional Energy Electrocatalysis. Advanced Materials, 2018, 30, 1705110.	21.0	171
30	The Controllable Reconstruction of Biâ€MOFs for Electrochemical CO₂ Reduction through Electrolyte and Potential Mediation. Angewandte Chemie - International Edition, 2021, 60, 18178-18184.	13.8	170
31	Electrochemical Nitrogen Reduction: Identification and Elimination of Contamination in Electrolyte. ACS Energy Letters, 2019, 4, 2111-2116.	17.4	167
32	Molten Salt-Directed Catalytic Synthesis of 2D Layered Transition-Metal Nitrides for Efficient Hydrogen Evolution. CheM, 2020, 6, 2382-2394.	11.7	163
33	Defect-rich carbon fiber electrocatalysts with porous graphene skin for flexible solid-state zincâ€“air batteries. Energy Storage Materials, 2018, 15, 124-130.	18.0	162
34	Recent advances in spinel-type electrocatalysts for bifunctional oxygen reduction and oxygen evolution reactions. Journal of Energy Chemistry, 2021, 53, 290-302.	12.9	154
35	Anionic Regulated NiFe (Oxy)Sulfide Electrocatalysts for Water Oxidation. Small, 2017, 13, 1700610.	10.0	150
36	The Crucial Role of Charge Accumulation and Spin Polarization in Activating Carbonâ€Based Catalysts for Electrocatalytic Nitrogen Reduction. Angewandte Chemie - International Edition, 2020, 59, 4525-4531.	13.8	149

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37	Thermal Exfoliation of Layered Metalâ€“Organic Frameworks into Ultrahydrophilic Graphene Stacks and Their Applications in Liâ€“S Batteries. Advanced Materials, 2017, 29, 1702829.	21.0	141
38	Porous carbon derived from rice husks as sustainable bioresources: insights into the role of micro-/mesoporous hierarchy in hosting active species for lithiumâ€“sulphur batteries. Green Chemistry, 2016, 18, 5169-5179.	9.0	140
39	Highly Selective Electrochemical Reduction of Dinitrogen to Ammonia at Ambient Temperature and Pressure over Iron Oxide Catalysts. Chemistry - A European Journal, 2018, 24, 18494-18501.	3.3	129
40	A Quinonoidâ€Imineâ€Enriched Nanostructured Polymer Mediator for Lithiumâ€“Sulfur Batteries. Advanced Materials, 2017, 29, 1606802.	21.0	127
41	Dual-sized NiFe layered double hydroxides in situ grown on oxygen-decorated self-dispersal nanocarbon as enhanced water oxidation catalysts. Journal of Materials Chemistry A, 2015, 3, 24540-24546.	10.3	124
42	A review of anion-regulated multi-anion transition metal compounds for oxygen evolution electrocatalysis. Inorganic Chemistry Frontiers, 2018, 5, 521-534.	6.0	123
43	Main-group elements boost electrochemical nitrogen fixation. CheM, 2021, 7, 3232-3255.	11.7	123
44	3D Mesoporous Graphene: CVD Self-Assembly on Porous Oxide Templates and Applications in High-Stable Li-S Batteries. Small, 2015, 11, 5243-5252.	10.0	120
45	Advances in Hybrid Electrocatalysts for Oxygen Evolution Reactions: Rational Integration of NiFe Layered Double Hydroxides and Nanocarbon. Particle and Particle Systems Characterization, 2016, 33, 473-486.	2.3	106
46	Hierarchical Vineâ€Treeâ€Like Carbon Nanotube Architectures: Inâ€Situ CVD Selfâ€Assembly and Their Use as Robust Scaffolds for Lithiumâ€Sulfur Batteries. Advanced Materials, 2014, 26, 7051-7058.	21.0	104
47	Effective exposure of nitrogen heteroatoms in 3D porous graphene framework for oxygen reduction reaction and lithiumâ€“sulfur batteries. Journal of Energy Chemistry, 2018, 27, 167-175.	12.9	103
48	Regulating p-block metals in perovskite nanodots for efficient electrocatalytic water oxidation. Nature Communications, 2017, 8, 934.	12.8	102
49	Graphene/nitrogen-doped porous carbon sandwiches for the metal-free oxygen reduction reaction: conductivity versus active sites. Journal of Materials Chemistry A, 2016, 4, 12658-12666.	10.3	99
50	Coordination Tunes Selectivity: Twoâ€Electron Oxygen Reduction on Highâ€Loading Molybdenum Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 9256-9261.	2.0	98
51	Oxygen Reduction Reaction on Graphene in an Electroâ€Fenton System: Inâ€…Situ Generation of H₂O₂ for the Oxidation of Organic Compounds. ChemSusChem, 2016, 9, 1194-1199.	6.8	93
52	Anionâ€Regulated Hydroxysulfide Monoliths as OER/ORR/HER Electrocatalysts and their Applications in Selfâ€Powered Electrochemical Water Splitting. Small Methods, 2018, 2, 1800055.	8.6	91
53	3D Hierarchical Porous Graphene-Based Energy Materials: Synthesis, Functionalization, and Application in Energy Storage and Conversion. Electrochemical Energy Reviews, 2019, 2, 332-371.	25.5	82
54	Engineering the electronic and strained interface for high activity of PdMcore@Ptmonolayer electrocatalysts for oxygen reduction reaction. Science Bulletin, 2020, 65, 1396-1404.	9.0	76

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55	An aqueous preoxidation method for monolithic perovskite electrocatalysts with enhanced water oxidation performance. Science Advances, 2016, 2, e1600495.	10.3	75
56	Can metalâ€“nitrogenâ€“carbon catalysts satisfy oxygen electrochemistry?. Journal of Materials Chemistry A, 2016, 4, 4998-5001.	10.3	72
57	Template growth of nitrogen-doped mesoporous graphene on metal oxides and its use as a metal-free bifunctional electrocatalyst for oxygen reduction and evolution reactions. Catalysis Today, 2018, 301, 25-31.	4.4	71
58	Engineering Low-Coordination Single-Atom Cobalt on Graphitic Carbon Nitride Catalyst for Hydrogen Evolution. ACS Catalysis, 2022, 12, 5517-5526.	11.2	67
59	Resilient aligned carbon nanotube/graphene sandwiches for robust mechanical energy storage. Nano Energy, 2014, 7, 161-169.	16.0	66
60	Recent advances in electrocatalytic oxygen reduction for on-site hydrogen peroxide synthesis in acidic media. Journal of Energy Chemistry, 2022, 67, 432-450.	12.9	66
61	Core-branch CoNi hydroxysulfides with versatilely regulated electronic and surface structures for superior oxygen evolution electrocatalysis. Journal of Energy Chemistry, 2019, 38, 8-14.	12.9	63
62	Guestâ€“host modulation of multi-metallic (oxy)hydroxides for superb water oxidation. Journal of Materials Chemistry A, 2016, 4, 3210-3216.	10.3	62
63	Predicting a new class of metal-organic frameworks as efficient catalyst for bi-functional oxygen evolution/reduction reactions. Journal of Catalysis, 2018, 367, 206-211.	6.2	61
64	Highly Exfoliated Reduced Graphite Oxide Powders as Efficient Lubricant Oil Additives. Advanced Materials Interfaces, 2016, 3, 1600700.	3.7	59
65	A review of graphene-based 3D van der Waals hybrids and their energy applications. Nano Today, 2019, 25, 27-37.	11.9	59
66	A â€˜pointâ€“lineâ€“pointâ€™ hybrid electrocatalyst for bi-functional catalysis of oxygen evolution and reduction reactions. Journal of Materials Chemistry A, 2016, 4, 3379-3385.	10.3	56
67	Oxygenophilic ionic liquids promote the oxygen reduction reaction in Pt-free carbon electrocatalysts. Materials Horizons, 2017, 4, 895-899.	12.2	56
68	Highâ€Efficiency Electrosynthesis of Hydrogen Peroxide from Oxygen Reduction Enabled by a Tungsten Single Atom Catalyst with Unique Terdentate N₁O₂ Coordination. Advanced Functional Materials, 2022, 32, .	14.9	55
69	Towards superior oxygen evolution through graphene barriers between metal substrates and hydroxide catalysts. Journal of Materials Chemistry A, 2015, 3, 16183-16189.	10.3	54
70	Efficient Nitrogen Fixation to Ammonia through Integration of Plasma Oxidation with Electrocatalytic Reduction. Angewandte Chemie, 2021, 133, 14250-14256.	2.0	44
71	Mesoscale Diffusion Enhancement of Carbon-Bowl-Shaped Nanoreactor toward High-Performance Electrochemical H₂O₂ Production. ACS Applied Materials & Interfaces, 2021, 13, 39763-39771.	8.0	41
72	Electrocatalytic green ammonia production beyond ambient aqueous nitrogen reduction. Chemical Engineering Science, 2022, 257, 117735.	3.8	41

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73	Crâ€Doped Pd Metallene Endows a Practical Formaldehyde Sensor New Limit and High Selectivity. Advanced Materials, 2022, 34, e2105276.	21.0	40
74	True or False in Electrochemical Nitrogen Reduction. Joule, 2019, 3, 1573-1575.	24.0	38
75	Cobalt Nanoparticles and Atomic Sites in Nitrogenâ€Doped Carbon Frameworks for Highly Sensitive Sensing of Hydrogen Peroxide. Small, 2020, 16, e1902860.	10.0	38
76	Carbonâ€Based Electrocatalysts: Atomic Modulation and Structure Design of Carbons for Bifunctional Electrocatalysis in Metalâ€“Air Batteries (Adv. Mater. 13/2019). Advanced Materials, 2019, 31, 1970095.	21.0	37
77	Regeneration of single-atom catalysts deactivated under acid oxygen reduction reaction conditions. Journal of Energy Chemistry, 2022, 73, 478-484.	12.9	32
78	The nanostructure preservation of 3D porous graphene: New insights into the graphitization and surface chemistry of non-stacked double-layer templated graphene after high-temperature treatment. Carbon, 2016, 103, 36-44.	10.3	30
79	Electrocatalytic Refinery for Sustainable Production of Fuels and Chemicals. Angewandte Chemie, 2021, 133, 19724-19742.	2.0	30
80	Mesoporous Coâ€“Oâ€“C nanosheets for electrochemical production of hydrogen peroxide in acidic medium. Journal of Materials Chemistry A, 2022, 10, 4068-4075.	10.3	26
81	C₃ production from CO₂ reduction by concerted *CO trimerization on a single-atom alloy catalyst. Journal of Materials Chemistry A, 2022, 10, 5998-6006.	10.3	25
82	Seawater-based electrolyte for zincâ€“air batteries. Green Chemical Engineering, 2020, 1, 117-123.	6.3	24
83	Characterization of a Blend-Biosurfactant of Glycolipid and Lipopeptide Produced by Bacillus subtilis TU2 Isolated from Underground Oil-Extraction Wastewater. Journal of Microbiology and Biotechnology, 2013, 23, 390-396.	2.1	24
84	Molecular-scale controllable conversion of biopolymers into hard carbons towards lithium and sodium ion batteries: A review. Journal of Energy Chemistry, 2022, 72, 554-569.	12.9	24
85	Spatial-confinement induced electroreduction of CO and CO₂ to diols on densely-arrayed Cu nanopyramids. Chemical Science, 2021, 12, 8079-8087.	7.4	22
86	Emerging Graphene Derivatives and Analogues for Efficient Energy Electrocatalysis. Advanced Functional Materials, 2022, 32, .	14.9	22
87	Few-layered mesoporous graphene for high-performance toluene adsorption and regeneration. Environmental Science: Nano, 2019, 6, 3113-3122.	4.3	21
88	The Controllable Reconstruction of Biâ€MOFs for Electrochemical CO₂ Reduction through Electrolyte and Potential Mediation. Angewandte Chemie, 2021, 133, 18326-18332.	2.0	20
89	Rational recipe for bulk growth of graphene/carbon nanotube hybrids: New insights from in-situ characterization on working catalysts. Carbon, 2015, 95, 292-301.	10.3	18
90	2D Atomically Thin Electrocatalysts: From Graphene to Metallene. Matter, 2019, 1, 1454-1455.	10.0	17

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91	Controllable bulk growth of few-layer graphene/single-walled carbon nanotube hybrids containing Fe@C nanoparticles in a fluidized bed reactor. Carbon, 2014, 67, 554-563.	10.3	16
92	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.	6.8	16
93	Highâ€Power Microbial Fuel Cells Based on a Carbonâ€“Carbon Composite Air Cathode. Small, 2020, 16, e1905240.	10.0	15
94	SAPO-34 templated growth of hierarchical porous graphene cages as electrocatalysts for both oxygen reduction and evolution. New Carbon Materials, 2017, 32, 509-516.	6.1	11
95	Oxygen Electrocatalysis: Topological Defects in Metal-Free Nanocarbon for Oxygen Electrocatalysis (Adv. Mater. 32/2016). Advanced Materials, 2016, 28, 7030-7030.	21.0	10
96	Synchrotron Xâ€ray Spectroscopic Investigations of Inâ€Situâ€Formed Alloy Anodes for Magnesium Batteries. Advanced Materials, 2022, 34, e2108688.	21.0	9
97	Catalysis: Spatially Confined Hybridization of Nanometer-Sized NiFe Hydroxides into Nitrogen-Doped Graphene Frameworks Leading to Superior Oxygen Evolution Reactivity (Adv. Mater. 30/2015). Advanced Materials, 2015, 27, 4524-4524.	21.0	8
98	The Crucial Role of Charge Accumulation and Spin Polarization in Activating Carbonâ€Based Catalysts for Electrocatalytic Nitrogen Reduction. Angewandte Chemie, 2020, 132, 4555-4561.	2.0	8
99	Micelle-templating interfacial self-assembly of two-dimensional mesoporous nanosheets for sustainable H2O2 electrosynthesis. Sustainable Materials and Technologies, 2022, 32, e00398.	3.3	7
100	Simplifying the creation of iron compound inserted, nitrogen-doped carbon nanotubes and its catalytic application. Journal of Alloys and Compounds, 2021, 857, 157543.	5.5	6
101	Lithium-Sulfur Batteries: Nitrogen-Doped Aligned Carbon Nanotube/Graphene Sandwiches: Facile Catalytic Growth on Bifunctional Natural Catalysts and Their Applications as Scaffolds for High-Rate Lithium-Sulfur Batteries (Adv. Mater. 35/2014). Advanced Materials, 2014, 26, 6199-6199.	21.0	4
102	Detecting residual chemical disinfectant using an atomic Coâ€“N_{<i>x</i>}â€“C anchored neuronal-like carbon catalyst modified amperometric sensor. Environmental Science: Nano, 2022, 9, 1759-1769.	4.3	4
103	Carbene Ligands Enabled Câ€“N Coupling for Methylamine Electrosynthesis: A Computational Study. Energy & Fuels, 2022, 36, 7213-7218.	5.1	4
104	Lithium-Sulfur Batteries: Hierarchical Vine-Tree-Like Carbon Nanotube Architectures: In-Situ CVD Self-Assembly and Their Use as Robust Scaffolds for Lithium-Sulfur Batteries (Adv. Mater. 41/2014). Advanced Materials, 2014, 26, 6986-6986.	21.0	3
105	Growth Mechanism of 3D Graphene Materials Based on Chemical Vapor Deposition. Springer Theses, 2021, , 35-56.	0.1	0
106	Nano-Confined Hybridization and Electrocatalytic Application Based on 3D Mesoporous Graphene Framework. Springer Theses, 2021, , 89-118.	0.1	0
107	Construction and Application of 3D Graphene Materials Based on Templated Polymerization. Springer Theses, 2021, , 57-88.	0.1	0
108	Design Principles and Synthesis of 3D Graphene-Analogous Materials and van der Waals Heterostructures. Springer Theses, 2021, , 119-137.	0.1	0