Cheng Tang

List of Publications by Citations

103 papers	10,299 citations	54 h-index	101 g-index
113 ext. papers	13,220 ext. citations	14.5 avg, IF	7.33 L-index

#	Paper	IF	Citations
103	A Review of Electrocatalytic Reduction of Dinitrogen to Ammonia under Ambient Conditions. *Advanced Energy Materials*, **2018**, 8, 1800369	21.8	619
102	Nanocarbon for Oxygen Reduction Electrocatalysis: Dopants, Edges, and Defects. *Advanced Materials*, **2017**, 29, 1604103	24	544
101	Spatially Confined Hybridization of Nanometer-Sized NiFe Hydroxides into Nitrogen-Doped Graphene Frameworks Leading to Superior Oxygen Evolution Reactivity. *Advanced Materials*, **2015**, 27, 4516-4522	24	533
100	Topological Defects in Metal-Free Nanocarbon for Oxygen Electrocatalysis. *Advanced Materials*, **2016**, 28, 6845-51	24	522
99	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. *Advanced Materials*, **2014**, 26, 6100-5	24	492
98	Defect Engineering toward Atomic Co-N -C in Hierarchical Graphene for Rechargeable Flexible Solid Zn-Air Batteries. *Advanced Materials*, **2017**, 29, 1703185	24	473
97	How to explore ambient electrocatalytic nitrogen reduction reliably and insightfully. *Chemical Society Reviews*, **2019**, 48, 3166-3180	58.5	377
96	A Review of Precious-Metal-Free Bifunctional Oxygen Electrocatalysts: Rational Design and Applications in Zn–Air Batteries. *Advanced Functional Materials*, **2018**, 28, 1803329	15.6	368
95	Multiscale Principles To Boost Reactivity in Gas-Involving Energy Electrocatalysis. *Accounts of Chemical Research*, **2018**, 51, 881-889	24.3	335
94	Two-Dimensional Mosaic Bismuth Nanosheets for Highly Selective Ambient Electrocatalytic Nitrogen Reduction. *ACS Catalysis*, **2019**, 9, 2902-2908	13.1	329
93	CaO-Templated Growth of Hierarchical Porous Graphene for High-Power Lithium–Sulfur Battery Applications. *Advanced Functional Materials*, **2016**, 26, 577-585	15.6	294
92	Nitrogen Vacancies on 2D Layered W N : A Stable and Efficient Active Site for Nitrogen Reduction Reaction. *Advanced Materials*, **2019**, 31, e1902709	24	258
91	Bifunctional Transition Metal Hydroxysulfides: Room-Temperature Sulfurization and Their Applications in Zn-Air Batteries. *Advanced Materials*, **2017**, 29, 1702327	24	252
90	A review of nanocarbons in energy electrocatalysis: Multifunctional substrates and highly active sites. *Journal of Energy Chemistry*, **2017**, 26, 1077-1093	12	220
89	A porphyrin covalent organic framework cathode for flexible Zn–air batteries. *Energy and Environmental Science*, **2018**, 11, 1723-1729	35.4	219
88	Coordination Tunes Selectivity: Two-Electron Oxygen Reduction on High-Loading Molybdenum Single-Atom Catalysts. *Angewandte Chemie - International Edition*, **2020**, 59, 9171-9176	16.4	206
87	A Nanosized CoNi Hydroxide@Hydroxysulfide Core-Shell Heterostructure for Enhanced Oxygen Evolution. *Advanced Materials*, **2019**, 31, e1805658	24	144

86	Atomic Modulation and Structure Design of Carbons for Bifunctional Electrocatalysis in Metal-Air Batteries. *Advanced Materials*, **2019**, 31, e1803800	24	141
85	Monolithic-structured ternary hydroxides as freestanding bifunctional electrocatalysts for overall water splitting. *Journal of Materials Chemistry A*, **2016**, 4, 7245-7250	13	135
84	3D Mesoporous van der Waals Heterostructures for Trifunctional Energy Electrocatalysis. *Advanced Materials*, **2018**, 30, 1705110	24	132
83	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	16.4	126
82	Defect-rich carbon fiber electrocatalysts with porous graphene skin for flexible solid-state zinc–air batteries. *Energy Storage Materials*, **2018**, 15, 124-130	19.4	118
81	Porous carbon derived from rice husks as sustainable bioresources: insights into the role of micro-/mesoporous hierarchy in hosting active species for lithium–sulphur batteries. *Green Chemistry*, **2016**, 18, 5169-5179	10	117
80	Thermal Exfoliation of Layered Metal-Organic Frameworks into Ultrahydrophilic Graphene Stacks and Their Applications in Li-S Batteries. *Advanced Materials*, **2017**, 29, 1702829	24	115
79	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	13	114
78	3D Mesoporous Graphene: CVD Self-Assembly on Porous Oxide Templates and Applications in High-Stable Li-S Batteries. *Small*, **2015**, 11, 5243-52	11	110
77	Tailoring Selectivity of Electrochemical Hydrogen Peroxide Generation by Tunable Pyrrolic-Nitrogen-Carbon. *Advanced Energy Materials*, **2020**, 10, 2000789	21.8	108
76	A Quinonoid-Imine-Enriched Nanostructured Polymer Mediator for Lithium-Sulfur Batteries. *Advanced Materials*, **2017**, 29, 1606802	24	107
75	Anionic Regulated NiFe (Oxy)Sulfide Electrocatalysts for Water Oxidation. *Small*, **2017**, 13, 1700610	11	104
74	Electrochemical Nitrogen Reduction: Identification and Elimination of Contamination in Electrolyte. *ACS Energy Letters*, **2019**, 4, 2111-2116	20.1	100
73	Hierarchical vine-tree-like carbon nanotube architectures: In-situ CVD self-assembly and their use as robust scaffolds for lithium-sulfur batteries. *Advanced Materials*, **2014**, 26, 7051-8	24	97
72	Advanced energy materials for flexible batteries in energy storage: A review. *SmartMat*, **2020**, 1,	22.8	93
71	Electrocatalytic Refinery for Sustainable Production of Fuels and Chemicals. *Angewandte Chemie - International Edition*, **2021**, 60, 19572-19590	16.4	93
70	Effective exposure of nitrogen heteroatoms in 3D porous graphene framework for oxygen reduction reaction and lithium–sulfur batteries. *Journal of Energy Chemistry*, **2018**, 27, 167-175	12	90
69	The Crucial Role of Charge Accumulation and Spin Polarization in Activating Carbon-Based Catalysts for Electrocatalytic Nitrogen Reduction. *Angewandte Chemie - International Edition*, **2020**, 59, 4525-4531	16.4	88

68	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	3.1	84
67	Regulating p-block metals in perovskite nanodots for efficient electrocatalytic water oxidation. *Nature Communications*, **2017**, 8, 934	17.4	83
66	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	4.8	82
65	In Situ Fragmented Bismuth Nanoparticles for Electrocatalytic Nitrogen Reduction. *Advanced Energy Materials*, **2020**, 10, 2001289	21.8	81
64	Stable and Highly Efficient Hydrogen Evolution from Seawater Enabled by an Unsaturated Nickel Surface Nitride. *Advanced Materials*, **2021**, 33, e2007508	24	81
63	A review of anion-regulated multi-anion transition metal compounds for oxygen evolution electrocatalysis. *Inorganic Chemistry Frontiers*, **2018**, 5, 521-534	6.8	76
62	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	13	76
61	Recent advances in spinel-type electrocatalysts for bifunctional oxygen reduction and oxygen evolution reactions. *Journal of Energy Chemistry*, **2021**, 53, 290-302	12	70
60	A perspective on sustainable energy materials for lithium batteries. *SusMat*, **2021**, 1, 38-50		69
59	Oxygen Reduction Reaction on Graphene in an Electro-Fenton System: In Situ Generation of H2 O2 for the Oxidation of Organic Compounds. *ChemSusChem*, **2016**, 9, 1194-9	8.3	67
58	Molten Salt-Directed Catalytic Synthesis of 2D Layered Transition-Metal Nitrides for Efficient Hydrogen Evolution. *CheM*, **2020**, 6, 2382-2394	16.2	67
57	Anion-Regulated Hydroxysulfide Monoliths as OER/ORR/HER Electrocatalysts and their Applications in Self-Powered Electrochemical Water Splitting. *Small Methods*, **2018**, 2, 1800055	12.8	63
56	An aqueous preoxidation method for monolithic perovskite electrocatalysts with enhanced water oxidation performance. *Science Advances*, **2016**, 2, e1600495	14.3	63
55	3D Hierarchical Porous Graphene-Based Energy Materials: Synthesis, Functionalization, and Application in Energy Storage and Conversion. *Electrochemical Energy Reviews*, **2019**, 2, 332-371	29.3	59
54	Coordination Tunes Selectivity: Two-Electron Oxygen Reduction on High-Loading Molybdenum Single-Atom Catalysts. *Angewandte Chemie*, **2020**, 132, 9256-9261	3.6	59
53	Can metal–nitrogen–carbon catalysts satisfy oxygen electrochemistry?. *Journal of Materials Chemistry A*, **2016**, 4, 4998-5001	13	58
52	Efficient Nitrogen Fixation to Ammonia through Integration of Plasma Oxidation with Electrocatalytic Reduction. *Angewandte Chemie - International Edition*, **2021**, 60, 14131-14137	16.4	56
51	Guest–host modulation of multi-metallic (oxy)hydroxides for superb water oxidation. *Journal of Materials Chemistry A*, **2016**, 4, 3210-3216	13	55

50	Resilient aligned carbon nanotube/graphene sandwiches for robust mechanical energy storage. *Nano Energy*, **2014**, 7, 161-169	17.1	54
49	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	5.3	53
48	A □oint□ne□oint□hybrid electrocatalyst for bi-functional catalysis of oxygen evolution and reduction reactions. *Journal of Materials Chemistry A*, **2016**, 4, 3379-3385	13	50
47	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	48
46	Towards superior oxygen evolution through graphene barriers between metal substrates and hydroxide catalysts. *Journal of Materials Chemistry A*, **2015**, 3, 16183-16189	13	47
45	Oxygenophilic ionic liquids promote the oxygen reduction reaction in Pt-free carbon electrocatalysts. *Materials Horizons*, **2017**, 4, 895-899	14.4	45
44	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	7.3	45
43	Highly Exfoliated Reduced Graphite Oxide Powders as Efficient Lubricant Oil Additives. *Advanced Materials Interfaces*, **2016**, 3, 1600700	4.6	44
42	Engineering the electronic and strained interface for high activity of PdMcore@Ptmonolayer electrocatalysts for oxygen reduction reaction. *Science Bulletin*, **2020**, 65, 1396-1404	10.6	42
41	A review of graphene-based 3D van der Waals hybrids and their energy applications. *Nano Today*, **2019**, 25, 27-37	17.9	38
40	The Controllable Reconstruction of Bi-MOFs for Electrochemical CO Reduction through Electrolyte and Potential Mediation. *Angewandte Chemie - International Edition*, **2021**, 60, 18178-18184	16.4	35
39	Hard Carbon Anodes for Next-Generation Li-Ion Batteries: Review and Perspective. *Advanced Energy Materials*, **2021**, 11, 2101650	21.8	35
38	Main-group elements boost electrochemical nitrogen fixation. *CheM*, **2021**,	16.2	28
37	True or False in Electrochemical Nitrogen Reduction. *Joule*, **2019**, 3, 1573-1575	27.8	25
36	Carbon-Based Electrocatalysts: Atomic Modulation and Structure Design of Carbons for Bifunctional Electrocatalysis in Metal□Air Batteries (Adv. Mater. 13/2019). *Advanced Materials*, **2019**, 31, 1970095	24	24
35	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	10.4	24
34	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, 390-6	3.3	19
33	Rational recipe for bulk growth of graphene/carbon nanotube hybrids: New insights from in-situ characterization on working catalysts. *Carbon*, **2015**, 95, 292-301	10.4	17

32	Cobalt Nanoparticles and Atomic Sites in Nitrogen-Doped Carbon Frameworks for Highly Sensitive Sensing of Hydrogen Peroxide. *Small*, **2020**, 16, e1902860	11	17
31	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	10.4	15
30	Efficient Nitrogen Fixation to Ammonia through Integration of Plasma Oxidation with Electrocatalytic Reduction. *Angewandte Chemie*, **2021**, 133, 14250-14256	3.6	15
29	Few-layered mesoporous graphene for high-performance toluene adsorption and regeneration. *Environmental Science: Nano*, **2019**, 6, 3113-3122	7.1	13
28	Mesoscale Diffusion Enhancement of Carbon-Bowl-Shaped Nanoreactor toward High-Performance Electrochemical HO Production. *ACS Applied Materials & Interfaces*, **2021**, 13, 39763-39771	9.5	12
27	SAPO-34 templated growth of hierarchical porous graphene cages as electrocatalysts for both oxygen reduction and evolution. *New Carbon Materials*, **2017**, 32, 509-516	4.4	11
26	Oxygen Electrocatalysis: Topological Defects in Metal-Free Nanocarbon for Oxygen Electrocatalysis (Adv. Mater. 32/2016). *Advanced Materials*, **2016**, 28, 7030-7030	24	10
25	High-Efficiency Electrosynthesis of Hydrogen Peroxide from Oxygen Reduction Enabled by a Tungsten Single Atom Catalyst with Unique Terdentate N 1 O 2 Coordination. *Advanced Functional Materials*,2110224	15.6	10
24	Recent advances in electrocatalytic oxygen reduction for on-site hydrogen peroxide synthesis in acidic media. *Journal of Energy Chemistry*, **2021**,	12	9
23	Cr-Doped Pd Metallene Endows a Practical Formaldehyde Sensor New Limit and High Selectivity. *Advanced Materials*, **2021**, e2105276	24	8
22	High-Power Microbial Fuel Cells Based on a Carbon-Carbon Composite Air Cathode. *Small*, **2020**, 16, e1905240	13	8
21	Spatial-confinement induced electroreduction of CO and CO to diols on densely-arrayed Cu nanopyramids. *Chemical Science*, **2021**, 12, 8079-8087	9.4	7
20	Electrocatalytic green ammonia production beyond ambient aqueous nitrogen reduction. *Chemical Engineering Science*, **2022**, 117735	4.4	6
19	Electrocatalytic Refinery for Sustainable Production of Fuels and Chemicals. *Angewandte Chemie*, **2021**, 133, 19724-19742	3.6	5
18	2D Atomically Thin Electrocatalysts: From Graphene to Metallene. *Matter*, **2019**, 1, 1454-1455	12.7	5
17	The Crucial Role of Charge Accumulation and Spin Polarization in Activating Carbon-Based Catalysts for Electrocatalytic Nitrogen Reduction. *Angewandte Chemie*, **2020**, 132, 4555-4561	3.6	4
16	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	24	4
15	Mesoporous Co□□ nanosheets for electrochemical production of hydrogen peroxide in acidic medium. *Journal of Materials Chemistry A*,	13	4

14	C3 production from CO2 reduction by concerted *CO trimerization on a single-atom alloy catalyst. *Journal of Materials Chemistry A*,	13	4
13	Anomalous C-C Coupling on Under-Coordinated Cu (111): A Case Study of Cu Nanopyramids for CO Reduction Reaction by Molecular Modelling. *ChemSusChem*, **2021**, 14, 671-678	8.3	4
12	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	24	3
11	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	24	3
10	Seawater-based electrolyte for Zinc–air batteries. *Green Chemical Engineering*, **2020**, 1, 117-123	3	3
9	Simplifying the creation of iron compound inserted, nitrogen-doped carbon nanotubes and its catalytic application. *Journal of Alloys and Compounds*, **2021**, 857, 157543	5.7	3
8	Engineering Low-Coordination Single-Atom Cobalt on Graphitic Carbon Nitride Catalyst for Hydrogen Evolution. *ACS Catalysis*, **2022**, 12, 5517-5526	13.1	3
7	Synchrotron X-ray Spectroscopic Investigations of In-Situ Formed Alloy Anodes for Magnesium Batteries.. *Advanced Materials*, **2021**, e2108688	24	2
6	Micelle-templating interfacial self-assembly of two-dimensional mesoporous nanosheets for sustainable H2O2 electrosynthesis. *Sustainable Materials and Technologies*, **2022**, e00398	5.3	2
5	The Controllable Reconstruction of Bi-MOFs for Electrochemical CO2 Reduction through Electrolyte and Potential Mediation. *Angewandte Chemie*, **2021**, 133, 18326-18332	3.6	1
4	Growth Mechanism of 3D Graphene Materials Based on Chemical Vapor Deposition. *Springer Theses* , **2021**, 35-56	0.1	
3	Nano-Confined Hybridization and Electrocatalytic Application Based on 3D Mesoporous Graphene Framework. *Springer Theses*, **2021**, 89-118	0.1	
2	Construction and Application of 3D Graphene Materials Based on Templated Polymerization. *Springer Theses*, **2021**, 57-88	0.1	
1	Design Principles and Synthesis of 3D Graphene-Analogous Materials and van der Waals Heterostructures. *Springer Theses*, **2021**, 119-137	0.1	