

Xin-Long Tian

List of Publications by Year in descending order

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110
papers

7,692
citations

53660

45
h-index

54797

84
g-index

111
all docs

111
docs citations

111
times ranked

6293
citing authors

#	ARTICLE	IF	CITATIONS
1	Engineering bunched Pt-Ni alloy nanocages for efficient oxygen reduction in practical fuel cells. <i>Science</i> , 2019, 366, 850-856.	6.0	1,005
2	Advanced Electrocatalysts for the Oxygen Reduction Reaction in Energy Conversion Technologies. <i>Joule</i> , 2020, 4, 45-68.	11.7	596
3	Surfactant-free atomically ultrathin rhodium nanosheet nanoassemblies for efficient nitrogen electroreduction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3211-3217.	5.2	376
4	Effect of Transition Metals on the Structure and Performance of the Doped Carbon Catalysts Derived From Polyaniline and Melamine for ORR Application. <i>ACS Catalysis</i> , 2014, 4, 3797-3805.	5.5	351
5	Transition Metal Nitride Coated with Atomic Layers of Pt as a Low-Cost, Highly Stable Electrocatalyst for the Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2016, 138, 1575-1583.	6.6	348
6	Advanced Platinum-Based Oxygen Reduction Electrocatalysts for Fuel Cells. <i>Accounts of Chemical Research</i> , 2021, 54, 311-322.	7.6	237
7	Unsupported Platinum-Based Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Energy Letters</i> , 2017, 2, 2035-2043.	8.8	174
8	Recent Progress on Transition Metal Oxides as Bifunctional Catalysts for Lithium-Air and Zinc-Air Batteries. <i>Batteries and Supercaps</i> , 2019, 2, 336-347.	2.4	173
9	Research advances in unsupported Pt-based catalysts for electrochemical methanol oxidation. <i>Journal of Energy Chemistry</i> , 2017, 26, 1067-1076.	7.1	163
10	High valence state of Ni and Mo synergism in NiS ₂ -MoS ₂ hetero-nanorods catalyst with layered surface structure for urea electrocatalysis. <i>Journal of Energy Chemistry</i> , 2022, 66, 483-492.	7.1	158
11	g-C ₃ N ₄ promoted MOF derived hollow carbon nanopolyhedra doped with high density/fraction of single Fe atoms as an ultra-high performance non-precious catalyst towards acidic ORR and PEM fuel cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5020-5030.	5.2	152
12	Formation of a Tubular Assembly by Ultrathin Ti _{0.8} Co _{0.2} N Nanosheets as Efficient Oxygen Reduction Electrocatalysts for Hydrogen-Metal-Air Fuel Cells. <i>ACS Catalysis</i> , 2018, 8, 8970-8975.	5.5	147
13	Engineering Ruthenium-Based Electrocatalysts for Effective Hydrogen Evolution Reaction. <i>Nano-Micro Letters</i> , 2021, 13, 160.	14.4	142
14	Limitations and Improvement Strategies for Early-Transition-Metal Nitrides as Competitive Catalysts toward the Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2016, 6, 6165-6174.	5.5	130
15	Single atomic cobalt electrocatalyst for efficient oxygen reduction reaction. <i>EScience</i> , 2022, 2, 399-404.	25.0	127
16	Binary Fe, Cu-doped bamboo-like carbon nanotubes as efficient catalyst for the oxygen reduction reaction. <i>Nano Energy</i> , 2017, 37, 187-194.	8.2	125
17	Binary transition metal nitrides with enhanced activity and durability for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2015, 3, 16801-16809.	5.2	115
18	Advanced Atomically Dispersed Metal-Nitrogen-Carbon Catalysts Toward Cathodic Oxygen Reduction in PEM Fuel Cells. <i>Advanced Energy Materials</i> , 2021, 11, 2101222.	10.2	109

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19	Three-dimensional hierarchical Cu _x S-based evaporator for high-efficiency multifunctional solar distillation. <i>Nano Energy</i> , 2020, 69, 104465.	8.2	107
20	A scalable, cost-effective and salt-rejecting MoS ₂ /SA@melamine foam for continuous solar steam generation. <i>Nano Energy</i> , 2021, 87, 106213.	8.2	99
21	Recent advances in two-dimensional Pt based electrocatalysts for methanol oxidation reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 31202-31215.	3.8	87
22	High-Performance Core-Shell Catalyst with Nitride Nanoparticles as a Core: Well-Defined Titanium Copper Nitride Coated with an Atomic Pt Layer for the Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2017, 7, 3810-3817.	5.5	84
23	Engineering the electronic and strained interface for high activity of Pd _{core} @Pt _{monolayer} electrocatalysts for oxygen reduction reaction. <i>Science Bulletin</i> , 2020, 65, 1396-1404.	4.3	76
24	Progress in the development of heteroatom-doped nickel phosphates for electrocatalytic water splitting. <i>Journal of Colloid and Interface Science</i> , 2022, 607, 1091-1102.	5.0	76
25	Coupling hollow Fe ₃ O ₄ nanoparticles with oxygen vacancy on mesoporous carbon as a high-efficiency ORR electrocatalyst for Zn-air battery. <i>Journal of Colloid and Interface Science</i> , 2020, 567, 410-418.	5.0	75
26	Rational design ternary platinum based electrocatalysts for effective methanol oxidation reaction. <i>Journal of Energy Chemistry</i> , 2022, 70, 230-235.	7.1	75
27	Sandwich Photothermal Membrane with Confined Hierarchical Carbon Cells Enabling High-Efficiency Solar Steam Generation. <i>Small</i> , 2020, 16, e2000573.	5.2	67
28	Holey platinum nanotubes for ethanol electrochemical reforming in aqueous solution. <i>Science Bulletin</i> , 2021, 66, 2079-2089.	4.3	66
29	MOF-Templated sword-like Co ₃ O ₄ @NiCo ₂ O ₄ sheet arrays on carbon cloth as highly efficient Li-O ₂ battery cathode. <i>Journal of Power Sources</i> , 2020, 450, 227725.	4.0	62
30	Structural engineering of robust titanium nitride as effective platinum support for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 6065-6073.	5.2	61
31	Hierarchically open-porous carbon networks enriched with exclusive Fe-N _x active sites as efficient oxygen reduction catalysts towards acidic H ₂ -O ₂ PEM fuel cell and alkaline Zn-air battery. <i>Chemical Engineering Journal</i> , 2020, 390, 124479.	6.6	61
32	Engineering of Hierarchical and Three-Dimensional Architectures Constructed by Titanium Nitride Nanowire Assemblies for Efficient Electrocatalysis. <i>ChemElectroChem</i> , 2019, 6, 2208-2214.	1.7	60
33	Designing Robust Support for Pt Alloy Nanoframes with Durable Oxygen Reduction Reaction Activity. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9117-9124.	4.0	60
34	Self-regulating and asymmetric evaporator for efficient solar water-electricity generation. <i>Nano Energy</i> , 2021, 86, 106112.	8.2	60
35	Cationic covalent-organic framework for sulfur storage with high-performance in lithium-sulfur batteries. <i>Journal of Colloid and Interface Science</i> , 2021, 591, 264-272.	5.0	57
36	Engineering one-dimensional and hierarchical PtFe alloy assemblies towards durable methanol electrooxidation. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13090-13095.	5.2	56

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37	Highly stable Pt ₃ Ni nanowires tailored with trace Au for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26402-26409.	5.2	55
38	Recent advances in MOFs/MOF derived nanomaterials toward high-efficiency aqueous zinc ion batteries. <i>Coordination Chemistry Reviews</i> , 2022, 468, 214642.	9.5	55
39	S, N co-doped carbon nanotube encased Co NPs as efficient bifunctional oxygen electrocatalysts for zinc-air batteries. <i>Chemical Engineering Journal</i> , 2021, 422, 130135.	6.6	54
40	A Co-doped porous niobium nitride nanogrid as an effective oxygen reduction catalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 14278-14285.	5.2	51
41	Platinum-Silver Alloy Nanoballoon Nanoassemblies with Super Catalytic Activity for the Formate Electrooxidation. <i>ACS Applied Energy Materials</i> , 2018, 1, 1252-1258.	2.5	50
42	Direct integration of ultralow-platinum alloy into nanocarbon architectures for efficient oxygen reduction in fuel cells. <i>Science Bulletin</i> , 2021, 66, 2207-2216.	4.3	49
43	Highly Selective TiN-Supported Highly Dispersed Pt Catalyst: Ultra Active toward Hydrogen Oxidation and Inactive toward Oxygen Reduction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 3530-3537.	4.0	48
44	Platinum decorated hierarchical porous structures composed of ultrathin titanium nitride nanoflakes for efficient methanol oxidation reaction. <i>Electrochimica Acta</i> , 2018, 264, 216-224.	2.6	47
45	Template-Free Preparation of 3D Porous Co-Doped VN Nanosheet-Assembled Microflowers with Enhanced Oxygen Reduction Activity. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 11604-11612.	4.0	47
46	Porous and three dimensional titanium nitride supported platinum as an electrocatalyst for oxygen reduction reaction. <i>Electrochemistry Communications</i> , 2018, 91, 31-35.	2.3	46
47	Enhanced water management in the cathode of an air-breathing PEMFC using a dual catalyst layer and optimizing the gas diffusion and microporous layers. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3961-3967.	3.8	45
48	In situ construction of Ir@Pt/C nanoparticles in the cathode layer of membrane electrode assemblies with ultra-low Pt loading and high Pt exposure. <i>Journal of Power Sources</i> , 2017, 355, 83-89.	4.0	45
49	Enhanced cyclability of Li-O ₂ batteries with cathodes of Ir and MnO ₂ supported on well-defined TiN arrays. <i>Nanoscale</i> , 2018, 10, 2983-2989.	2.8	44
50	Sandwich hydrogel with confined plasmonic Cu/carbon cells for efficient solar water purification. <i>Journal of Materials Chemistry A</i> , 2021, 9, 15462-15471.	5.2	41
51	A core-shell Pd ₁ Ru ₁ Ni ₂ @Pt/C catalyst with a ternary alloy core and Pt monolayer: enhanced activity and stability towards the oxygen reduction reaction by the addition of Ni. <i>Journal of Materials Chemistry A</i> , 2016, 4, 847-855.	5.2	40
52	Facile synthesis of C ₃ N ₄ /NiIn ₂ S ₄ heterostructure with novel solar steam evaporation efficiency and photocatalytic H ₂ O ₂ production performance. <i>Applied Catalysis B: Environmental</i> , 2022, 310, 121336.	10.8	40
53	A strategy to unlock the potential of CrN as a highly active oxygen reduction reaction catalyst. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8575-8585.	5.2	38
54	Nodal PtNi nanowires with Pt skin and controllable Near-Surface composition for enhanced oxygen reduction electrocatalysis in fuel cells. <i>Chemical Engineering Journal</i> , 2021, 418, 129322.	6.6	36

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55	Exploring and understanding the internal voltage losses through catalyst layers in proton exchange membrane water electrolysis devices. <i>Applied Energy</i> , 2022, 317, 119213.	5.1	36
56	Recent Advances in the Hydrogen Evolution Reaction of Zn _{1-x} Cd _x S-Based Photocatalysts. <i>Solar Rrl</i> , 2022, 6, .	3.1	32
57	Structure evolution from Fe ₂ Ni MIL MOF to carbon confined O-doped FeNi/FeF ₂ via partial fluorination for improved oxygen evolution reaction. <i>Chemical Engineering Journal</i> , 2022, 442, 136165.	6.6	31
58	A plasma bombing strategy to synthesize high-loading single-atom catalysts for oxygen reduction reaction. <i>Cell Reports Physical Science</i> , 2022, 3, 100880.	2.8	31
59	Ultrastable NiFeOOH/NiFe/Ni electrocatalysts prepared by in-situ electro-oxidation for oxygen evolution reaction at large current density. <i>Applied Surface Science</i> , 2021, 564, 150440.	3.1	30
60	Recent progress in seawater electrolysis for hydrogen evolution by transition metal phosphides. <i>Catalysis Communications</i> , 2022, 162, 106382.	1.6	30
61	Bridge the activity and durability of Ruthenium for hydrogen evolution reaction with the Ru O C link. <i>Chemical Engineering Journal</i> , 2022, 433, 134421.	6.6	30
62	Heterogeneous structured Ni ₃ Se ₂ /MoO ₂ @Ni ₁₂ P ₅ catalyst for durable urea oxidation reaction. <i>Materials Today Physics</i> , 2022, 23, 100646.	2.9	30
63	Mo-decorated cobalt phosphide nanoarrays as bifunctional electrocatalysts for efficient overall water/seawater splitting. <i>Materials Today Nano</i> , 2022, 18, 100216.	2.3	30
64	Bifunctional Pd@RhPd Core-Shell Nanodendrites for Methanol Electrolysis. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 35767-35776.	4.0	28
65	Au@Ir core-shell nanowires towards oxygen reduction reaction. <i>Chemical Engineering Journal</i> , 2021, 421, 129760.	6.6	27
66	One-dimensional PtFe hollow nanochains for the efficient oxygen reduction reaction. , 2022, 4, 1003-1010.		27
67	Pyrimidine-Functionalized Covalent Organic Framework and its Cobalt Complex as an Efficient Electrocatalyst for Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2021, 14, 4556-4562.	3.6	26
68	Three dimensional titanium molybdenum nitride nanowire assemblies as highly efficient and durable platinum support for methanol oxidation reaction. <i>Electrochimica Acta</i> , 2019, 295, 50-57.	2.6	24
69	An amorphous lanthanum-iridium solid solution with an open structure for efficient water splitting. <i>Journal of Materials Chemistry A</i> , 2020, 8, 12518-12525.	5.2	24
70	Facile fabrication of single-atom catalysts by a plasma-etching strategy for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 6531-6537.	5.2	24
71	Ruthenium Complex of sp ² Carbon-Conjugated Covalent Organic Frameworks as an Efficient Electrocatalyst for Hydrogen Evolution. <i>Small</i> , 2022, 18, e2107750.	5.2	24
72	Performance improvement induced by membrane treatment in proton exchange membrane water electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 5807-5816.	3.8	22

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73	Plasma induced Fe-N active sites to improve the oxygen reduction reaction performance. , 2022, 1, 100005.		22
74	Photocatalytic Hydrogen Evolution Using Ternary Metal Sulfide/TiO ₂ Heterojunction Photocatalysts. ChemCatChem, 2022, 14, .	1.8	21
75	Rechargeable Zinc-Air Battery with Ultrahigh Power Density Based on Uniform N, Co Codoped Carbon Nanospheres. ACS Applied Materials & Interfaces, 2019, 11, 44153-44160.	4.0	20
76	Ni ₂ P nanoparticles-inserted NiFeP nanosheets with rich interfaces as efficient catalysts for the oxygen evolution reaction. Journal of Alloys and Compounds, 2022, 903, 163855.	2.8	20
77	Fundamentals and photocatalytic hydrogen evolution applications of quaternary chalcogenide semiconductor: Cu ₂ ZnSnS ₄ . Rare Metals, 2022, 41, 2153-2168.	3.6	20
78	Au decorated Pd nanowires for methane oxidation to liquid C1 products. Applied Catalysis B: Environmental, 2022, 308, 121223.	10.8	20
79	Atomic platinum layer coated titanium copper nitride supported on carbon nanotubes for the methanol oxidation reaction. Electrochimica Acta, 2017, 248, 349-355.	2.6	19
80	Platinum-decorated three dimensional titanium copper nitride architectures with durable methanol oxidation reaction activity. International Journal of Hydrogen Energy, 2019, 44, 8415-8424.	3.8	19
81	Engineering PdAu Nanowires for Highly Efficient Direct Methane Conversion to Methanol under Mild Conditions. Journal of Physical Chemistry C, 2021, 125, 12713-12720.	1.5	17
82	Platinum supported on multifunctional titanium cobalt oxide nanosheets assembles for efficient oxygen reduction reaction. Electrochimica Acta, 2018, 265, 364-371.	2.6	16
83	Amorphous Amorphous Coupling Enhancing the Oxygen Evolution Reaction Activity and Stability of the NiFe-Based Catalyst. ACS Applied Materials & Interfaces, 2022, 14, 15205-15213.	4.0	16
84	Isolated Co Atoms Anchored on Defective Nitrogen-Doped Carbon Graphene as Efficient Oxygen Reduction Reaction Electrocatalysts. Energy and Environmental Materials, 2023, 6, .	7.3	16
85	Synthesis of a N-doped mesoporous carbon as an efficient electrocatalyst for oxygen reduction. International Journal of Hydrogen Energy, 2018, 43, 21791-21797.	3.8	15
86	Hierarchical Natural Pollen Cell-Derived Composite Sorbents for Efficient Atmospheric Water Harvesting. ACS Applied Materials & Interfaces, 2022, 14, 33032-33040.	4.0	15
87	Synthesis and Design of a Highly Stable Platinum Nickel Electrocatalyst for the Oxygen Reduction Reaction. ACS Applied Materials & Interfaces, 2021, 13, 52681-52687.	4.0	14
88	Layer-structured FeCo bishydroxide as an ultra-stable bifunctional electrocatalyst for water splitting at high current densities. Sustainable Energy and Fuels, 2021, 5, 2747-2752.	2.5	13
89	Glucose-derived carbon supported well-dispersed CrN as competitive oxygen reduction catalysts in acidic medium. Electrochimica Acta, 2019, 314, 202-211.	2.6	12
90	A mesoporous carbon derived from 4,4'-dipyridyl iron as an efficient catalyst for oxygen reduction. Journal of Materials Chemistry A, 2020, 8, 2439-2444.	5.2	12

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91	Porous carbon polyhedrons with exclusive Cu-N _x moieties as highly effective electrocatalysts for oxygen reduction reactions. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 28021-28027.	3.8	12
92	Preparation of highly active MoNi ₄ alloys in 3D porous nanostructures and their application as bifunctional electrocatalysts for overall water splitting. <i>Catalysis Communications</i> , 2021, 159, 106350.	1.6	12
93	A graphene-like nanoribbon for efficient bifunctional electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26688-26697.	5.2	10
94	IrO _x Nanoclusters Modified by BaCO ₃ Enable "Two Birds with One Stone" in Solar-Driven Direct Unbuffered Seawater Electrolysis. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 61088-61097.	4.0	10
95	Construction of a high-performance air-breathing cathode using platinum catalyst supported by carbon black and carbon nanotubes. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 9191-9196.	3.8	8
96	Photocatalytic reduction of water to hydrogen by CuPbSbS ₃ nanoflakes. <i>Materials Today Energy</i> , 2022, 25, 100956.	2.5	8
97	Tetrazole-functionalized two-dimensional covalent organic frameworks coordinated with metal ions for electrocatalytic oxygen evolution reaction. <i>Materials Today Chemistry</i> , 2022, 24, 100777.	1.7	8
98	A Platinum Monolayer Core-Shell Catalyst with a Ternary Alloy Nanoparticle Core and Enhanced Stability for the Oxygen Reduction Reaction. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-11.	1.5	7
99	Propagation and attenuation of swell energy in the Pacific Ocean. <i>Renewable Energy</i> , 2022, 188, 750-764.	4.3	7
100	Assembly of a Highly Active Iridium-Based Oxide Oxygen Evolution Reaction Catalyst by Using Metal-Organic Framework Self-Dissolution. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 29414-29423.	4.0	6
101	<i>In situ</i> formation of grain boundaries on a supported hybrid to boost water oxidation activity of iridium oxide. <i>Nanoscale</i> , 2021, 13, 13845-13857.	2.8	6
102	In Situ Hybridizing Cu ₃ (BTC) ₂ and Titania to Attain a High-Performance Copper Catalyst: Dual-Functional Role of Metal-Support Interaction on the Activity and Selectivity. <i>ChemCatChem</i> , 2021, 13, 3846-3856.	1.8	6
103	Tunable cobalt doping titanium nitride (TiCoN) interlaced nanotubes enable an enhanced electronic synergy on visible-light driven hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 17143-17153.	3.8	5
104	Facile Synthesis of Iron and Phosphorous-Embedded Nitrogen-Containing Porous Carbon as an Efficient Electrocatalyst for Microbial Fuel Cells. <i>ChemElectroChem</i> , 2021, 8, 4108.	1.7	5
105	Recent Progress in Layered Double Hydroxide-Based Electrocatalyst for Hydrogen Evolution Reaction. <i>ChemElectroChem</i> , 2022, 9, .	1.7	5
106	Nitrogen-bonded ultrasmall palladium clusters over the nitrogen-doped carbon for promoting Suzuki cross-coupling reactions. <i>Advanced Composites and Hybrid Materials</i> , 2022, 5, 1396-1403.	9.9	5
107	General Method for Synthesizing Effective and Durable Electrocatalysts Derived from Cellulose for Microbial Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 13369-13378.	4.0	4
108	A comparative study on the catalytic activities and stabilities of atomic-layered platinum on dispersed Ti _{0.9} Cu _{0.1} N nanoparticles supported by N-doped carbon nanotubes (N-CNTs) and reduced graphene oxide (N-rGO). <i>International Journal of Hydrogen Energy</i> , 2020, 45, 1857-1866.	3.8	2

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109	Toward efficient electrocatalytic oxygen evolution with a low concentration baking soda activated IrO _x surface in a hydrothermal medium. <i>Materials Chemistry Frontiers</i> , 2022, 6, 1282-1291.	3.2	2
110	Preparation of nitride nanoparticles based core-shell structured catalyst and its catalysis towards formic acid oxidation. <i>Scientia Sinica Chimica</i> , 2017, 47, 641-646.	0.2	0