

Daojian Cheng

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1426091/publications.pdf>

Version: 2024-02-01

91
papers

4,978
citations

136740

32
h-index

95083

68
g-index

94
all docs

94
docs citations

94
times ranked

6075
citing authors

#	ARTICLE	IF	CITATIONS
1	A universal principle for a rational design of single-atom electrocatalysts. <i>Nature Catalysis</i> , 2018, 1, 339-348.	16.1	1,214
2	Unveiling the high-activity origin of single-atom iron catalysts for oxygen reduction reaction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6626-6631.	3.3	500
3	Vertical CoP Nanoarray Wrapped by N,P-Doped Carbon for Hydrogen Evolution Reaction in Both Acidic and Alkaline Conditions. <i>Advanced Energy Materials</i> , 2019, 9, 1803970.	10.2	284
4	Single-Atom Ru Doping Induced Phase Transition of MoS ₂ and S Vacancy for Hydrogen Evolution Reaction. <i>Small Methods</i> , 2019, 3, 1900653.	4.6	206
5	CoP nanowires coupled with CoMoP nanosheets as a highly efficient cooperative catalyst for hydrogen evolution reaction. <i>Nano Energy</i> , 2020, 68, 104332.	8.2	202
6	Computational Approaches to the Chemical Conversion of Carbon Dioxide. <i>ChemSusChem</i> , 2013, 6, 944-965.	3.6	144
7	Facile Synthesis of Cu/NiCu Electrocatalysts Integrating Alloy, Core-Shell, and One-Dimensional Structures for Efficient Methanol Oxidation Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 19843-19851.	4.0	114
8	Construction of Defect-Rich RhCu Nanotubes with Highly Active Rh ₃ Cu ₁ Alloy Phase for Overall Water Splitting in All pH Values. <i>Advanced Energy Materials</i> , 2020, 10, 1903038.	10.2	102
9	Thermal behavior of core-shell and three-shell layered clusters: Melting of Cu ₁ Au ₅₄ and Cu ₁₂ Au ₄₃ . <i>Physical Review B</i> , 2006, 74, .	1.1	82
10	Interface construction of P-Substituted MoS ₂ as efficient and robust electrocatalyst for alkaline hydrogen evolution reaction. <i>Nano Energy</i> , 2020, 78, 105253.	8.2	80
11	Active Site Identification and Evaluation Criteria of In Situ Grown CoTe and NiTe Nanoarrays for Hydrogen Evolution and Oxygen Evolution Reactions. <i>Small Methods</i> , 2019, 3, 1900113.	4.6	78
12	Design of High-Performance Pd-Based Alloy Nanocatalysts for Direct Synthesis of H ₂ O ₂ . <i>ACS Catalysis</i> , 2017, 7, 2164-2170.	5.5	75
13	Construction of Dual-Site Atomically Dispersed Electrocatalysts with Ru ₅ Single Atoms and Ru ₄ Nanoclusters for Accelerated Alkali Hydrogen Evolution. <i>Small</i> , 2021, 17, e2101163.	5.2	71
14	Identification of activity trends for CO oxidation on supported transition-metal single-atom catalysts. <i>Catalysis Science and Technology</i> , 2017, 7, 5860-5871.	2.1	69
15	Growth of Highly Active Amorphous RuCu Nanosheets on Cu Nanotubes for the Hydrogen Evolution Reaction in Wide pH Values. <i>Small</i> , 2020, 16, e2000924.	5.2	69
16	Understanding the Mechanism of Photocatalysis Enhancements in the Graphene-like Semiconductor Sheet/TiO ₂ Composites. <i>Journal of Physical Chemistry C</i> , 2014, 118, 5954-5960.	1.5	65
17	Hydrogen Production via Efficient Formic Acid Decomposition: Engineering the Surface Structure of Pd-Based Alloy Catalysts by Design. <i>ACS Catalysis</i> , 2019, 9, 781-790.	5.5	62
18	Fine Tuning Electronic Structure of Catalysts through Atomic Engineering for Enhanced Hydrogen Evolution. <i>Advanced Energy Materials</i> , 2018, 8, 1800789.	10.2	59

#	ARTICLE	IF	CITATIONS
19	Component-dependent electrocatalytic activity of PdCu bimetallic nanoparticles for hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2017, 246, 572-579.	2.6	58
20	Design of high-performance MoS ₂ edge supported single-metal atom bifunctional catalysts for overall water splitting via a simple equation. <i>Nanoscale</i> , 2019, 11, 20228-20237.	2.8	57
21	Low Pt-Content Ternary PtNiCu Nanoparticles with Hollow Interiors and Accessible Surfaces as Enhanced Multifunctional Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 9600-9608.	4.0	54
22	Porous Co ₂ P nanowires as high efficient bifunctional catalysts for 4-nitrophenol reduction and sodium borohydride hydrolysis. <i>Journal of Colloid and Interface Science</i> , 2017, 507, 429-436.	5.0	51
23	Tailoring of Pd-Pt bimetallic clusters with high stability for oxygen reduction reaction. <i>Nanoscale</i> , 2012, 4, 2408.	2.8	47
24	Branch-leaf-shaped CuNi@NiFeCu nanodendrites as highly efficient electrocatalysts for overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120600.	10.8	47
25	SiH/TiO ₂ and GeH/TiO ₂ Heterojunctions: Promising TiO ₂ -based Photocatalysts under Visible Light. <i>Scientific Reports</i> , 2014, 4, 4810.	1.6	43
26	Enhanced photoelectrochemical performance of rutile TiO ₂ by Sb-N donor-acceptor coinorporation from first principles calculations. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	41
27	Growth of IrCu nanoislands with rich IrCu/Ir interfaces enables highly efficient overall water splitting in non-acidic electrolytes. <i>Chemical Engineering Journal</i> , 2021, 416, 129128.	6.6	41
28	From double-atom catalysts to single-cluster catalysts: A new frontier in heterogeneous catalysis. <i>Nano Select</i> , 2021, 2, 251-270.	1.9	40
29	Assessment of Catalytic Activities of Gold Nanoclusters with Simple Structure Descriptors. <i>ACS Catalysis</i> , 2018, 8, 9702-9710.	5.5	38
30	Structures of small Pd-Pt bimetallic clusters by Monte Carlo simulation. <i>Chemical Physics</i> , 2006, 330, 423-430.	0.9	37
31	One-pot synthesis of copper-nickel sulfide nanowires for overall water splitting in alkaline media. <i>Chemical Communications</i> , 2019, 55, 8154-8157.	2.2	34
32	Structural transition and melting of onion-ring Pd-Pt bimetallic clusters. <i>Chemical Physics Letters</i> , 2008, 461, 71-76.	1.2	33
33	Tuning the catalytic activity of Au-Pd nanoalloys in CO oxidation via composition. <i>Journal of Catalysis</i> , 2014, 314, 47-55.	3.1	33
34	Biomass-derived porous carbon supported Co CoO yolk-shell nanoparticles as enhanced multifunctional electrocatalysts. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 6525-6534.	3.8	33
35	Solid-State Synthesis of Highly Dispersed Nitrogen-Coordinated Single Iron Atom Electrocatalysts for Proton Exchange Membrane Fuel Cells. <i>Nano Letters</i> , 2021, 21, 3633-3639.	4.5	32
36	Understanding the structural properties and thermal stabilities of Au-Pd-Pt trimetallic clusters. <i>Chemical Physics</i> , 2014, 441, 152-158.	0.9	30

#	ARTICLE	IF	CITATIONS
37	Structures, Thermal Stability, and Chemical Activity of Crown-Jewel-Structured Pd–Pt Nanoalloys. <i>Journal of Physical Chemistry C</i> , 2015, 119, 10888-10895.	1.5	29
38	Role of Composition and Geometric Relaxation in CO ₂ Binding to Cu–Ni Bimetallic Clusters. <i>Journal of Physical Chemistry C</i> , 2014, 118, 250-258.	1.5	26
39	Theoretical study of CO catalytic oxidation on free and defective graphene-supported Au–Pd bimetallic clusters. <i>RSC Advances</i> , 2014, 4, 42554-42561.	1.7	26
40	Modification of the adsorption properties of O and OH on Pt–Ni bimetallic surfaces by subsurface alloying. <i>Electrochimica Acta</i> , 2012, 76, 440-445.	2.6	25
41	Revisit the Role of Metal Dopants in Enhancing the Selectivity of Ag-Catalyzed Ethylene Epoxidation: Optimizing Oxophilicity of Reaction Site via Cocatalytic Mechanism. <i>ACS Catalysis</i> , 2021, 11, 3371-3383.	5.5	25
42	From mixed to three-layer core/shell PtCu nanoparticles: ligand-induced surface segregation to enhance electrocatalytic activity. <i>Nanoscale</i> , 2017, 9, 8945-8951.	2.8	24
43	Origin of enhanced ethylene oxide selectivity by Cs-promoted silver catalyst. <i>Molecular Catalysis</i> , 2017, 441, 92-99.	1.0	24
44	Mechanistic insight into the facet-dependent selectivity of ethylene epoxidation on Ag nanocatalysts. <i>Applied Catalysis A: General</i> , 2017, 538, 27-36.	2.2	22
45	Origin of Enhanced Activities for CO Oxidation and O ₂ Reaction over Composition-Optimized Pd ₅₀ Cu ₅₀ Nanoalloy Catalysts. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11010-11020.	1.5	22
46	Enhancement Mechanism of the Conversion Efficiency of Dye-Sensitized Solar Cells Based on Nitrogen-, Fluorine-, and Iodine-Doped TiO ₂ Photoanodes. <i>Journal of Physical Chemistry C</i> , 2015, 119, 13425-13432.	1.5	21
47	Hydrogen evolution reaction (HER) on Au@Ag ultrananostructures as electro-catalysts. <i>Nanoscale</i> , 2018, 10, 17730-17737.	2.8	21
48	Oxygen-Reconstituted Active Species of Single-Atom Cu Catalysts for Oxygen Reduction Reaction. <i>Research</i> , 2020, 2020, 7593023.	2.8	21
49	Carbon-based material-supported single-atom catalysts for energy conversion. <i>IScience</i> , 2022, 25, 104367.	1.9	20
50	Structure, chemical ordering and thermal stability of Pt–Ni alloy nanoclusters. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 355008.	0.7	19
51	Shape-controlled Synthesis of PdCu Nanocrystals for Formic Acid Oxidation. <i>Chemistry Letters</i> , 2015, 44, 1101-1103.	0.7	19
52	PtCoNi Alloy Nanoclusters for Synergistic Catalytic Oxygen Reduction Reaction. <i>ACS Applied Nano Materials</i> , 2020, 3, 2536-2544.	2.4	18
53	Hydrogen generation from formic acid decomposition on Pd–Cu nanoalloys. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 24098-24109.	3.8	17
54	PdCu alloy nanoparticle-decorated copper nanotubes as enhanced electrocatalysts: DFT prediction validated by experiment. <i>Nanotechnology</i> , 2016, 27, 495403.	1.3	16

#	ARTICLE	IF	CITATIONS
55	Phase diagram and segregation of Ag–Co nanoalloys: insights from theory and simulation. <i>Nanotechnology</i> , 2016, 27, 115702.	1.3	15
56	Phase stability and segregation behavior of nickel-based nanoalloys based on theory and simulation. <i>Journal of Alloys and Compounds</i> , 2017, 708, 1150-1160.	2.8	15
57	Designing transition metal and nitrogen-codoped SrTiO ₃ (001) perovskite surfaces as efficient photocatalysts for water splitting. <i>Sustainable Energy and Fuels</i> , 2017, 1, 1968-1980.	2.5	15
58	Effect of Rhenium Loading Sequence on Selectivity of Ag–Cs Catalyst for Ethylene Epoxidation. <i>Catalysis Letters</i> , 2017, 147, 2920-2928.	1.4	14
59	Enhanced oxygen reduction activity of PtCu nanoparticles by morphology tuning and transition-metal doping. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 4427-4434.	3.8	14
60	Ni (111)-supported graphene as a potential catalyst for high-efficient CO oxidation. <i>Carbon</i> , 2017, 116, 201-209.	5.4	13
61	Enhanced Ethylene Oxide Selectivity by Cu and Re Dual-Promoted Ag Catalysts. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 4180-4185.	1.8	13
62	Individual Component Map of Rotatory Strength and Rotatory Strength Density Plots As Analysis Tools of Circular Dichroism Spectra of Complex Systems. <i>Journal of Chemical Theory and Computation</i> , 2018, 14, 3703-3714.	2.3	13
63	Understanding Hygroscopic Nucleation of Sulfate Aerosols: Combination of Molecular Dynamics Simulation with Classical Nucleation Theory. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 1126-1132.	2.1	13
64	Melting phenomena: effect of composition for 55-atom Ag–Pd bimetallic clusters. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 2513.	1.3	12
65	Revisit the Role of Chlorine in Selectivity Enhancement of Ethylene Epoxidation. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 21403-21412.	1.8	11
66	Identification of the anti-triangular etched MoS ₂ with comparative activity with commercial Pt for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 33457-33465.	3.8	11
67	Review on Synthesis and Catalytic Coupling Mechanism of Highly Active Electrocatalysts for Water Splitting. <i>Energy Technology</i> , 2021, 9, 2000855.	1.8	11
68	Bandgap engineering of Magnéli phase Ti _n O _{2n-1} : Electron-hole self-compensation. <i>Journal of Chemical Physics</i> , 2015, 143, 054701.	1.2	10
69	Morphology Tailoring of Pt Nanocatalysts for the Oxygen Reduction Reaction: The Paradigm of Pt ₁₃ . <i>ChemNanoMat</i> , 2015, 1, 482-488.	1.5	10
70	Composition-controlled Synthesis of PtCuNPs Shells on Copper Nanowires as Electrocatalysts. <i>ChemistrySelect</i> , 2016, 1, 4392-4396.	0.7	10
71	Giant enhancement and anomalous temperature dependence of magnetism in monodispersed NiPt ₂ nanoparticles. <i>Nano Research</i> , 2017, 10, 3238-3247.	5.8	10
72	The Size Effect of PdCu Bimetallic Nanoparticles on Oxygen Reduction Reaction Activity. <i>ChemElectroChem</i> , 2018, 5, 2571-2576.	1.7	10

#	ARTICLE	IF	CITATIONS
73	Structure-controlled synthesis of one-dimensional PdCu nanocatalysts via a seed-mediated approach for oxygen reduction reaction. <i>Applied Surface Science</i> , 2019, 493, 139-145.	3.1	10
74	Design of High-Performance Co-Based Alloy Nanocatalysts for the Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2020, 26, 4128-4135.	1.7	10
75	One-step synthesis of atomic Ru doped ultra-thin Co(OH) ₂ nanosheets for oxygen evolution reaction in different pH values. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 22832-22841.	3.8	10
76	Concerted Catalysis on Tanghulu-like Cu@Zeolitic Imidazolate Framework-8 (ZIF-8) Nanowires with Tuning Catalytic Performances for 4-nitrophenol Reduction. <i>Engineered Science</i> , 2018, , .	1.2	10
77	Design of binary and ternary platinum shelled electrocatalysts with inexpensive metals for the oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 13014-13023.	3.8	9
78	Promoter role of tungsten in W-Pd/Al ₂ O ₃ catalyst for direct synthesis of H ₂ O ₂ : Modification of Pd/PdO ratio. <i>Applied Catalysis A: General</i> , 2021, 628, 118392.	2.2	9
79	CO oxidation mechanism on a MgO(1 0 0) supported Pt x Au 3âˆ™x clusters. <i>Applied Surface Science</i> , 2015, 356, 282-288.	3.1	8
80	Design of Single Atom Catalysts. <i>Advances in Physics: X</i> , 2021, 6, .	1.5	8
81	Constructing La-doped ultrathin Co-based nanostructured electrocatalysts for high-performance water oxidation process. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 14504-14514.	3.8	7
82	Origin of enhanced stability and oxygen adsorption capacity of medium-sized Ptâ€“Ni nanoclusters. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 285503.	0.7	6
83	Selectivity-Driven Design of the Agâ€“Cu Alloys for the Ethylene Epoxidation. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 12996-13006.	1.8	5
84	Theoretical Study on the Structural, Thermal and Phase Stability of Ptâ€“Cu Alloy Clusters. <i>Journal of Cluster Science</i> , 2020, 31, 615-626.	1.7	5
85	Synergy in Auâˆ™CuO Janus Structure for Catalytic Isopropanol Oxidative Dehydrogenation to Acetone. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	5
86	Facet-dependent diffusion of atomic oxygen on Ag surfaces. <i>Computational Materials Science</i> , 2018, 155, 17-27.	1.4	4
87	Universal description of heating-induced reshaping preference of coreâ€“shell bimetallic nanoparticles. <i>Nanoscale</i> , 2019, 11, 1386-1395.	2.8	4
88	DFT Study of Pyrolysis Gasoline Hydrogenation on Pd(100), Pd(110) and Pd(111) Surfaces. <i>Catalysis Letters</i> , 2019, 149, 2226-2233.	1.4	3
89	Hydrogenase-Like Electrocatalytic Activation and Inactivation Mechanism by Three-Dimensional Binderless Molecular Catalyst. <i>ACS Applied Energy Materials</i> , 2019, 2, 3352-3362.	2.5	3
90	Effect of Size and Composition on the Structural Stability of Ptâ€“Ni Nanoalloys. <i>Journal of Cluster Science</i> , 2020, 31, 609-614.	1.7	2

#	ARTICLE	IF	CITATIONS
91	Magnetism in bimetallic Pt _x Ni _{1-x} clusters via cross-atomic coupling. Journal of Materials Chemistry C, 2019, 7, 9293-9300.	2.7	1