

Metal Catalysts for Heterogeneous Catalysis: From Single Nanoparticles

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Citation Report

#	ARTICLE	IF	CITATIONS
2	Die facettenreiche Reaktivit�t heterogener Einzelatom-Katalysatoren. <i>Angewandte Chemie</i> , 2018, 130, 15538-15552.	2.0	36
3	Atomically dispersed gold-supported catalysts: preparation and potential for low-temperature CO oxidation. <i>Materials Today Nano</i> , 2018, 4, 54-69.	4.6	7
4	Stabilization of noble metal nanostructures for catalysis and sensing. <i>Nanoscale</i> , 2018, 10, 20492-20504.	5.6	36
5	Shape selection through epitaxy of supported platinum nanocrystals. <i>Nanoscale</i> , 2018, 10, 22730-22736.	5.6	6
6	Bioinspired interconnected hydrogel capsules for enhanced catalysis. <i>RSC Advances</i> , 2018, 8, 37050-37056.	3.6	1
7	Hidden Resources of Coordinated XPS and DFT Studies. , 0, , .		0
8	Nucleation of Cu _n (<i>n</i> = 1-5) Clusters and Equilibrium Morphology of Cu Particles Supported on CeO ₂ Surface: A Density Functional Theory Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 27402-27411.	3.1	15
9	Confined Pt ₁ Water Clusters in a MOF Catalyze the Low-Temperature Water-Gas Shift Reaction with both CO ₂ Oxygen Atoms Coming from Water. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 17094-17099.	13.8	54
10	Confined Pt ₁ Water Clusters in a MOF Catalyze the Low-Temperature Water-Gas Shift Reaction with both CO ₂ Oxygen Atoms Coming from Water. <i>Angewandte Chemie</i> , 2018, 130, 17340-17345.	2.0	4
11	Ru/Al ₂ O ₃ catalyzed CO ₂ hydrogenation: Oxygen-exchange on metal-support interfaces. <i>Journal of Catalysis</i> , 2018, 367, 194-205.	6.2	74
12	Case Studies in Nanocluster Synthesis and Characterization: Challenges and Opportunities. <i>Accounts of Chemical Research</i> , 2018, 51, 2456-2464.	15.6	104
13	Alkynyl Approach toward the Protection of Metal Nanoclusters. <i>Accounts of Chemical Research</i> , 2018, 51, 2465-2474.	15.6	384
14	Synergy between Defects, Photoexcited Electrons, and Supported Single Atom Catalysts for CO ₂ Reduction. <i>ACS Catalysis</i> , 2018, 8, 10464-10478.	11.2	85
15	Solventless Olefin Epoxidation Using a Mo-Loaded Sisal Derived Acid-Char Catalyst. <i>ChemistrySelect</i> , 2018, 3, 10357-10363.	1.5	3
16	Defects on carbons for electrocatalytic oxygen reduction. <i>Chemical Society Reviews</i> , 2018, 47, 7628-7658.	38.1	432
17	Formation of hierarchically-ordered nanoporous silver foam and its electrocatalytic properties in reductive dehalogenation of organic compounds. <i>New Journal of Chemistry</i> , 2018, 42, 17499-17512.	2.8	6
18	Ethene Dimerization and Hydrogenation over a Zeolite-Supported Rh(I)-Carbonyl Complex: Mechanistic Insights from DFT Modeling. <i>ACS Catalysis</i> , 2018, 8, 9836-9846.	11.2	14
19	Sulfuration of an Fe-N-C Catalyst Containing Fe _x C/Fe Species to Enhance the Catalysis of Oxygen Reduction in Acidic Media and for Use in Flexible Zn-Air Batteries. <i>Advanced Materials</i> , 2018, 30, e1804504.	21.0	269

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20	Encapsulation of Metal Nanoparticle Catalysts Within Mesoporous Zeolites and Their Enhanced Catalytic Performances: A Review. <i>Frontiers in Chemistry</i> , 2018, 6, 550.	3.6	74
21	The Multifaceted Reactivity of Single-Atom Heterogeneous Catalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 15316-15329.	13.8	261
22	Semireduction of Alkynes Using Formic Acid with Reusable Pd-Catalysts. <i>Journal of Organic Chemistry</i> , 2018, 83, 13574-13579.	3.2	16
23	Achieving Atomic Dispersion of Highly Loaded Transition Metals in Small-Pore Zeolite SSZ-13: High-Capacity and High-Efficiency Low-Temperature CO and Passive NO _x Adsorbers. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 16672-16677.	13.8	129
24	Quantifying Support Interactions and Reactivity Trends of Single Metal Atom Catalysts over TiO ₂ . <i>Journal of Physical Chemistry C</i> , 2018, 122, 25274-25289.	3.1	31
25	Achieving Atomic Dispersion of Highly Loaded Transition Metals in Small-Pore Zeolite SSZ-13: High-Capacity and High-Efficiency Low-Temperature CO and Passive NO _x Adsorbers. <i>Angewandte Chemie</i> , 2018, 130, 16914-16919.	2.0	34
26	Recent Developments on Supported Hydrogen-Bond Organocatalysts. <i>ChemCatChem</i> , 2018, 10, 5554-5572.	3.7	24
27	Donor/Acceptor Concepts for Developing Efficient Suzuki Cross-Coupling Catalysts Using Graphene-Supported Ni, Cu, Fe, Pd, and Bimetallic Pd/Ni Clusters. <i>Journal of Physical Chemistry C</i> , 2018, 122, 25396-25403.	3.1	37
28	Ligand Migration from Cluster to Support: A Crucial Factor for Catalysis by Thiolate-Protected Gold Clusters. <i>ChemCatChem</i> , 2018, 10, 5372-5376.	3.7	44
29	A robust iron catalyst for the selective hydrogenation of substituted (iso)quinolones. <i>Chemical Science</i> , 2018, 9, 8134-8141.	7.4	63
30	Structure-, dimension-, and particle size-engineering toward highly efficient supported nanoparticulate metal catalysts. <i>Journal of Materials Chemistry A</i> , 2018, 6, 18561-18570.	10.3	11
31	Functionalised heterogeneous catalysts for sustainable biomass valorisation. <i>Chemical Society Reviews</i> , 2018, 47, 8349-8402.	38.1	493
32	Facile fabrication of Cu-based alloy nanoparticles encapsulated within hollow octahedral N-doped porous carbon for selective oxidation of hydrocarbons. <i>Chemical Science</i> , 2018, 9, 8703-8710.	7.4	35
33	Scalable Solid-State Synthesis of Highly Dispersed Uncapped Metal (Rh, Ru, Ir) Nanoparticles for Efficient Hydrogen Evolution. <i>Advanced Energy Materials</i> , 2018, 8, 1801698.	19.5	149
34	Composition Dependence of Ethanol Oxidation at Ruthenium-Tin Oxide/Carbon Supported Platinum Catalysts. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3019-J3025.	2.9	11
35	Iodide-induced differential control of metal ion reduction rates: synthesis of terraced palladium-copper nanoparticles with dilute bimetallic surfaces. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22179-22188.	10.3	17
36	Combining active phase and support optimization in MnO ₂ -Au nanoflowers: Enabling high activities towards green oxidations. <i>Journal of Colloid and Interface Science</i> , 2018, 530, 282-291.	9.4	32
37	Accelerated active phase transformation of NiO powered by Pt single atoms for enhanced oxygen evolution reaction. <i>Chemical Science</i> , 2018, 9, 6803-6812.	7.4	96

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38	On the feasibility of the bottom-up synthesis of Mg ₂ CoH ₅ nanoparticles supported on a porous carbon and their hydrogen desorption behaviour. <i>Nano Structures Nano Objects</i> , 2018, 16, 144-150.	3.5	8
39	Single-Atom Catalysts: Synthetic Strategies and Electrochemical Applications. <i>Joule</i> , 2018, 2, 1242-1264.	24.0	1,618
40	Engineering Functional Metal Materials at the Atomic Level. <i>Advanced Materials</i> , 2018, 30, e1802751.	21.0	170
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42	Single-Site Heterogeneous Catalysts: From Synthesis to NMR Signal Enhancement. <i>Chemistry - A European Journal</i> , 2019, 25, 1420-1431.	3.3	27
43	Oxide-Supported Gold Clusters and Nanoparticles in Catalysis: A Computational Chemistry Perspective. <i>ChemCatChem</i> , 2019, 11, 73-89.	3.7	37
44	New monatomic layer clusters for advanced catalysis materials. <i>Science China Materials</i> , 2019, 62, 149-153.	6.3	12
45	Synergistic Effects of ppm Levels of Palladium on Natural Clinoclone for Reduction of Nitroarenes. <i>ChemSusChem</i> , 2019, 12, 4240-4248.	6.8	22
46	Tuning the interfaces in the ruthenium-nickel/carbon nanocatalysts for enhancing catalytic hydrogenation performance. <i>Journal of Catalysis</i> , 2019, 377, 299-308.	6.2	40
47	NiFePd/UiO-66 nanocomposites as highly efficient catalysts to accelerate hydrogen evolution from hydrous hydrazine. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 2727-2735.	6.0	21
48	Reaction mechanisms at the homogeneous-heterogeneous frontier: insights from first-principles studies on ligand-decorated metal nanoparticles. <i>Catalysis Science and Technology</i> , 2019, 9, 5173-5185.	4.1	33
49	Uniform Ru nanoparticles on N-doped graphene for selective hydrogenation of fatty acids to alcohols. <i>Journal of Catalysis</i> , 2019, 377, 429-437.	6.2	55
50	Remarkable Effect of Jacalin in Diminishing the Protein Corona Interference in the Antibacterial Activity of Pectin-Capped Copper Sulfide Nanoparticles. <i>ACS Omega</i> , 2019, 4, 14049-14056.	3.5	25
51	Synergic Catalysts of Polyoxometalate@Cationic Porous Aromatic Frameworks: Reciprocal Modulation of Both Capture and Conversion Materials. <i>Advanced Materials</i> , 2019, 31, e1902444.	21.0	65
52	Cascade aldol condensation of an aldehyde via the aerobic oxidation of ethanol over an Au/NiO composite. <i>Nanoscale Advances</i> , 2019, 1, 3654-3659.	4.6	14
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54	Construction of stabilized bulk-nano interfaces for highly promoted inverse CeO ₂ /Cu catalyst. <i>Nature Communications</i> , 2019, 10, 3470.	12.8	59
55	A nickel-iridium alloy as an efficient heterogeneous catalyst for hydrogenation of olefins. <i>Chemical Communications</i> , 2019, 55, 10519-10522.	4.1	15

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56	Enantioselective hydrogenation of α,β -ketoesters catalyzed by cinchona alkaloid stabilized Rh nanoparticles in ionic liquid. <i>Chirality</i> , 2019, 31, 818-823.	2.6	2
57	Theoretical insights into selective electrochemical conversion of carbon dioxide. <i>Nano Convergence</i> , 2019, 6, 8.	12.1	22
58	ZSM-5 Microspheres Consisting of Nanocrystals for Preparing Highly Dispersed MoP Clusters with Good Activity in Phenanthrene Hydrogenation. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 17289-17299.	3.7	7
59	Isolating contiguous Pt atoms and forming Pt-Zn intermetallic nanoparticles to regulate selectivity in 4-nitrophenylacetylene hydrogenation. <i>Nature Communications</i> , 2019, 10, 3787.	12.8	119
60	Surpassing the single-atom catalytic activity limit through paired Pt-O-Pt ensemble built from isolated Pt1 atoms. <i>Nature Communications</i> , 2019, 10, 3808.	12.8	225
61	Stable Multimetallic Nanoparticles for Oxygen Electrocatalysis. <i>Nano Letters</i> , 2019, 19, 5149-5158.	9.1	94
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66	Understanding Heterolytic H ₂ Cleavage and Water-Assisted Hydrogen Spillover on Fe ₃ O ₄ (001)-Supported Single Palladium Atoms. <i>ACS Catalysis</i> , 2019, 9, 7876-7887.	11.2	63
67	On the catalytic transfer hydrogenation of nitroarenes by a cubane-type Mo ₃ S ₄ cluster hydride: disentangling the nature of the reaction mechanism. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 17221-17231.	2.8	6
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70	Atomically dispersed metal catalysts for the oxygen reduction reaction: synthesis, characterization, reaction mechanisms and electrochemical energy applications. <i>Energy and Environmental Science</i> , 2019, 12, 2890-2923.	30.8	317
71	Controllable synthesis of mussel-inspired catechol-formaldehyde resin microspheres and their silver-based nanohybrids for catalytic and antibacterial applications. <i>Polymer Chemistry</i> , 2019, 10, 4537-4550.	3.9	25
72	From agriculture residue to catalyst support; A green and sustainable cellulose-based dip catalyst for C-C coupling and direct arylation. <i>Carbohydrate Polymers</i> , 2019, 223, 115060.	10.2	41
73	Hydrodeoxygenation of phenol over Ni-based bimetallic single-atom surface alloys: mechanism, kinetics and descriptor. <i>Catalysis Science and Technology</i> , 2019, 9, 4314-4326.	4.1	65

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74	Transition Metal-Functionalized Janus MoSSe Monolayer: A Magnetic and Efficient Single-Atom Photocatalyst for Water-Splitting Applications. <i>Journal of Physical Chemistry C</i> , 2019, 123, 18347-18354.	3.1	46
75	Statistical Analysis and Discovery of Heterogeneous Catalysts Based on Machine Learning from Diverse Published Data. <i>ChemCatChem</i> , 2019, 11, 4537-4547.	3.7	54
76	Synthesis of mesoporous Fe/h-CeO ₂ hollow micro-spheres with enhanced visible light photocatalytic activity. <i>Materials Research Express</i> , 2019, 6, 095516.	1.6	5
77	Nanocatalytic Medicine. <i>Advanced Materials</i> , 2019, 31, e1901778.	21.0	396
78	Catalytic consequences of ultrafine Pt clusters supported on SrTiO ₃ for photocatalytic overall water splitting. <i>Journal of Catalysis</i> , 2019, 376, 180-190.	6.2	67
79	Introduction to Single-Atom Catalysis. , 2019, , 1-20.		7
80	Microenvironment Engineering of Ruthenium Nanoparticles Incorporated into Silica Nanoreactors for Enhanced Hydrogenations. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 14483-14488.	13.8	71
81	Highly Dispersed Single-Atom Pt and Pt Clusters in the Fe-Modified KL Zeolite with Enhanced Selectivity for <i>n</i> -Heptane Aromatization. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 29858-29867.	8.0	49
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86	Ru subnanoparticles on N-doped carbon layer coated SBA-15 as efficient Catalysts for arene hydrogenation. <i>Applied Catalysis A: General</i> , 2019, 585, 117183.	4.3	21
87	Photoresponses of Supported Au Single Atoms on TiO ₂ (110) through the Metal-Induced Gap States. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 4683-4691.	4.6	18
88	Atomically Dispersed Reduced Graphene Aerogel-Supported Iridium Catalyst with an Iridium Loading of 14.8 wt %. <i>ACS Catalysis</i> , 2019, 9, 9905-9913.	11.2	55
89	Metal-organic framework encapsulated single-atom Pt catalysts for efficient photocatalytic hydrogen evolution. <i>Journal of Catalysis</i> , 2019, 375, 351-360.	6.2	86
90	The reactivity of CO on bimetallic Ni ₃ M clusters (M = Sc, Ti, V, Cr, Mn, Fe, Co, Cu, Rh, Ru, Ag, Pd and Pt) by density functional theory. <i>New Journal of Chemistry</i> , 2019, 43, 11363-11373.	2.8	3
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93	Regioselective generation and reactivity control of subnanometric platinum clusters in zeolites for high-temperature catalysis. <i>Nature Materials</i> , 2019, 18, 866-873.	27.5	339
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96	Supported Noble-Metal Single Atoms for Heterogeneous Catalysis. <i>Advanced Materials</i> , 2019, 31, e1902031.	21.0	207
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99	Oxygenation of Styrenes Catalyzed by N-Doped Carbon Incarcerated Cobalt Nanoparticles. <i>Bulletin of the Chemical Society of Japan</i> , 2019, 92, 1980-1985.	3.2	15
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105	Reduction of N ₂ O by H ₂ Catalyzed by Keggin-Type Phosphotungstic Acid Supported Single-Atom Catalysts: An Insight from Density Functional Theory Calculations. <i>Environmental Science & Technology</i> , 2019, 53, 12893-12903.	10.0	21
106	Tuning the Electrocatalytic Activity of Co ₃ O ₄ through Discrete Elemental Doping. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 39706-39714.	8.0	21
107	Metal-organic framework derived Pd/ZrO ₂ @CN as a stable catalyst for the catalytic hydrogenation of 2,3,5-trimethylbenzoquinone. <i>Applied Organometallic Chemistry</i> , 2019, 33, e5233.	3.5	13
108	Ultrafine Ag Nanoparticles as Active Catalyst for Electrocatalytic Hydrogen Production. <i>ChemCatChem</i> , 2019, 11, 5976-5981.	3.7	21
109	Selective C(sp ²)-H Amination Catalyzed by High-Valent Cobalt(III)/(IV)-by Complex Immobilized on Silica Nanoparticles. <i>ChemCatChem</i> , 2019, 11, 5615-5624.	3.7	10

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111	Rapid, High-Temperature, In Situ Microwave Synthesis of Bulk Nanocatalysts. <i>Small</i> , 2019, 15, e1904881.	10.0	28
112	Emissions Control Catalysis. <i>Catalysts</i> , 2019, 9, 912.	3.5	3
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115	Ligand-Mediated Nanocluster Formation with Classical and Autocatalytic Growth. <i>Journal of Physical Chemistry C</i> , 2019, 123, 29954-29963.	3.1	6
116	Cyclodextrin polymer networks decorated with subnanometer metal nanoparticles for high-performance low-temperature catalysis. <i>Science Advances</i> , 2019, 5, eaax6976.	10.3	35
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125	Zeolite-Encaged Single-Atom Rhodium Catalysts: Highly Efficient Hydrogen Generation and Shape-Selective Tandem Hydrogenation of Nitroarenes. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 18570-18576.	13.8	281
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129	<i>In Situ</i> Observation of Nanoparticle Exsolution from Perovskite Oxides: From Atomic Scale Mechanistic Insight to Nanostructure Tailoring. ACS Nano, 2019, 13, 12996-13005.	14.6	144
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134	An Au ₂₂ (L ⁸) ₆ nanocluster with <i>in situ</i> uncoordinated Au as a highly active catalyst for O ₂ activation and CO oxidation. Physical Chemistry Chemical Physics, 2019, 21, 20144-20150.	2.8	11
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136	A Highly Selective Palladium-Catalyzed Aerobic Oxidative Aniline–Aniline Cross-Coupling Reaction. Organic Letters, 2019, 21, 7279-7283.	4.6	17
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