

Water-Mediated Mars–Van Krevelen Mechanism for Single-Atom Pt₁ Catalyst

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Atomically Dispersed Rhodium on Self-Assembled Phosphotungstic Acid: Structural Features and Catalytic CO Oxidation Properties. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 3578-3587.	1.8	75
2	Evaluating Solvent Effects at the Aqueous/Pt(111) Interface. <i>ChemPhysChem</i> , 2017, 18, 2171-2190.	1.0	53
3	Theoretical Investigations of Pt ₁ @CeO ₂ Single-Atom Catalyst for CO Oxidation. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11281-11289.	1.5	138
4	First-principles study of single transition metal atoms on ZnO for the water gas shift reaction. <i>Catalysis Science and Technology</i> , 2017, 7, 4294-4301.	2.1	27
5	CO Oxidation on Metal Oxide Supported Single Pt atoms: The Role of the Support. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 6916-6925.	1.8	94
6	K ₁ Mo ₃ P ₂ O ₁₄ as Support for Single-Atom Catalysts. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22895-22900.	1.5	12
7	Single atom catalyst by atomic layer deposition technique. <i>Chinese Journal of Catalysis</i> , 2017, 38, 1508-1514.	6.9	59
8	Promoting Effects of Hydrothermal Treatment on the Activity and Durability of Pd/CeO ₂ Catalysts for CO Oxidation. <i>ACS Catalysis</i> , 2017, 7, 7097-7105.	5.5	151
9	CO ₂ electroreduction performance of a single transition metal atom supported on porphyrin-like graphene: a computational study. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 23113-23121.	1.3	117
10	Activation of surface lattice oxygen in single-atom Pt/CeO ₂ for low-temperature CO oxidation. <i>Science</i> , 2017, 358, 1419-1423.	6.0	1,114
11	Portable device for generation of ultra-pure water vapor feeds. <i>Review of Scientific Instruments</i> , 2017, 88, 115102.	0.6	4
12	Pt-embedded-CeO ₂ hollow spheres for enhancing CO oxidation performance. <i>Materials Chemistry Frontiers</i> , 2017, 1, 1754-1763.	3.2	36
13	Designed Precursor for the Controlled Synthesis of Highly Active Atomic and Subnanometric Platinum Catalysts on Mesoporous Silica. <i>Chemistry - an Asian Journal</i> , 2018, 13, 1053-1059.	1.7	15
14	Metal Catalysts for Heterogeneous Catalysis: From Single Atoms to Nanoclusters and Nanoparticles. <i>Chemical Reviews</i> , 2018, 118, 4981-5079.	23.0	3,103
15	Single-atom catalysts and their applications in organic chemistry. <i>Journal of Materials Chemistry A</i> , 2018, 6, 8793-8814.	5.2	174
16	Evolution and stabilization of subnanometric metal species in confined space by in situ TEM. <i>Nature Communications</i> , 2018, 9, 574.	5.8	140
17	Intercalation of nanostructured CeO ₂ in MgAl ₂ O ₄ spinel illustrates the critical interaction between metal oxides and oxides. <i>Nanoscale</i> , 2018, 10, 3331-3341.	2.8	23
18	Strategies for Stabilizing Atomically Dispersed Metal Catalysts. <i>Small Methods</i> , 2018, 2, 1700286.	4.6	276

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19	Tunable Catalytic Performance of Single Pt Atom on Doped Graphene in Direct Dehydrogenation of Propane by Rational Doping: A Density Functional Theory Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 1570-1576.	1.5	52
20	Surface Immobilization of Transition Metal Ions on Nitrogen-Doped Graphene Realizing High-Efficient and Selective CO ₂ Reduction. <i>Advanced Materials</i> , 2018, 30, e1706617.	11.1	276
21	Aerobic Oxygenation of Alkylarenes over Ultrafine Transition-Metal-Containing Manganese-Based Oxides. <i>ChemCatChem</i> , 2018, 10, 1096-1106.	1.8	27
22	A systematic theoretical study on FeOx-supported single-atom catalysts: M1/FeOx for CO oxidation. <i>Nano Research</i> , 2018, 11, 1599-1611.	5.8	75
23	Single-Atom Catalysts of Precious Metals for Electrochemical Reactions. <i>ChemSusChem</i> , 2018, 11, 104-113.	3.6	218
24	Supported Single Atom and Pseudo-Single Atom of Metals as Sustainable Heterogeneous Nanocatalysts. <i>ChemCatChem</i> , 2018, 10, 881-906.	1.8	37
25	Supported single-atom catalysts: synthesis, characterization, properties, and applications. <i>Environmental Chemistry Letters</i> , 2018, 16, 477-505.	8.3	96
26	Die facettenreiche Reaktivität heterogener Einzelatom-Katalysatoren. <i>Angewandte Chemie</i> , 2018, 130, 15538-15552.	1.6	36
27	The Multifaceted Reactivity of Single-Atom Heterogeneous Catalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 15316-15329.	7.2	261
28	Correlating DFT Calculations with CO Oxidation Reactivity on Ga-Doped Pt/CeO ₂ Single-Atom Catalysts. <i>Journal of Physical Chemistry C</i> , 2018, 122, 22460-22468.	1.5	91
29	Single-atom catalysts by the atomic layer deposition technique. <i>National Science Review</i> , 2018, 5, 628-630.	4.6	75
30	TiC supported single-atom platinum catalyst for CO oxidation: A density functional theory study. <i>Applied Surface Science</i> , 2018, 453, 159-165.	3.1	15
31	Heterogeneous single-atom catalysis. <i>Nature Reviews Chemistry</i> , 2018, 2, 65-81.	13.8	2,728
32	Carbonate-mediated Mars-van Krevelen mechanism for CO oxidation on cobalt-doped ceria catalysts: facet-dependence and coordination-dependence. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16045-16059.	1.3	54
33	Thermal O-H Bond Activation of Water As Mediated by Heteronuclear [Al ₂ Mg ₂ O ₅] ⁺ : Evidence for Oxygen-Atom Scrambling. <i>Journal of the American Chemical Society</i> , 2018, 140, 9275-9281.	6.6	13
34	Phosphomolybdic acid supported single-metal-atom catalysis in CO oxidation: first-principles calculations. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 20661-20668.	1.3	34
35	Theoretical study of the single noble metal stabilized on metal oxide clusters catalyze the water-gas shift reaction. <i>International Journal of Quantum Chemistry</i> , 2018, 118, e25767.	1.0	6
36	Harnessing the Wisdom in Colloidal Chemistry to Make Stable Single-Atom Catalysts. <i>Advanced Materials</i> , 2018, 30, e1802304.	11.1	82

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37	Insight Observation of Simultaneously Enhanced CO Tolerance and Stability of Pt Electrocatalysts Decorated with Oxygen Vacancy Rich Cerium Oxide. <i>ChemElectroChem</i> , 2018, 5, 3236-3242.	1.7	3
38	Carbon-Supported Single Atom Catalysts for Electrochemical Energy Conversion and Storage. <i>Advanced Materials</i> , 2018, 30, e1801995.	11.1	479
39	Isolated Platinum Atoms Stabilized by Amorphous Tungstenic Acid: Metal-Support Interaction for Synergistic Oxygen Activation. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 9351-9356.	7.2	80
40	Isolated Platinum Atoms Stabilized by Amorphous Tungstenic Acid: Metal-Support Interaction for Synergistic Oxygen Activation. <i>Angewandte Chemie</i> , 2018, 130, 9495-9500.	1.6	7
41	Bridging homogeneous and heterogeneous catalysis by heterogeneous single-metal-site catalysts. <i>Nature Catalysis</i> , 2018, 1, 385-397.	16.1	725
42	On the role of water in selective hydrogenation of cinnamaldehyde to cinnamyl alcohol on PtFe catalysts. <i>Journal of Catalysis</i> , 2018, 364, 192-203.	3.1	87
43	Low content of CoOx supported on nanocrystalline CeO ₂ for toluene combustion: The importance of interfaces between active sites and supports. <i>Applied Catalysis B: Environmental</i> , 2019, 240, 329-336.	10.8	124
44	Large-Pore Mesoporous CeO ₂ -ZrO ₂ Solid Solutions with In-Pore Confined Pt Nanoparticles for Enhanced CO Oxidation. <i>Small</i> , 2019, 15, e1903058.	5.2	43
45	Tailoring of the Proximity of Platinum Single Atoms on CeO ₂ Using Phosphorus Boosts the Hydrogenation Activity. <i>ACS Catalysis</i> , 2019, 9, 8404-8412.	5.5	95
46	Surpassing the single-atom catalytic activity limit through paired Pt-O-Pt ensemble built from isolated Pt ₁ atoms. <i>Nature Communications</i> , 2019, 10, 3808.	5.8	225
47	Towards dense single-atom catalysts for future automotive applications. <i>Nature Catalysis</i> , 2019, 2, 590-602.	16.1	300
48	Formation of Pt ₃ O ₄ particles on PtO ₂ -CeO ₂ solid solution. <i>Journal of Physics and Chemistry of Solids</i> , 2019, 135, 109097.	1.9	9
49	The effect of the oxidation states of supported oxides on catalytic activity: CO oxidation studies on Pt/cobalt oxide. <i>Chemical Communications</i> , 2019, 55, 9503-9506.	2.2	28
50	Introduction to Single-Atom Catalysis. , 2019, , 1-20.		7
51	Supported Noble-Metal Single Atoms for Heterogeneous Catalysis. <i>Advanced Materials</i> , 2019, 31, e1902031.	11.1	207
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53	Directed Self-Assembly of MOF-Derived Nanoparticles toward Hierarchical Structures for Enhanced Catalytic Activity in CO Oxidation. <i>Advanced Energy Materials</i> , 2019, 9, 1901754.	10.2	30
54	Superior activity of Rh ₁ /ZnO single-atom catalyst for CO oxidation. <i>Chinese Journal of Catalysis</i> , 2019, 40, 1847-1853.	6.9	47

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55	A versatile approach for quantification of surface site fractions using reaction kinetics: The case of CO oxidation on supported Ir single atoms and nanoparticles. <i>Journal of Catalysis</i> , 2019, 378, 121-130.	3.1	49
56	Versatile Applications of Metal Single-Atom @ 2D Material Nanoplatfoms. <i>Advanced Science</i> , 2019, 6, 1901787.	5.6	128
57	Remarkable active-site dependent H ₂ O promoting effect in CO oxidation. <i>Nature Communications</i> , 2019, 10, 3824.	5.8	96
58	Single-Atom Catalysts: From Design to Application. <i>Electrochemical Energy Reviews</i> , 2019, 2, 539-573.	13.1	320
59	Highly Active and Stable Metal Single-Atom Catalysts Achieved by Strong Electronic Metal-Support Interactions. <i>Journal of the American Chemical Society</i> , 2019, 141, 14515-14519.	6.6	455
60	Nanozyme-Based Bandage with Single-Atom Catalysis for Brain Trauma. <i>ACS Nano</i> , 2019, 13, 11552-11560.	7.3	193
61	Promoting effect of H ₂ O over macroporous Ce-Zr catalysts in soot oxidation. <i>Molecular Catalysis</i> , 2019, 474, 110416.	1.0	9
62	Complete cleavage of the N≡N triple bond by Ta ₂ N ₂ via degenerate ligand exchange at ambient temperature: A perfect catalytic cycle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 21416-21420.	3.3	60
63	Single Metal Atom Photocatalysis. <i>Small Methods</i> , 2019, 3, 1800447.	4.6	140
64	Atomic (single, double, and triple atoms) catalysis: frontiers, opportunities, and challenges. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3492-3515.	5.2	252
65	Highlights of Major Progress on Single-Atom Catalysis in 2017. <i>Catalysts</i> , 2019, 9, 135.	1.6	23
66	Two-dimensional π-conjugated metal bis(dithiolene) nanosheets as promising electrocatalysts for carbon dioxide reduction: a computational study. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15341-15346.	5.2	40
67	Unravelling Platinum-Zirconia Interfacial Sites Using CO Adsorption. <i>Inorganic Chemistry</i> , 2019, 58, 8021-8029.	1.9	25
68	A review of heterogeneous catalysts for syngas production via dry reforming. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 101, 139-158.	2.7	87
69	In situ spectroscopy-guided engineering of rhodium single-atom catalysts for CO oxidation. <i>Nature Communications</i> , 2019, 10, 1330.	5.8	177
70	Tuning Pt-CeO ₂ interactions by high-temperature vapor-phase synthesis for improved reducibility of lattice oxygen. <i>Nature Communications</i> , 2019, 10, 1358.	5.8	302
71	Understanding the Impact of Defects on Catalytic CO Oxidation of LaFeO ₃ -Supported Rh, Pd, and Pt Single-Atom Catalysts. <i>Journal of Physical Chemistry C</i> , 2019, 123, 7290-7298.	1.5	36
72	Theoretical Approach To Predict the Stability of Supported Single-Atom Catalysts. <i>ACS Catalysis</i> , 2019, 9, 3289-3297.	5.5	101

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74	Insight of the stability and activity of platinum single atoms on ceria. <i>Nano Research</i> , 2019, 12, 1401-1409.	5.8	121
75	Improved NO \leftrightarrow CO reactivity of highly dispersed Pt particles on CeO ₂ nanorod catalysts prepared by atomic layer deposition. <i>Catalysis Science and Technology</i> , 2019, 9, 2664-2672.	2.1	34
76	Ultimate dispersion of metallic and ionic platinum on ceria. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13019-13028.	5.2	21
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78	Linear Activation Energy-Reaction Energy Relations for LaBO ₃ (B = Mn, Fe, Co, Ni) Supported Single-Atom Platinum Group Metal Catalysts for CO Oxidation. <i>Journal of Physical Chemistry C</i> , 2019, 123, 31130-31141.	1.5	12
79	The effect of oxygen vacancies and water on HCHO catalytic oxidation over Co ₃ O ₄ catalyst: A combination of density functional theory and microkinetic study. <i>Chemical Engineering Journal</i> , 2019, 355, 540-550.	6.6	69
80	Palladium nanoclusters immobilized on defective nanodiamond-graphene core-shell supports for semihydrogenation of phenylacetylene. <i>Journal of Energy Chemistry</i> , 2019, 33, 31-36.	7.1	20
81	Three-dimensionally ordered mesoporous iron oxide-supported single-atom platinum: Highly active catalysts for benzene combustion. <i>Applied Catalysis B: Environmental</i> , 2019, 244, 650-659.	10.8	159
82	CO oxidation over supported Pt/Cr _x Fe _{2-x} O ₃ catalysts and their good tolerance to CO ₂ and H ₂ O. <i>Applied Catalysis B: Environmental</i> , 2019, 245, 314-324.	10.8	30
83	Termination Effects of Pt/ γ -Ti _{1-x} C _x T ₂ MXene Surfaces for Oxygen Reduction Reaction Catalysis. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1638-1644.	4.0	88
84	Toward Understanding of the Support Effect on Pd ₁ Single-Atom-Catalyzed Hydrogenation Reactions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 7922-7930.	1.5	63
85	A new trick for an old support: Stabilizing gold single atoms on LaFeO ₃ perovskite. <i>Applied Catalysis B: Environmental</i> , 2020, 261, 118178.	10.8	31
86	Promotive effect of H ₂ O on low-temperature NO reduction by CO over Pd/La _{0.9} Ba _{0.1} AlO ₃ . <i>Catalysis Today</i> , 2020, 352, 192-197.	2.2	10
87	Photocatalytic CO ₂ reduction over platinum modified hexagonal tungsten oxide: Effects of platinum on forward and back reactions. <i>Applied Catalysis B: Environmental</i> , 2020, 263, 118331.	10.8	38
88	Surface engineering of nano-ceria facet dependent coupling effect on Pt nanocrystals for electro-catalysis of methanol oxidation reaction. <i>Chemical Engineering Journal</i> , 2020, 381, 122752.	6.6	88
89	High active platinum clusters on titanium dioxide supports toward carbon monoxide oxidation. <i>Applied Catalysis B: Environmental</i> , 2020, 266, 118629.	10.8	25
91	CO oxidation over Pt/Cr _{1.3} Fe _{0.7} O ₃ catalysts: Enhanced activity on single Pt atom by H ₂ O promotion. <i>Journal of Catalysis</i> , 2020, 382, 192-203.	3.1	41

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92	Effect of Hydrotalcites Interlayer Water on Pt-Catalyzed Aqueous-Phase Selective Hydrogenation of Cinnamaldehyde. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 2516-2524.	4.0	28
93	Metal single-atom coordinated graphitic carbon nitride as an efficient catalyst for CO oxidation. <i>Nanoscale</i> , 2020, 12, 364-371.	2.8	59
94	On the mechanism of H ₂ activation over single-atom catalyst: An understanding of Pt ₁ /WO ₃ in the hydrogenolysis reaction. <i>Chinese Journal of Catalysis</i> , 2020, 41, 524-532.	6.9	50
95	Well-Defined Materials for Heterogeneous Catalysis: From Nanoparticles to Isolated Single-Atom Sites. <i>Chemical Reviews</i> , 2020, 120, 623-682.	23.0	794
96	Cerium(III) Nitrate Derived CeO ₂ Support Stabilising PtO _x Active Species for Room Temperature CO Oxidation. <i>ChemCatChem</i> , 2020, 12, 1413-1428.	1.8	15
97	Uniformity Is Key in Defining Structure–Function Relationships for Atomically Dispersed Metal Catalysts: The Case of Pt/CeO ₂ . <i>Journal of the American Chemical Society</i> , 2020, 142, 169-184.	6.6	170
98	Facile CO Oxidation on Oxygen–functionalized MXenes via the Mars–van Krevelen Mechanism. <i>ChemCatChem</i> , 2020, 12, 1007-1012.	1.8	7
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100	Single-atom nanozymes for biological applications. <i>Biomaterials Science</i> , 2020, 8, 6428-6441.	2.6	62
101	Hydrogen Evolution Reaction over Single-Atom Catalysts Based on Metal Adatoms at Defected Graphene and h-BN. <i>Journal of Physical Chemistry C</i> , 2020, 124, 16860-16867.	1.5	32
102	Ligand Stabilized Ni ₁ Catalyst for Efficient CO Oxidation. <i>ChemPhysChem</i> , 2020, 21, 2417-2425.	1.0	4
103	Single-Site Heterogeneous Catalysts and Photocatalysts for Emerging Applications. <i>ACS Symposium Series</i> , 2020, , 151-188.	0.5	3
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105	Single-atom electron microscopy for energy-related nanomaterials. <i>Journal of Materials Chemistry A</i> , 2020, 8, 16142-16165.	5.2	20
106	Porous carbon as catalyst support for CO oxidation: Impact of nitrogen doping. <i>Carbon</i> , 2020, 169, 297-306.	5.4	19
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108	Surface Coordination Chemistry of Atomically Dispersed Metal Catalysts. <i>Chemical Reviews</i> , 2020, 120, 11810-11899.	23.0	325
109	Single-Atom Catalysts Based on the Metal–Oxide Interaction. <i>Chemical Reviews</i> , 2020, 120, 11986-12043.	23.0	486

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111	Recent advances in single-atom catalysts for CO oxidation. <i>Catalysis Reviews - Science and Engineering</i> , 2022, 64, 491-532.	5.7	35
112	Activation of subnanometric Pt on Cu-modified CeO ₂ via redox-coupled atomic layer deposition for CO oxidation. <i>Nature Communications</i> , 2020, 11, 4240.	5.8	101
113	Recent advances and strategies in the stabilization of single-atom catalysts for electrochemical applications. , 2020, 2, 488-520.		37
114	Spontaneous Formation of Asymmetric Oxygen Vacancies in Transition-Metal-Doped CeO ₂ Nanorods with Improved Activity for Carbonyl Sulfide Hydrolysis. <i>ACS Catalysis</i> , 2020, 10, 11739-11750.	5.5	140
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116	X-ray Absorption Spectroscopy: An Indispensable Tool to Study Single-Atom Catalysts. <i>Synchrotron Radiation News</i> , 2020, 33, 18-26.	0.2	7
117	Palladium Nanoparticles Supported on Surface-Modified Metal Oxides for Catalytic Oxidation of Lean Methane. <i>ACS Applied Nano Materials</i> , 2020, 3, 12130-12138.	2.4	27
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119	Excellent Catalytic Activity of a Pd-Promoted MnO _x Catalyst for Purifying Automotive Exhaust Gases. <i>ChemCatChem</i> , 2020, 12, 4276-4280.	1.8	11
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123	Single-Atom Catalysts for Electrocatalytic Applications. <i>Advanced Functional Materials</i> , 2020, 30, 2000768.	7.8	390
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140	Strong Metal-Support Interactions between Pt Single Atoms and TiO ₂ . Angewandte Chemie - International Edition, 2020, 59, 11824-11829.	7.2	309
141	Dual Metal Active Sites in an Ir ₁ /FeO _x Single-Atom Catalyst: A Redox Mechanism for the Water-Gas Shift Reaction. Angewandte Chemie - International Edition, 2020, 59, 12868-12875.	7.2	102
142	Local structure of Pt species dictates remarkable performance on Pt/Al ₂ O ₃ for preferential oxidation of CO in H ₂ . Applied Catalysis B: Environmental, 2021, 282, 119588.	10.8	41
143	Prediction and Tuning of the Defects in the Redox Catalysts: Ethylene Oxychlorination. ChemCatChem, 2021, 13, 221-226.	1.8	4
144	Prototype Atomically Dispersed Supported Metal Catalysts: Iridium and Platinum. Small, 2021, 17, e2004665.	5.2	27
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147	Ultra-small Noble Metal Ceria-based Catalytic Materials: From Synthesis to Application. European Journal of Inorganic Chemistry, 2021, 2021, 689-701.	1.0	6
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310	Surface and Interface Coordination Chemistry Learned from Model Heterogeneous Metal Nanocatalysts: From Atomically Dispersed Catalysts to Atomically Precise Clusters. <i>Chemical Reviews</i> , 2023, 123, 5948-6002.	23.0	50

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312	In situ diffraction monitoring of nanocrystals structure evolving during catalytic reaction at their surface. <i>Scientific Reports</i> , 2023, 13, .	1.6	3
313	Local chemical environment effect in single-atom catalysis. <i>Chem Catalysis</i> , 2023, 3, 100492.	2.9	8
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319	Fe ₃ O ₄ @MOF hybrid for supercilious recovery of Au(III) and Pd(II) from e-waste and spent as catalysts for cyclohexane oxidation. <i>Journal of Cleaner Production</i> , 2023, 404, 136966.	4.6	8
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326	Elucidation of single atom catalysts for energy and sustainable chemical production: Synthesis, characterization and frontier science. <i>Progress in Energy and Combustion Science</i> , 2023, 96, 101074.	15.8	13
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330	Theoretical exploration of Rh1/CeO ₂ catalysts with high performance using CO oxidation as a probe reaction. <i>Molecular Catalysis</i> , 2023, 541, 113077.	1.0	0
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