Chun-Ran Chang

List of Publications by Year
in descending order

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58 papers	6,624 citations	117625 34 h-index	144013 57 g-index
58 all docs	58 docs citations	58 times ranked	8296 citing authors

#	Article	IF	Citations
1	Design of N-Coordinated Dual-Metal Sites: A Stable and Active Pt-Free Catalyst for Acidic Oxygen Reduction Reaction. Journal of the American Chemical Society, 2017, 139, 17281-17284.	13.7	1,220
2	Engineering the electronic structure of single atom Ru sites via compressive strain boosts acidic water oxidation electrocatalysis. Nature Catalysis, 2019, 2, 304-313.	34.4	757
3	Mechanistic Insights on Ternary Ni_{2â^'}_xCo_xP for Hydrogen Evolution and Their Hybrids with Graphene as Highly Efficient and Robust Catalysts for Overall Water Splitting. Advanced Functional Materials, 2016, 26, 6785-6796.	14.9	500
4	Ultrathin rhodium nanosheets. Nature Communications, 2014, 5, 3093.	12.8	428
5	Single-atom Rh/N-doped carbon electrocatalyst for formic acid oxidation. Nature Nanotechnology, 2020, 15, 390-397.	31.5	420
6	High Catalytic Activity and Chemoselectivity of Sub-nanometric Pd Clusters on Porous Nanorods of CeO₂ for Hydrogenation of Nitroarenes. Journal of the American Chemical Society, 2016, 138, 2629-2637.	13.7	387
7	Solid frustrated-Lewis-pair catalysts constructed by regulations on surface defects of porous nanorods of CeO2. Nature Communications, 2017, 8, 15266.	12.8	272
8	Ethylene-glycol ligand environment facilitates highly efficient hydrogen evolution of Pt/CoP through proton concentration and hydrogen spillover. Energy and Environmental Science, 2019, 12, 2298-2304.	30.8	227
9	Modulating electronic structure of CoP electrocatalysts towards enhanced hydrogen evolution by Ce chemical doping in both acidic and basic media. Nano Energy, 2017, 38, 290-296.	16.0	212
10	Single Carbon Vacancy Traps Atomic Platinum for Hydrogen Evolution Catalysis. Journal of the American Chemical Society, 2022, 144, 2171-2178.	13.7	140
11	Understanding All-Solid Frustrated-Lewis-Pair Sites on CeO₂ from Theoretical Perspectives. ACS Catalysis, 2018, 8, 546-554.	11.2	135
12	Visible-Light-Activated Suzukiâ€“Miyaura Coupling Reactions of Aryl Chlorides over the Multifunctional Pd/Au/Porous Nanorods of CeO₂ Catalysts. ACS Catalysis, 2015, 5, 6481-6488.	11.2	126
13	A Water-Promoted Mechanism of Alcohol Oxidation on a Au(111) Surface: Understanding the Catalytic Behavior of Bulk Gold. ACS Catalysis, 2013, 3, 1693-1699.	11.2	118
14	Synergy of Pd atoms and oxygen vacancies on In2O3 for methane conversion under visible light. Nature Communications, 2022, 13, .	12.8	105
15	Semi-solid and solid frustrated Lewis pair catalysts. Chemical Society Reviews, 2018, 47, 5541-5553.	38.1	102
16	Theoretical investigations of the catalytic role of water in propene epoxidation on gold nanoclusters: A hydroperoxyl-mediated pathway. Nano Research, 2011, 4, 131-142.	10.4	98
17	Synergy of the catalytic activation on Ni and the CeO₂â€“TiO₂/Ce₂Ti₂O₇ stoichiometric redox cycle for dramatically enhanced solar fuel production. Energy and Environmental Science, 2019, 12, 767-779.	30.8	90
18	Single-Walled Carbon Nanotube Induced Optimized Electron Polarization of Rhodium Nanocrystals To Develop an Interface Catalyst for Highly Efficient Electrocatalysis. ACS Catalysis, 2018, 8, 8092-8099.	11.2	82

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19	Thermal behavior, specific heat capacity and adiabatic time-to-explosion of G(FOX-7). Journal of Hazardous Materials, 2008, 158, 333-339.	12.4	76
20	Mechanistic Insights into Propene Epoxidation with O₂â€“H₂O Mixture on Au₇/Î±-Al₂O₃: A Hydroproxyl Pathway from ab Initio Molecular Dynamics Simulations. ACS Catalysis, 2016, 6, 2525-2535.	11.2	70
21	Theoretical Studies on Gas-Phase Reactions of Sulfuric Acid Catalyzed Hydrolysis of Formaldehyde and Formaldehyde with Sulfuric Acid and H₂SO₄Â·Â·Â·H₂O Complex. Journal of Physical Chemistry A, 2013, 117, 5106-5116.	2.5	69
22	The promotional role of water in heterogeneous catalysis: mechanism insights from computational modeling. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2016, 6, 679-693.	14.6	58
23	Facet-dependent catalytic activities of Pd/rGO: Exploring dehydrogenation mechanism of dodecahydro-N-ethylcarbazole. Applied Catalysis B: Environmental, 2020, 266, 118658.	20.2	56
24	In situ encapsulation of iron(0) for solar thermochemical syngas production over iron-based perovskite material. Communications Chemistry, 2018, 1, .	4.5	55
25	Dynamic Frustrated Lewis Pairs on Ceria for Direct Nonoxidative Coupling of Methane. ACS Catalysis, 2019, 9, 5523-5536.	11.2	54
26	An oxygen vacancy-rich two-dimensional Au/TiO₂ hybrid for synergistically enhanced electrochemical N₂ activation and reduction. Journal of Materials Chemistry A, 2020, 8, 6586-6596.	10.3	54
27	Theoretical Studies on the Synergetic Effects of Auâ€“Pd Bimetallic Catalysts in the Selective Oxidation of Methanol. Journal of Physical Chemistry C, 2015, 119, 16072-16081.	3.1	45
28	Gallium nitride catalyzed the direct hydrogenation of carbon dioxide to dimethyl ether as primary product. Nature Communications, 2021, 12, 2305.	12.8	45
29	Unravelling the Enigma of Nonoxidative Conversion of Methane on Iron Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2020, 59, 18586-18590.	13.8	44
30	Trends in water-promoted oxygen dissociation on the transition metal surfaces from first principles. Physical Chemistry Chemical Physics, 2017, 19, 2364-2371.	2.8	39
31	Nitric acid catalyzed hydrolysis of SO3 in the formation of sulfuric acid: A theoretical study. Chemical Physics Letters, 2013, 581, 26-29.	2.6	37
32	A theoretical study on the catalytic role of water in methanol steam reforming on PdZn(111). Catalysis Science and Technology, 2015, 5, 2935-2944.	4.1	37
33	Boosting the thermal stability and catalytic performance by confining Ag single atom sites over antimony-doped tin oxide via atom trapping. Applied Catalysis B: Environmental, 2021, 283, 119625.	20.2	36
34	Hierarchically Hollow MnO₂@CeO₂ Heterostructures for NO Oxidation: Remarkably Promoted Activity and SO₂ Tolerance. ACS Catalysis, 2021, 11, 10988-10996.	11.2	36
35	Highly efficient ammonia synthesis at low temperature over a Ruâ€“Co catalyst with dual atomically dispersed active centers. Chemical Science, 2021, 12, 7125-7137.	7.4	35
36	Hydrogenation of molecular oxygen to hydroperoxyl: An alternative pathway for O2 activation on nanogold catalysts. Nano Research, 2015, 8, 3737-3748.	10.4	34

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37	Molecular structure, theoretical calculation and thermal behavior of 2-(1,1-dinitromethylene)-1,3-diazepentane. Journal of Molecular Structure, 2008, 891, 340-345.	3.6	32
38	Preparation, Crystal Structure and Theoretical Calculation of G(FOX-7). Chinese Journal of Chemistry, 2008, 26, 495-499.	4.9	30
39	Hydrogen activation enabled by the interfacial frustrated Lewis pairs on cobalt borate nanosheets. Journal of Catalysis, 2019, 372, 142-150.	6.2	27
40	Stepâ€Edge Assisted Direct Linear Alkane Coupling. Chemistry - A European Journal, 2017, 23, 6185-6189.	3.3	26
41	Role of surface frustrated Lewis pairs on reduced CeO2(110) in direct conversion of syngas. Chinese Journal of Catalysis, 2020, 41, 1906-1915.	14.0	23
42	Nonâ€isothermal Decomposition Kinetics, Specific Heat Capacity and Adiabatic Timeâ€toâ€explosion of 1â€Aminoâ€1â€hydrazinoâ€2,2â€dinitroethylene (AHDNE). Chinese Journal of Chemistry, 2009, 27, 665-671.	4.9	18
43	Theoretical study on the leaching of palladium in a CO atmosphere. Catalysis Science and Technology, 2012, 2, 2238.	4.1	18
44	Cooperative Catalysis by Multiple Active Centers in Nonoxidative Conversion of Methane. Journal of Physical Chemistry C, 2020, 124, 13656-13663.	3.1	18
45	Design of Single-Atom and Frustrated-Lewis-Pair dual active sites for direct conversion of CH4 and CO2 to acetic acid. Journal of Catalysis, 2022, 408, 206-215.	6.2	18
46	Mechanistic investigations of Co(II)-Catalyzed C-N coupling reactions. Journal of Organometallic Chemistry, 2018, 868, 144-153.	1.8	16
47	Theoretical Insights into Dual-Metal-Site Catalysts for the Nonoxidative Coupling of Methane. ACS Catalysis, 2021, 11, 13149-13159.	11.2	16
48	Structural Characterization and Thermal Behavior of 1â€Aminoâ€1â€methylaminoâ€2,2â€dinitroethylene. Chinese Journal of Chemistry, 2010, 28, 583-588.	4.9	15
49	A DFT study on the enthalpies of thermite reactions and enthalpies of formation of metal composite oxide. Chemical Physics, 2018, 507, 19-27.	1.9	15
50	Unravelling the Enigma of Nonoxidative Conversion of Methane on Iron Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 18745-18749.	2.0	12
51	Theoretical studies on copper-catalyzed arylation of nitrogen heterocycles from benzenediazonium acetate under ligand-free conditions. Journal of Organometallic Chemistry, 2018, 864, 50-57.	1.8	10
52	Perceptions on the treatment of apparent isotope effects during the analyses of reaction rate and mechanism. Physical Chemistry Chemical Physics, 2022, 24, 15182-15194.	2.8	10
53	Screening silica-confined single-atom catalysts for nonoxidative conversion of methane. Journal of Chemical Physics, 2021, 154, 174706.	3.0	6
54	Molecular Structure, Theoretical Calculation and Thermal Behavior of DAG(NTO). Chinese Journal of Chemistry, 2008, 26, 1549-1554.	4.9	5

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55	Leaching of palladium atoms from small cluster models during Heck reactions â€“ An experimental and theoretical study. Catalysis Communications, 2022, 165, 106441.	3.3	4
56	Gas-Phase Mechanism Study of Methane Nonoxidative Conversion by ReaxFF Method. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2020, .	4.9	3
57	Silica-Confined Two-Atom Single-Cluster Catalyst for Direct Nonoxidative Conversion of Methane: A DFT Study. Journal of Physical Chemistry C, 2021, 125, 23212-23218.	3.1	3
58	Inside Cover Image, Volume 6, Issue 6. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2016, 6, ii.	14.6	0