Rentao Mu

List of Publications by Year
in descending order

66 papers	4,239 citations	126907 33 h-index	110387 64 g-index
69 all docs	69 docs citations	69 times ranked	5293 citing authors

#	Article	IF	Citations
1	Breaking the scaling relationship via thermally stable Pt/Cu single atom alloys for catalytic dehydrogenation. Nature Communications, 2018, 9, 4454.	12.8	451
2	Synergetic Effect of Surface and Subsurface Ni Species at Ptâˆ'Ni Bimetallic Catalysts for CO Oxidation. Journal of the American Chemical Society, 2011, 133, 1978-1986.	13.7	257
3	Visualizing Chemical Reactions Confined under Graphene. Angewandte Chemie - International Edition, 2012, 51, 4856-4859.	13.8	207
4	Graphene cover-promoted metal-catalyzed reactions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17023-17028.	7.1	183
5	FeO₆ Octahedral Distortion Activates Lattice Oxygen in Perovskite Ferrite for Methane Partial Oxidation Coupled with CO₂ Splitting. Journal of the American Chemical Society, 2020, 142, 11540-11549.	13.7	177
6	Tuning Cu/Cu₂O Interfaces for the Reduction of Carbon Dioxide to Methanol in Aqueous Solutions. Angewandte Chemie - International Edition, 2018, 57, 15415-15419.	13.8	175
7	Structural motifs of water on metal oxide surfaces. Chemical Society Reviews, 2017, 46, 1785-1806.	38.1	170
8	Hydroxylâ€Mediated Nonâ€oxidative Propane Dehydrogenation over VO_x/Î³â€Al₂O₃ Catalysts with Improved Stability. Angewandte Chemie - International Edition, 2018, 57, 6791-6795.	13.8	149
9	Overturning CO₂ Hydrogenation Selectivity with High Activity via Reaction-Induced Strong Metalâ€“Support Interactions. Journal of the American Chemical Society, 2022, 144, 4874-4882.	13.7	139
10	Hydroxyl-mediated ethanol selectivity of CO₂ hydrogenation. Chemical Science, 2019, 10, 3161-3167.	7.4	138
11	Modulating Lattice Oxygen in Dual-Functional Moâ€“Vâ€“O Mixed Oxides for Chemical Looping Oxidative Dehydrogenation. Journal of the American Chemical Society, 2019, 141, 18653-18657.	13.7	133
12	Activation and Spillover of Hydrogen on Subâ€1â€…nm Palladium Nanoclusters Confined within Sodalite Zeolite for the Semiâ€Hydrogenation of Alkynes. Angewandte Chemie - International Edition, 2019, 58, 7668-7672.	13.8	123
13	Propane Dehydrogenation on Single-Site [PtZn4] Intermetallic Catalysts. CheM, 2021, 7, 387-405.	11.7	116
14	Probing equilibrium of molecular and deprotonated water on TiO ₂ (110). Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1801-1805.	7.1	90
15	Subsurface catalysis-mediated selectivity of dehydrogenation reaction. Science Advances, 2018, 4, eaar5418.	10.3	89
16	Formation of Enriched Vacancies for Enhanced CO₂ Electrocatalytic Reduction over AuCu Alloys. ACS Energy Letters, 2018, 3, 2144-2149.	17.4	88
17	Catalytic hydrothermal liquefaction for bio-oil production over CNTs supported metal catalysts. Chemical Engineering Science, 2017, 161, 299-307.	3.8	87
18	Enhanced reactivity of graphene wrinkles and their function as nanosized gas inlets for reactions under graphene. Physical Chemistry Chemical Physics, 2013, 15, 19042.	2.8	84

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19	The Interplay between Structure and Product Selectivity of CO₂ Hydrogenation. Angewandte Chemie - International Edition, 2019, 58, 11242-11247.	13.8	84
20	Reversible surface structural changes in Pt-based bimetallic nanoparticles during oxidation and reduction cycles. Applied Surface Science, 2009, 255, 7296-7301.	6.1	82
21	The Functionality of Surface Hydroxy Groups on the Selectivity and Activity of Carbon Dioxide Reduction over Cuprous Oxide in Aqueous Solutions. Angewandte Chemie - International Edition, 2018, 57, 7724-7728.	13.8	82
22	Pb intercalation underneath a graphene layer on Ru(0001) and its effect on graphene oxidation. Physical Chemistry Chemical Physics, 2011, 13, 16655.	2.8	70
23	Facilitating the reduction of Vâ€“O bonds on VO_x/ZrO₂ catalysts for non-oxidative propane dehydrogenation. Chemical Science, 2020, 11, 3845-3851.	7.4	63
24	Sorption enhanced steam reforming of methanol for high-purity hydrogen production over Cu-MgO/Al2O3 bifunctional catalysts. Applied Catalysis B: Environmental, 2020, 276, 119052.	20.2	61
25	Coverageâ€Dependent Behaviors of Vanadium Oxides for Chemical Looping Oxidative Dehydrogenation. Angewandte Chemie - International Edition, 2020, 59, 22072-22079.	13.8	57
26	Oscillation of Surface Structure and Reactivity of PtNi Bimetallic Catalysts with Redox Treatments at Variable Temperatures. Journal of Physical Chemistry C, 2011, 115, 20590-20595.	3.1	55
27	The role of Al doping in Pd/ZnO catalyst for CO2 hydrogenation to methanol. Applied Catalysis B: Environmental, 2020, 263, 118367.	20.2	54
28	On the Role of Sn Segregation of Pt-Sn Catalysts for Propane Dehydrogenation. ACS Catalysis, 2021, 11, 4401-4410.	11.2	54
29	Dimerization Induced Deprotonation of Water on RuO₂(110). Journal of Physical Chemistry Letters, 2014, 5, 3445-3450.	4.6	47
30	Structure and catalytic consequence of Mgâ€modified VO_x/Al₂O₃ catalysts for propane dehydrogenation. AIChE Journal, 2017, 63, 4911-4919.	3.6	47
31	In situ identification of the metallic state of Ag nanoclusters in oxidative dispersion. Nature Communications, 2021, 12, 1406.	12.8	42
32	Tailoring the Growth of Graphene on Ru(0001) via Engineering of the Substrate Surface. Journal of Physical Chemistry C, 2012, 116, 2988-2993.	3.1	35
33	Active sites in CO2 hydrogenation over confined VOx-Rh catalysts. Science China Chemistry, 2019, 62, 1710-1719.	8.2	35
34	Oxidative Strong Metalâ€Support Interactions between Metals and Inert Boron Nitride. Journal of Physical Chemistry Letters, 2021, 12, 4187-4194.	4.6	35
35	Deprotonated Water Dimers: The Building Blocks of Segmented Water Chains on Rutile RuO₂(110). Journal of Physical Chemistry C, 2015, 119, 23552-23558.	3.1	33
36	The Nature of Loading-Dependent Reaction Barriers over Mixed RuO₂/TiO₂ Catalysts. ACS Catalysis, 2018, 8, 5526-5532.	11.2	33

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37	Tuning Cu/Cu 2 O Interfaces for the Reduction of Carbon Dioxide to Methanol in Aqueous Solutions. Angewandte Chemie, 2018, 130, 15641-15645.	2.0	32
38	Iso-oriented monolayer Î±-MoO₃(010) films epitaxially grown on SrTiO₃(001). Nanoscale, 2016, 8, 3119-3124.	5.6	26
39	Coverage Effect on the Activity of the Acetylene Semihydrogenation over Pdâ€“Sn Catalysts: A Density Functional Theory Study. Journal of Physical Chemistry C, 2018, 122, 6005-6013.	3.1	26
40	Fast Prediction of CO Binding Energy via the Local Structure Effect on PtCu Alloy Surfaces. Langmuir, 2017, 33, 8700-8706.	3.5	24
41	Activation of CO over Ultrathin Manganese Oxide Layers Grown on Au(111). ACS Catalysis, 2021, 11, 849-857.	11.2	23
42	The Functionality of Surface Hydroxy Groups on the Selectivity and Activity of Carbon Dioxide Reduction over Cuprous Oxide in Aqueous Solutions. Angewandte Chemie, 2018, 130, 7850-7854.	2.0	21
43	Site-Specific Imaging of Elemental Steps in Dehydration of Diols on TiO₂(110). ACS Nano, 2013, 7, 10414-10423.	14.6	20
44	Adsorption and Photodesorption of CO from Charged Point Defects on TiO2(110). Journal of Physical Chemistry Letters, 2017, 8, 4565-4572.	4.6	20
45	Chemical looping partial oxidation over FeWO /SiO2 catalysts. Chinese Journal of Catalysis, 2020, 41, 1140-1151.	14.0	19
46	Design of Lewis Pairs via Interface Engineering of Oxideâ€“Metal Composite Catalyst for Water Activation. Journal of Physical Chemistry Letters, 2021, 12, 1443-1452.	4.6	18
47	Defect-mediated reactivity of Pt/TiO2 catalysts: the different role of titanium and oxygen vacancies. Science China Chemistry, 2020, 63, 1323-1330.	8.2	17
48	Modulating the surface defects of titanium oxides and consequent reactivity of Pt catalysts. Chemical Science, 2019, 10, 10531-10536.	7.4	15
49	Modulating the Formation and Evolution of Surface Hydrogen Species on ZnO through Cr Addition. ACS Catalysis, 2022, 12, 6255-6264.	11.2	15
50	Hydroxylâ€Mediated Nonâ€oxidative Propane Dehydrogenation over VO_x/Î³â€Al₂O₃ Catalysts with Improved Stability. Angewandte Chemie, 2018, 130, 6907-6911.	2.0	14
51	Diffusion and Photon-Stimulated Desorption of CO on TiO₂(110). Journal of Physical Chemistry C, 2018, 122, 15382-15389.	3.1	14
52	A comparative study in structure and reactivity of â€œFeO x -on-Ptâ€•and â€œNiO x -on-Ptâ€•catalysts. Science China Chemistry, 2015, 58, 162-168.	8.2	13
53	Dynamics, Stability, and Adsorption States of Water on Oxidized RuO₂(110). Journal of Physical Chemistry C, 2017, 121, 18505-18515.	3.1	11
54	Light Makes a Surface Banana-Bond Split: Photodesorption of Molecular Hydrogen from RuO2(110). Journal of the American Chemical Society, 2016, 138, 8714-8717.	13.7	9

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55	Hydrogen adsorption and reaction on RuO2(110). Surface Science, 2018, 677, 264-270.	1.9	9
56	Coverageâ€Đependent Behaviors of Vanadium Oxides for Chemical Looping Oxidative Dehydrogenation. Angewandte Chemie, 2020, 132, 22256-22263.	2.0	9
57	Dynamic transformation between bilayer islands and dinuclear clusters of Cr oxide on Au(111) through environment and interface effects. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	9
58	Active sites for H2 and H2O activation over bifunctional ZnO-Pt(1â€¯1â€¯1) model catalysts. Applied Surface Science, 2020, 503, 144204.	6.1	6
59	Predominance of Subsurface and Bulk Oxygen Vacancies in Reduced Manganese Oxide. Journal of Physical Chemistry C, 2021, 125, 7990-7998.	3.1	6
60	Dynamic Structural Evolution of Mnâ€“Au Alloy and MnO_x Nanostructures on Au(111) under Different Atmospheres. Journal of Physical Chemistry C, 2021, 125, 15335-15342.	3.1	5
61	Stabilizing Oxide Nanolayer via Interface Confinement and Surface Hydroxylation. Journal of Physical Chemistry Letters, 2022, 13, 6566-6570.	4.6	5
62	Atmosphere-Dependent Structures of Ptâ€“Mn Bimetallic Catalysts. Journal of Physical Chemistry C, 2020, 124, 17548-17555.	3.1	2
63	Step-confined thin film growth via near-surface atom migration. Nano Research, 2020, 13, 1552-1557.	10.4	2
64	Low-temperature growth of ultrathin and epitaxial Mo₂C nanosheets via a vaporâ€“liquidâ€“solid process. Nanoscale, 2022, 14, 9142-9149.	5.6	2
65	Titelbild: Tuning Cu/Cu₂O Interfaces for the Reduction of Carbon Dioxide to Methanol in Aqueous Solutions (Angew. Chem. 47/2018). Angewandte Chemie, 2018, 130, 15507-15507.	2.0	1
66	Modulating electronic structure of graphene overlayers through electrochemical intercalation. Applied Surface Science, 2020, 522, 146359.	6.1	1