Zhenhua Zeng

List of Publications by Year
in descending order

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45 papers	5,067 citations	279487 23 h-index	253896 43 g-index
45 all docs	45 docs citations	45 times ranked	8165 citing authors

#	Article	IF	Citations
1	DFT Insights into NO Electrochemical Reduction: A Case Study of Pt(211) and Cu(211) Surfaces. ACS Catalysis, 2022, 12, 1394-1402.	5.5	19
2	Mitigation of RuO₆ octahedron distortion by enhanced A-site electronegativity in pyrochlore for acidic water oxidation. Journal of Materials Chemistry A, 2022, 10, 9419-9426.	5.2	10
3	Toward a Fundamental Understanding of Strain Generation and Strain Tuning for the Fuel Cell Applications. ECS Meeting Abstracts, 2022, MA2022-01, 1488-1488.	0.0	0
4	Catalytically-Active Phases and Reaction Mechanism of Ni-Based and Co-Based Layered Double Hydroxides for the Oxygen Evolution Reaction. ECS Meeting Abstracts, 2022, MA2022-01, 1368-1368.	0.0	0
5	Intrinsic Electrocatalytic Activity for Oxygen Evolution of Crystalline 3dâ€Transition Metal Layered Double Hydroxides. Angewandte Chemie, 2021, 133, 14567-14578.	1.6	30
6	Intrinsic Electrocatalytic Activity for Oxygen Evolution of Crystalline 3dâ€Transition Metal Layered Double Hydroxides. Angewandte Chemie - International Edition, 2021, 60, 14446-14457.	7.2	170
7	Magnetic field-induced capacitance change in aqueous carbon-based supercapacitors. Cell Reports Physical Science, 2021, 2, 100455.	2.8	13
8	On the relationship between potential of zero charge and solvent dynamics in the reversible hydrogen electrode. Journal of Catalysis, 2021, 398, 161-170.	3.1	7
9	Structural and Chemical Transformations of Zinc Oxide Ultrathin Films on Pd(111) Surfaces. ACS Applied Materials & Interfaces, 2021, 13, 35113-35123.	4.0	10
10	Direct methane activation by atomically thin platinum nanolayers on two-dimensional metal carbides. Nature Catalysis, 2021, 4, 882-891.	16.1	63
11	Achieving flexible large-scale reactivity tuning by controlling the phase, thickness and support of two-dimensional ZnO. Chemical Science, 2021, 12, 15284-15290.	3.7	3
12	K-Edge XANES Investigation of Fe-Based Oxides by Density Functional Theory Calculations. Journal of Physical Chemistry C, 2021, 125, 26229-26239.	1.5	11
13	Effect of cobalt addition on platinum supported on multi-walled carbon nanotubes for water-gas shift. Journal of Catalysis, 2020, 391, 25-34.	3.1	3
14	In-situ structure and catalytic mechanism of NiFe and CoFe layered double hydroxides during oxygen evolution. Nature Communications, 2020, 11, 2522.	5.8	594
15	Direct Demonstration of Unified BrÃ¸nstedâ^'Evansâ^'Polanyi Relationships for Proton-Coupled Electron Transfer Reactions on Transition Metal Surfaces. Journal of the Electrochemical Society, 2020, 167, 166516.	1.3	7
16	Strain and support effects on phase transition and surface reactivity of ultrathin ZnO films: DFT insights. AIP Advances, 2020, 10, .	0.6	4
17	Migration of Cobalt Species within Mixed Platinum-Cobalt Oxide Bifunctional Electrocatalysts in Alkaline Electrolytes. Journal of the Electrochemical Society, 2019, 166, F3093-F3097.	1.3	7
18	Tunable intrinsic strain in two-dimensional transition metal electrocatalysts. Science, 2019, 363, 870-874.	6.0	384

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19	First-principles investigation of electrochemical dissolution of Pt nanoparticles and kinetic simulation. Journal of Chemical Physics, 2019, 151, 234711.	1.2	10
20	In situ surface stress measurement and computational analysis examining the oxygen reduction reaction on Pt and Pd. Electrochimica Acta, 2018, 260, 400-406.	2.6	14
21	Coreâ€“Shell Nanostructured Cobaltâ€“Platinum Electrocatalysts with Enhanced Durability. ACS Catalysis, 2018, 8, 35-42.	5.5	72
22	Plating Precious Metals on Nonprecious Metal Nanoparticles for Sustainable Electrocatalysts. Nano Letters, 2017, 17, 3391-3395.	4.5	61
23	Stabilization of ultrathin (hydroxy)oxide films on transition metal substrates for electrochemical energy conversion. Nature Energy, 2017, 2, .	19.8	167
24	The atomic simulation environmentâ€”a Python library for working with atoms. Journal of Physics Condensed Matter, 2017, 29, 273002.	0.7	1,933
25	Platinum-nickel hydroxide nanocomposites for electrocatalytic reduction of water. Nano Energy, 2017, 31, 456-461.	8.2	119
26	Establishing and Understanding Adsorptionâ€“Energy Scaling Relations with Negative Slopes. Journal of Physical Chemistry Letters, 2016, 7, 5302-5306.	2.1	43
27	Characterization of oxygenated species at water/Pt(111) interfaces from DFT energetics and XPS simulations. Nano Energy, 2016, 29, 369-377.	8.2	47
28	Electrochemical Surface Stress Development during CO and NO Oxidation on Pt. Journal of Physical Chemistry C, 2016, 120, 8674-8683.	1.5	22
29	Dynamic Surface Stress Response during Reversible Mg Electrodeposition and Stripping. Journal of the Electrochemical Society, 2016, 163, A2679-A2684.	1.3	9
30	Towards First Principles-Based Prediction of Highly Accurate Electrochemical Pourbaix Diagrams. Journal of Physical Chemistry C, 2015, 119, 18177-18187.	1.5	97
31	Influence of controlled surface oxidation on the magnetic anisotropy of Co ultrathin films. Applied Physics Letters, 2015, 106, .	1.5	27
32	Theoretical study of CO adsorption on Au catalysts under environmental catalytic conditions. Catalysis Communications, 2014, 52, 78-83.	1.6	20
33	Exceptional Size-Dependent Activity Enhancement in the Electroreduction of CO₂ over Au Nanoparticles. Journal of the American Chemical Society, 2014, 136, 16473-16476.	6.6	600
34	Ab Initio Thermodynamic Modeling of Electrified Metalâ€“Oxide Interfaces: Consistent Treatment of Electronic and Ionic Chemical Potentials. Journal of Physical Chemistry C, 2014, 118, 22663-22671.	1.5	11
35	Origin of electrolyte-dopant dependent sulfur poisoning of SOFC anodes. Physical Chemistry Chemical Physics, 2013, 15, 6769.	1.3	15
36	Generalized trends in the formation energies of perovskite oxides. Physical Chemistry Chemical Physics, 2013, 15, 7526.	1.3	85

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37	Avoiding pitfalls in the modeling of electrochemical interfaces. Chemical Physics Letters, 2013, 555, 145-148.	1.2	50
38	Adsorption of NO on the Rh₁₃, Pd₁₃, Ir₁₃, and Pt₁₃ Clusters: A Density Functional Theory Investigation. Journal of Physical Chemistry C, 2012, 116, 20540-20549.	1.5	33
39	In Situ Oxidation Study of Pt(110) and Its Interaction with CO. Journal of the American Chemical Society, 2011, 133, 20319-20325.	6.6	120
40	First-principles calculation of core-level binding energy shift in surface chemical processes. Science China Chemistry, 2010, 53, 402-410.	4.2	25
41	Theory of nitride oxide adsorption on transition metal (111) surfaces: a first-principles investigation. Physical Chemistry Chemical Physics, 2010, 12, 2459.	1.3	63
42	Density functional theory andab initiomolecular dynamics study of NO adsorption on Pd(111) and Pt(111) surfaces. Physical Review B, 2010, 81, .	1.1	16
43	Band structure and Fermi surface of atomically uniform lead films. New Journal of Physics, 2010, 12, 113034.	1.2	1
44	Density functional theory study of the energetics, electronic structure, and core-level shifts of NO adsorption on the Pt(111) surface. Physical Review B, 2009, 79, .	1.1	45
45	First-Principles Study of Carbon Monoxide Oxidation on Ag(111) in Presence of Subsurface Oxygen and Stepped Ag(221). Journal of Physical Chemistry C, 2009, 113, 8266-8272.	1.5	27