Jeong Woo Han

List of Publications by Year
in descending order

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Version: 2024-02-01

205	10,023	34105 52	45317 90
papers	citations	h-index	g-index

217	217	217	11134
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Versatile Strategy for Tuning ORR Activity of a Single Fe-N₄ Site by Controlling Electron-Withdrawing/Donating Properties of a Carbon Plane. Journal of the American Chemical Society, 2019, 141, 6254-6262.	13.7	509
2	Cation Size Mismatch and Charge Interactions Drive Dopant Segregation at the Surfaces of Manganite Perovskites. Journal of the American Chemical Society, 2013, 135, 7909-7925.	13.7	468
3	Modified carbon nitride nanozyme as bifunctional glucose oxidase-peroxidase for metal-free bioinspired cascade photocatalysis. Nature Communications, 2019, 10, 940.	12.8	349
4	Exsolution trends and co-segregation aspects of self-grown catalyst nanoparticles in perovskites. Nature Communications, 2017, 8, 15967.	12.8	305
5	Investigation of the Support Effect in Atomically Dispersed Pt on WO_{3â^'x} for Utilization of Pt in the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2019, 58, 16038-16042.	13.8	271
6	Sr Segregation in Perovskite Oxides: Why It Happens and How It Exists. Joule, 2018, 2, 1476-1499.	24.0	255
7	Facile Twoâ€Step Synthesis of Allâ€Inorganic Perovskite CsPbX₃ (X = Cl, Br, and I) Zeoliteâ€Y Composite Phosphors for Potential Backlight Display Application. Advanced Functional Materials, 2017, 27, 1704371.	14.9	223
8	Heme Cofactorâ€Resembling Feâ€“N Single Site Embedded Graphene as Nanozymes to Selectively Detect H₂O₂ with High Sensitivity. Advanced Functional Materials, 2020, 30, 1905410.	14.9	171
9	Fully Dispersed Rh Ensemble Catalyst To Enhance Low-Temperature Activity. Journal of the American Chemical Society, 2018, 140, 9558-9565.	13.7	170
10	Cu-Pd alloy nanoparticles as highly selective catalysts for efficient electrochemical reduction of CO2 to CO. Applied Catalysis B: Environmental, 2019, 246, 82-88.	20.2	167
11	Tailoring Binding Abilities by Incorporating Oxophilic Transition Metals on 3D Nanostructured Ni Arrays for Accelerated Alkaline Hydrogen Evolution Reaction. Journal of the American Chemical Society, 2021, 143, 1399-1408.	13.7	161
12	Approaching Ultrastable Highâ€Rate Liâ€“S Batteries through Hierarchically Porous Titanium Nitride Synthesized by Multiscale Phase Separation. Advanced Materials, 2019, 31, e1806547.	21.0	155
13	Density Functional Theory Study for Catalytic Activation and Dissociation of CO₂ on Bimetallic Alloy Surfaces. Journal of Physical Chemistry C, 2016, 120, 3438-3447.	3.1	152
14	Highly Durable Platinum Singleâ€Atom Alloy Catalyst for Electrochemical Reactions. Advanced Energy Materials, 2018, 8, 1701476.	19.5	152
15	Promoting Effects of Hydrothermal Treatment on the Activity and Durability of Pd/CeO₂ Catalysts for CO Oxidation. ACS Catalysis, 2017, 7, 7097-7105.	11.2	151
16	Surface Electronic Structure Transitions at High Temperature on Perovskite Oxides: The Case of Strained La_{0.8}Sr_{0.2}CoO₃ Thin Films. Journal of the American Chemical Society, 2011, 133, 17696-17704.	13.7	148
17	New Insights into the Strain Coupling to Surface Chemistry, Electronic Structure, and Reactivity of La_{0.7}Sr_{0.3}MnO₃. Journal of Physical Chemistry Letters, 2011, 2, 801-807.	4.6	145
18	Structural Design of Amorphous CoMoP_x with Abundant Active Sites and Synergistic Catalysis Effect for Effective Water Splitting. Advanced Functional Materials, 2020, 30, 2003889.	14.9	128

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19	Precisely Constructing Orbital Coupling-Modulated Dual-Atom Fe Pair Sites for Synergistic CO₂ Electroreduction. ACS Energy Letters, 2022, 7, 640-649.	17.4	127
20	Highly Water-Resistant La-Doped Co₃O₄ Catalyst for CO Oxidation. ACS Catalysis, 2019, 9, 10093-10100.	11.2	126
21	Cation-swapped homogeneous nanoparticles in perovskite oxides for highÂpower density. Nature Communications, 2019, 10, 697.	12.8	119
22	Controlling the Oxidation State of Pt Single Atoms for Maximizing Catalytic Activity. Angewandte Chemie - International Edition, 2020, 59, 20691-20696.	13.8	113
23	Defect-engineered graphene chemical sensors with ultrahigh sensitivity. Physical Chemistry Chemical Physics, 2016, 18, 14198-14204.	2.8	110
24	Mechanism for enhanced oxygen reduction kinetics at the (La,Sr)CoO3â˜Î´/(La,Sr)2CoO4+Î´ hetero-interface. Energy and Environmental Science, 2012, 5, 8598.	30.8	109
25	Rational Design of TiC-Supported Single-Atom Electrocatalysts for Hydrogen Evolution and Selective Oxygen Reduction Reactions. ACS Energy Letters, 2019, 4, 126-132.	17.4	104
26	Synergistic Effect of Molecular-Type Electrocatalysts with Ultrahigh Pore Volume Carbon Microspheres for Lithiumâ€“Sulfur Batteries. ACS Nano, 2018, 12, 6013-6022.	14.6	100
27	Engineering electrocatalyst nanosurfaces to enrich the activity by inducing lattice strain. Energy and Environmental Science, 2021, 14, 3717-3756.	30.8	98
28	Highâ€Performance and Reliable Leadâ€Free Layeredâ€Perovskite Transistors. Advanced Materials, 2020, 32, e2002717.	21.0	86
29	Various metal (Fe, Mo, V, Co)-doped Ni2P nanowire arrays as overall water splitting electrocatalysts and their applications in unassisted solar hydrogen production with STH 14 %. Applied Catalysis B: Environmental, 2021, 297, 120434.	20.2	82
30	Highly active dry methane reforming catalysts with boosted in situ grown Ni-Fe nanoparticles on perovskite via atomic layer deposition. Science Advances, 2020, 6, eabb1573.	10.3	79
31	Design of lithium selective crown ethers: Synthesis, extraction and theoretical binding studies. Chemical Engineering Journal, 2017, 326, 921-933.	12.7	78
32	Design of Ceria Catalysts for Lowâ€Temperature CO Oxidation. ChemCatChem, 2020, 12, 11-26.	3.7	78
33	Self-assembled alloy nanoparticles in a layered double perovskite as a fuel oxidation catalyst for solid oxide fuel cells. Journal of Materials Chemistry A, 2018, 6, 15947-15953.	10.3	77
34	Concentration Effect of Reducing Agents on Green Synthesis of Gold Nanoparticles: Size, Morphology, and Growth Mechanism. Nanoscale Research Letters, 2016, 11, 230.	5.7	76
35	Enhanced oxygen exchange of perovskite oxide surfaces through strain-driven chemical stabilization. Energy and Environmental Science, 2018, 11, 71-77.	30.8	75
36	Growth Kinetics of Individual Co Particles Ex-solved on SrTi_{0.75}Co_{0.25}O_{3-Î´} Polycrystalline Perovskite Thin Films. Journal of the American Chemical Society, 2019, 141, 6690-6697.	13.7	75

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37	Facet-Dependent Mn Doping on Shaped Co₃O₄ Crystals for Catalytic Oxidation. ACS Catalysis, 2021, 11, 11066-11074.	11.2	69
38	Chemical transformation approach for high-performance ternary NiFeCo metal compound-based water splitting electrodes. Applied Catalysis B: Environmental, 2021, 294, 120246.	20.2	67
39	Scalable Oxygenâ€Ion Transport Kinetics in Metalâ€Oxide Films: Impact of Thermally Induced Lattice Compaction in Acceptor Doped Ceria Films. Advanced Functional Materials, 2014, 24, 1562-1574.	14.9	65
40	Enhancing Thermocatalytic Activities by Upshifting the dâ€Band Center of Exsolved Coâ€Niâ€Fe Ternary Alloy Nanoparticles for the Dry Reforming of Methane. Angewandte Chemie - International Edition, 2021, 60, 15912-15919.	13.8	65
41	Enhanced one dimensional mobility of oxygen on strained LaCoO3(001) surface. Journal of Materials Chemistry, 2011, 21, 18983.	6.7	64
42	All-solid-state, origami-type foldable supercapacitor chips with integrated series circuit analogues. Energy and Environmental Science, 2014, 7, 1095.	30.8	62
43	A Highly Active and Redox-Stable SrGdNi_{0.2}Mn_{0.8}O_{4Â±Î´} Anode with in Situ Exsolution of Nanocatalysts. ACS Catalysis, 2019, 9, 1172-1182.	11.2	62
44	Reconstructing the Coordination Environment of Platinum Single-Atom Active Sites for Boosting Oxygen Reduction Reaction. ACS Catalysis, 2021, 11, 466-475.	11.2	62
45	2â€(Nâ€Methylbenzyl)pyridine: A Potential Liquid Organic Hydrogen Carrier with Fast H₂ Release and Stable Activity in Consecutive Cycles. ChemSusChem, 2018, 11, 661-665.	6.8	60
46	Controlling Electrostatic Interaction in PEDOT:PSS to Overcome Thermoelectric Tradeoff Relation. Advanced Functional Materials, 2019, 29, 1905590.	14.9	60
47	Promoting biomass electrooxidation via modulating proton and oxygen anion deintercalation in hydroxide. Nature Communications, 2022, 13, .	12.8	60
48	Density Functional Theory Study of H and CO Adsorption on Alkali-Promoted Mo₂C Surfaces. Journal of Physical Chemistry C, 2011, 115, 6870-6876.	3.1	59
49	A Simple Descriptor to Rapidly Screen CO Oxidation Activity on Rare-Earth Metal-Doped CeO2: From Experiment to First-Principles. ACS Applied Materials & Interfaces, 2017, 9, 15449-15458.	8.0	59
50	Mechanistic insight into the quantitative synthesis of acetic acid by direct conversion of CH4 and CO2: An experimental and theoretical approach. Applied Catalysis B: Environmental, 2018, 229, 237-248.	20.2	59
51	One-Pot Chemo-bioprocess of PET Depolymerization and Recycling Enabled by a Biocompatible Catalyst, Betaine. ACS Catalysis, 2021, 11, 3996-4008.	11.2	58
52	Design of grain boundary enriched bimetallic borides for enhanced hydrogen evolution reaction. Chemical Engineering Journal, 2021, 405, 126977.	12.7	56
53	Progress of Exsolved Metal Nanoparticles on Oxides as High Performance (Electro)Catalysts for the Conversion of Small Molecules. Small, 2021, 17, e2005383.	10.0	53
54	Crystal Facet-Manipulated 2D Pt Nanodendrites to Achieve an Intimate Heterointerface for Hydrogen Evolution Reactions. Journal of the American Chemical Society, 2022, 144, 9033-9043.	13.7	53

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55	The position of lysine controls the catechol-mediated surface adhesion and cohesion in underwater mussel adhesion. Journal of Colloid and Interface Science, 2020, 563, 168-176.	9.4	51
56	Corrosion-engineered bimetallic oxide electrode as anode for high-efficiency anion exchange membrane water electrolyzer. Chemical Engineering Journal, 2021, 420, 127670.	12.7	51
57	High-performance hysteresis-free perovskite transistors through anion engineering. Nature Communications, 2022, 13, 1741.	12.8	51
58	Investigation of the Support Effect in Atomically Dispersed Pt on WO 3â˜ x for Utilization of Pt in the Hydrogen Evolution Reaction. Angewandte Chemie, 2019, 131, 16184-16188.	2.0	49
59	Simple physical mixing of zeolite prevents sulfur deactivation of vanadia catalysts for NOx removal. Nature Communications, 2021, 12, 901.	12.8	49
60	Highâ€Efficiency Anionâ€Exchange Membrane Water Electrolyzer Enabled by Ternary Layered Double Hydroxide Anode. Small, 2021, 17, e2100639.	10.0	49
61	Liquid-liquid extraction of lithium using lipophilic dibenzo-14-crown-4 ether carboxylic acid in hydrophobic room temperature ionic liquid. Hydrometallurgy, 2016, 164, 362-371.	4.3	48
62	Atomic and Molecular Adsorption on the Bi(111) Surface: Insights into Catalytic CO₂ Reduction. Journal of Physical Chemistry C, 2018, 122, 23084-23090.	3.1	48
63	Interface-modulated uniform outer nanolayer: A category of electrodes of nanolayer-encapsulated core-shell configuration for supercapacitors. Nano Energy, 2021, 81, 105667.	16.0	48
64	Aerosol Cross-Linked Crown Ether Diols Melded with Poly(vinyl alcohol) as Specialized Microfibrous Li⁺ Adsorbents. ACS Applied Materials & Interfaces, 2017, 9, 42862-42874.	8.0	47
65	Importance of Kinetics in Surface Alloying: A Comparison of the Diffusion Pathways of Pd and Ag Atoms on Cu(111). Journal of Physical Chemistry C, 2009, 113, 12863-12869.	3.1	46
66	Mechanistic study of glycerol dehydration on BrÃ¸nsted acidic amorphous aluminosilicate. Journal of Catalysis, 2016, 341, 33-43.	6.2	46
67	Hybrid MnO2 Film with Agarose Gel for Enhancing the Structural Integrity of Thin Film Supercapacitor Electrodes. ACS Applied Materials & Interfaces, 2013, 5, 9908-9912.	8.0	45
68	2D-structured V-doped Ni(Co,Fe) phosphides with enhanced charge transfer and reactive sites for highly efficient overall water splitting electrocatalysts. Journal of Materials Chemistry A, 2021, 9, 12203-12213.	10.3	45
69	Suppression of Cation Segregation in (La,Sr)CoO_{3âˆ’Î´} by Elastic Energy Minimization. ACS Applied Materials & Interfaces, 2018, 10, 8057-8065.	8.0	44
70	Activating Lattice Oxygen in Perovskite Oxide by Bâ€Site Cation Doping for Modulated Stability and Activity at Elevated Temperatures. Advanced Science, 2021, 8, e2102713.	11.2	44
71	A novel strategy to develop non-noble metal catalyst for CO2 electroreduction: Hybridization of metal-organic polymer. Applied Catalysis B: Environmental, 2018, 236, 154-161.	20.2	43
72	Engineering of Charged Defects at Perovskite Oxide Surfaces for Exceptionally Stable Solid Oxide Fuel Cell Electrodes. ACS Applied Materials & Interfaces, 2020, 12, 21494-21504.	8.0	43

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73	Low-temperature direct synthesis of high quality WS2 thin films by plasma-enhanced atomic layer deposition for energy related applications. Applied Surface Science, 2018, 459, 596-605.	6.1	42
74	Engineering Single Atom Catalysts to Tune Properties for Electrochemical Reduction and Evolution Reactions. Advanced Energy Materials, 2021, 11, 2101670.	19.5	42
75	Continuous Oxygen Vacancy Gradient in TiO₂ Photoelectrodes by a Photoelectrochemicalâ€Driven â€œSelfâ€Purificationâ€•Process. Advanced Energy Materials, 2022, 12, .	19.5	42
76	Suppressing cation segregation on lanthanum-based perovskite oxides to enhance the stability of solid oxide fuel cell cathodes. RSC Advances, 2016, 6, 69782-69789.	3.6	41
77	Omnidirectionally stretchable, high performance supercapacitors based on a grapheneâ€“carbon-nanotube layered structure. Nano Energy, 2015, 15, 33-42.	16.0	39
78	Rational Development of Coâ€Doped Mesoporous Ceria with High Peroxidaseâ€Mimicking Activity at Neutral pH for Paperâ€Based Colorimetric Detection of Multiple Biomarkers. Advanced Functional Materials, 2022, 32, .	14.9	39
79	Different catalytic behaviors of Pd and Pt metals in decalin dehydrogenation to naphthalene. Catalysis Science and Technology, 2017, 7, 3728-3735.	4.1	38
80	Promoting alkali and alkaline-earth metals on MgO for enhancing CO₂capture by first-principles calculations. Physical Chemistry Chemical Physics, 2014, 16, 24818-24823.	2.8	37
81	Mechanistic insights into the phase transition and metal ex-solution phenomena of Pr_{0.5}Ba_{0.5}Mn_{0.85}Co_{0.15}O_{3â˜Î´} from simple to layered perovskite under reducing conditions and enhanced catalytic activity. Energy and Environmental Science, 2021, 14, 873-882.	30.8	37
82	Chemisorption of NH₃ on Monomeric Vanadium Oxide Supported on Anatase TiO₂: A Combined DRIFT and DFT Study. Journal of Physical Chemistry C, 2018, 122, 16674-16682.	3.1	36
83	Control of transition metalâ€“oxygen bond strength boosts the redox ex-solution in a perovskite oxide surface. Energy and Environmental Science, 2020, 13, 3404-3411.	30.8	36
84	Rational Design of a Bifunctional Catalyst for the Oxydehydration of Glycerol: A Combined Theoretical and Experimental Study. ACS Catalysis, 2015, 5, 82-94.	11.2	34
85	Simultaneous Suppression of Shuttle Effect and Lithium Dendrite Growth by Lightweight Bifunctional Separator for Liâ€“S Batteries. ACS Applied Energy Materials, 2020, 3, 2643-2652.	5.1	34
86	Enzymeâ€Driven Hasselbackâ€Like DNAâ€Based Inorganic Superstructures. Advanced Functional Materials, 2017, 27, 1704213.	14.9	33
87	Precise control of surface oxygen vacancies in ZnO nanoparticles for extremely high acetone sensing response. Journal of Advanced Ceramics, 2022, 11, 769-783.	17.4	33
88	Interfacial Adsorption and Redox Coupling of Li₄Ti₅O₁₂ with Nanographene for High-Rate Lithium Storage. ACS Applied Materials & Interfaces, 2015, 7, 16565-16572.	8.0	32
89	Precise control of defects in graphene using oxygen plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	32
90	Mechanistic study for enhanced CO oxidation activity on (Mn,Fe) co-doped CeO 2 (111). Catalysis Today, 2017, 293-294, 82-88.	4.4	32

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91	Directional Change of Interfacial Electric Field by Carbon Insertion in Heterojunction System TiO₂/WO₃. ACS Applied Materials & Interfaces, 2020, 12, 15239-15245.	8.0	32
92	Enantiospecific adsorption of amino acids on hydroxylated quartz (101Ì„0). Physical Chemistry Chemical Physics, 2010, 12, 8024.	2.8	31
93	Gas-phase dehydration of vicinal diols to epoxides: Dehydrative epoxidation over a Cs/SiO2 catalyst. Journal of Catalysis, 2015, 323, 85-99.	6.2	31
94	Adenine oligomer directed synthesis of chiral gold nanoparticles. Nature Communications, 2022, 13, .	12.8	31
95	Density functional theory study on the dehydrogenation of 1,2-dimethyl cyclohexane and 2-methyl piperidine on Pd and Pt catalysts. Catalysis Today, 2020, 352, 345-353.	4.4	30
96	Enantiospecific Adsorption of Amino Acids on Hydroxylated Quartz (0001). Langmuir, 2009, 25, 10737-10745.	3.5	29
97	Chirality and Rotation of Asymmetric Surface-Bound Thioethers. Journal of Physical Chemistry C, 2011, 115, 897-901.	3.1	29
98	Controlling the Oxidation State of Pt Single Atoms for Maximizing Catalytic Activity. Angewandte Chemie, 2020, 132, 20872-20877.	2.0	28
99	Effect of Monovalent Metal Iodide Additives on the Optoelectric Properties of Two-Dimensional Sn-Based Perovskite Films. Chemistry of Materials, 2021, 33, 2498-2505.	6.7	28
100	Continuous Synthesis of Methanol from Methane and Steam over Copper-Mordenite. ACS Catalysis, 2021, 11, 1065-1070.	11.2	28
101	Unveiling the key factor for the phase reconstruction and exsolved metallic particle distribution in perovskites. Nature Communications, 2021, 12, 6814.	12.8	28
102	Step decoration of chiral metal surfaces. Journal of Chemical Physics, 2009, 130, 124710.	3.0	27
103	Universality in surface mixing rule of adsorption strength for small adsorbates on binary transition metal alloys. Physical Chemistry Chemical Physics, 2015, 17, 3123-3130.	2.8	27
104	Density functional theory study for the enhanced sulfur tolerance of Ni catalysts by surface alloying. Applied Surface Science, 2018, 429, 87-94.	6.1	26
105	Rational Design of Transition Metal Coâ€Doped Ceria Catalysts for Lowâ€Temperature CO Oxidation. ChemCatChem, 2019, 11, 2288-2296.	3.7	26
106	Size-Controlled Pd Nanoparticles Loaded on Co₃O₄ Nanoparticles by Calcination for Enhanced CO Oxidation. ACS Applied Nano Materials, 2020, 3, 486-495.	5.0	26
107	Dopantâ€Driven Positive Reinforcement in Exâ€Solution Process: New Strategy to Develop Highly Capable and Durable Catalytic Materials. Advanced Materials, 2020, 32, e2003983.	21.0	26
108	First principles calculations of methylamine and methanol adsorption on hydroxylated quartz (0001). Surface Science, 2008, 602, 2478-2485.	1.9	25

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109	A Tailored Catalyst for the Sustainable Conversion of Glycerol to Acrolein: Mechanistic Aspect of Sequential Dehydration. ChemSusChem, 2014, 7, 2193-2201.	6.8	25
110	Design of an Ultrastable and Highly Active Ceria Catalyst for CO Oxidation by Rare-Earth- and Transition-Metal Co-Doping. ACS Catalysis, 2020, 10, 14877-14886.	11.2	23
111	Design principles of noble metal-free electrocatalysts for hydrogen production in alkaline media: combining theory and experiment. Nanoscale Advances, 2021, 3, 6797-6826.	4.6	23
112	Effect of caffeic acid adsorption in controlling the morphology of gold nanoparticles: role of surface coverage and functional groups. Physical Chemistry Chemical Physics, 2016, 18, 27775-27783.	2.8	22
113	Polymer Interface-Dependent Morphological Transition toward Two-Dimensional Porous Inorganic Nanocoins as an Ultrathin Multifunctional Layer for Stable Lithiumâ€“Sulfur Batteries. Journal of the American Chemical Society, 2021, 143, 15644-15652.	13.7	22
114	Energy and dose dependence of proton-irradiation damage in graphene. RSC Advances, 2015, 5, 31861-31865.	3.6	21
115	Electrocatalysts with Increased Activity for Coelectrolysis of Steam and Carbon Dioxide in Solid Oxide Electrolyzer Cells. ACS Catalysis, 2019, 9, 967-976.	11.2	21
116	Multidentate thia-crown ethers as hyper-crosslinked macroporous adsorbent resins for the efficient Pd/Pt recovery and separation from highly acidic spent automotive catalyst leachate. Chemical Engineering Journal, 2021, 424, 130379.	12.7	21
117	Chemical speciation of adsorbed glycine on metal surfaces. Journal of Chemical Physics, 2011, 135, 034703.	3.0	20
118	Enantiospecific Chemisorption of Amino Acids on Step Decorated Chiral Cu Surfaces. Topics in Catalysis, 2012, 55, 243-259.	2.8	20
119	Exploring crystal phase and morphology in the TiO 2 supporting materials used for visible-light driven plasmonic photocatalyst. Applied Catalysis B: Environmental, 2016, 198, 91-99.	20.2	20
120	Cold welding of gold nanoparticles on mica substrate: Self-adjustment and enhanced diffusion. Scientific Reports, 2016, 6, 32951.	3.3	20
121	High-performance Fe 5 C 2 @CMK-3 nanocatalyst for selective and high-yield production of gasoline-range hydrocarbons. Journal of Catalysis, 2017, 349, 66-74.	6.2	20
122	Catalytic decomposition of N2O on Pd Cu alloy catalysts: A density functional theory study. Applied Surface Science, 2020, 510, 145349.	6.1	20
123	Ultrathin and Bifunctional Polymer-Nanolayer-Embedded Separator to Simultaneously Alleviate Li Dendrite Growth and Polysulfide Crossover in Liâ€“S Batteries. ACS Applied Energy Materials, 2021, 4, 611-622.	5.1	20
124	Intermediates for catalytic reduction of CO2 on p-block element surfaces. Journal of Industrial and Engineering Chemistry, 2021, 96, 236-242.	5.8	20
125	Boosting Support Reducibility and Metal Dispersion by Exposed Surface Atom Control for Highly Active Supported Metal Catalysts. ACS Catalysis, 2022, 12, 4402-4414.	11.2	19
126	Highly selective extraction of palladium from spent automotive catalyst acid leachate using novel alkylated dioxa-dithiacrown ether derivatives. Journal of Industrial and Engineering Chemistry, 2020, 89, 428-435.	5.8	18

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127	Disordered-Layer-Mediated Reverse Metalâ€“Oxide Interactions for Enhanced Photocatalytic Water Splitting. Nano Letters, 2021, 21, 5247-5253.	9.1	18
128	Exsolved metal-boosted active perovskite oxide catalyst for stable water gas shift reaction. Journal of Catalysis, 2021, 400, 148-159.	6.2	18
129	Key Roles of Trace Oxygen Treatment for Highâ€Performance Znâ€Ðoped CuI pâ€Channel Transistors. Advanced Electronic Materials, 2021, 7, .	5.1	17
130	Structure-activity relationship of VO /TiO2 catalysts for mercury oxidation: A DFT study. Applied Surface Science, 2021, 552, 149462.	6.1	17
131	In-situ exsolution of Ni nanoparticles to achieve an active and stable solid oxide fuel cell anode catalyst on A-site deficient La0.4Sr0.4Ti0.94Ni0.06O3-Î´. Journal of Industrial and Engineering Chemistry, 2021, 103, 264-274.	5.8	17
132	Engineering counter-ion-induced disorder of a highly doped conjugated polymer for high thermoelectric performance. Nano Energy, 2021, 90, 106604.	16.0	17
133	Tuning the Surface Chemistry of Chiral Cu(531)^S for Enhanced Enantiospecific Adsorption of Amino Acids. Journal of Physical Chemistry C, 2015, 119, 15195-15203.	3.1	16
134	Role of Halide Ions for Controlling Morphology of Copper Nanocrystals in Aqueous Solution. ChemistrySelect, 2017, 2, 4655-4661.	1.5	16
135	Oxidative Methane Conversion to Ethane on Highly Oxidized Pd/CeO₂ Catalysts Below 400â€‰Â°C. ChemSusChem, 2020, 13, 677-681.	6.8	16
136	Identifying the electrocatalytic active sites of a Ru-based catalyst with high Faraday efficiency in CO₂-saturated media for an aqueous Znâ€“CO₂ system. Journal of Materials Chemistry A, 2020, 8, 14927-14934.	10.3	16
137	Concurrent promotion of phase transition and bimetallic nanocatalyst exsolution in perovskite oxides driven by Pd doping to achieve highly active bifunctional fuel electrodes for reversible solid oxide electrochemical cells. Applied Catalysis B: Environmental, 2022, 314, 121517.	20.2	16
138	Kinetic and Mechanistic Insights into the All-Solid-State Z-Schematic System. Journal of Physical Chemistry C, 2014, 118, 29583-29590.	3.1	15
139	Surface Roughening Strategy for Highly Efficient Bifunctional Electrocatalyst: Combination of Atomic Layer Deposition and Anion Exchange Reaction. Small Methods, 2022, 6, e2101308.	8.6	15
140	Quantum Dots of [Na₄Cs₆PbBr₄]⁸⁺, Water Stable in Zeolite X, Luminesce Sharply in the Green. Advanced Materials, 2020, 32, e2001868.	21.0	14
141	Nb-TiO2 nanotubes as catalyst supports with high activity and durability for oxygen reduction. Applied Surface Science, 2020, 521, 146330.	6.1	14
142	Investigation of the adsorption of amino acids on Pd(111): A density functional theory study. Applied Surface Science, 2014, 301, 199-207.	6.1	13
143	Understanding the Reaction Mechanism of Glycerol Hydrogenolysis over a CuCr₂O₄ Catalyst. ChemSusChem, 2017, 10, 442-454.	6.8	13
144	Tuning the electronic state of metal/graphene catalysts for the control of catalytic activity via N- and B-doping into graphene. Chemical Communications, 2018, 54, 7147-7150.	4.1	13

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145	Improved CO Oxidation via Surface Stabilization of Ceria Nanoparticles Induced by Rare-Earth Metal Dopants. ACS Applied Nano Materials, 2019, 2, 6473-6481.	5.0	13
146	Unprecedented electrocatalytic oxygen evolution performances by cobalt-incorporated molybdenum carbide microflowers with controlled charge re-distribution. Journal of Materials Chemistry A, 2021, 9, 1770-1783.	10.3	13
147	Strain Effects on the Surface Chemistry of La0.7Sr0.3MnO3. ECS Transactions, 2011, 35, 2097-2104.	0.5	12
148	Direct access to aggregation-free and small intermetallic nanoparticles in ordered, large-pore mesoporous carbon for an electrocatalyst. RSC Advances, 2016, 6, 88255-88264.	3.6	12
149	Probing One-Dimensional Oxygen Vacancy Channels Driven by Cationâ€“Anion Double Ordering in Perovskites. Nano Letters, 2020, 20, 8353-8359.	9.1	12
150	Effective Screening Route for Highly Active and Selective Metalâ^'Nitrogenâ€Doped Carbon Catalysts in CO₂ Electrochemical Reduction. Small, 2021, 17, e2103705.	10.0	12
151	Precise Modulation of Tripleâ€Phase Boundaries towards a Highly Functional Exsolved Catalyst for Dry Reforming of Methane under a Dilutionâ€Free System. Angewandte Chemie - International Edition, 2022, 61, .	13.8	12
152	Radial alignment of c-channel nanorods in 3D porous TiO2 for eliciting enhanced Li storage performance. Chemical Communications, 2015, 51, 15019-15022.	4.1	11
153	Aqueous Synthesis of 14â€15â€Membered Crown Ethers with Mixed O, N and S Heteroatoms: Experimental and Theoretical Binding Studies with Platinumâ€Group Metals. ChemPlusChem, 2019, 84, 210-221.	2.8	11
154	Enhancing Thermocatalytic Activities by Upshifting the dâ€Band Center of Exsolved Coâ€Niâ€Fe Ternary Alloy Nanoparticles for the Dry Reforming of Methane. Angewandte Chemie, 2021, 133, 16048-16055.	2.0	11
155	Alleviating inhibitory effect of H2 on low-temperature water-gas shift reaction activity of Pt/CeO2 catalyst by forming CeO2 nano-patches on Pt nano-particles. Applied Catalysis B: Environmental, 2022, 305, 121038.	20.2	11
156	Observation of crystalline changes of titanium dioxide during lithium insertion by visible spectrum analysis. Physical Chemistry Chemical Physics, 2017, 19, 13140-13146.	2.8	10
157	Effects of Hydrogen on the Stacking Orientation of Bilayer Graphene Grown on Copper. Chemistry of Materials, 2020, 32, 10357-10364.	6.7	10
158	Validation of defect association energy on modulating oxygen ionic conductivity in low temperature solid oxide fuel cell. Journal of Power Sources, 2020, 480, 229106.	7.8	10
159	Development of Ni-based alloy catalysts to improve the sulfur poisoning resistance of Ni/YSZ anodes in SOFCs. Catalysis Science and Technology, 2020, 10, 4544-4552.	4.1	10
160	Atomic layer deposition-triggered hierarchical core/shell stable bifunctional electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2021, 9, 21132-21141.	10.3	10
161	Synergistic coupling ensuing cobalt phosphosulfide encapsulated by heteroatom-doped two-dimensional graphene shell as an excellent catalyst for oxygen electroreduction. Chemical Engineering Journal, 2021, 423, 130233.	12.7	10
162	A platinum catalyst deposited on a zirconia support for the design of lithiumâ€“oxygen batteries with enhanced cycling ability. Chemical Communications, 2017, 53, 11767-11770.	4.1	9

#	Article	IF	Citations
163	Computational approaches to the exsolution phenomenon in perovskite oxides with a view to design highly durable and active anodes for solid oxide fuel cells. Korean Journal of Chemical Engineering, 2020, 37, 1295-1305.	2.7	9
164	A stable and active three-dimensional carbon based trimetallic electrocatalyst for efficient overall wastewater splitting. International Journal of Hydrogen Energy, 2021, 46, 30762-30779.	7.1	9
165	Tuning reaction pathways of peroxymonosulfate-based advanced oxidation process via defect engineering. Cell Reports Physical Science, 2021, 2, 100550.	5.6	9
166	Effect of B-Cation Doping on Oxygen Vacancy Formation and Migration in LaBO₃: A Density Functional Theory Study. Journal of the Korean Ceramic Society, 2015, 52, 331-337.	2.3	9
167	Systematic Approach to Designing a Highly Efficient Coreâ€“Shell Electrocatalyst for N₂O Reduction. ACS Catalysis, 2021, 11, 15089-15097.	11.2	9
168	Role of an Interface for Hydrogen Production Reaction over Size-Controlled Supported Metal Catalysts. ACS Catalysis, 2022, 12, 8082-8093.	11.2	9
169	Tunable lithium storage properties of metal lithium titanates by stoichiometric modulation. Electrochemistry Communications, 2016, 64, 26-29.	4.7	8
170	Insights into the Li Diffusion Dynamics and Nanostructuring of H₂Ti₁₂O₂₅ To Enhance Its Li Storage Performance. ACS Applied Materials & Interfaces, 2016, 8, 12186-12193.	8.0	8
171	Enantiospecific Adsorption and Decomposition of Cysteine Enantiomers on the Chiral Cu{421}^R Surface. Journal of Physical Chemistry C, 2019, 123, 20829-20837.	3.1	8
172	First-Principles Study of Enhanced Oxygen Incorporation Near the Grain Boundary on Yttria-Stabilized Zirconia. Science of Advanced Materials, 2016, 8, 196-200.	0.7	8
173	Density functional theory study of NOx adsorption on alkaline earth metal oxide and transition metal surfaces. Korean Journal of Chemical Engineering, 2019, 36, 1258-1266.	2.7	7
174	Room-Temperature-Processed Amorphous Sn-In-O Electron Transport Layer for Perovskite Solar Cells. Materials, 2020, 13, 32.	2.9	7
175	Adsorption differences between low coverage enantiomers of alanine on the chiral Cu{421}^R surface. Physical Chemistry Chemical Physics, 2017, 19, 13562-13570.	2.8	6
176	Pdâ€“Cu alloy catalyst synthesized by citric acid-assisted galvanic displacement reaction for N2O reduction. Journal of Applied Electrochemistry, 2020, 50, 395-405.	2.9	6
177	The association between L1 skeletal muscle index derived from routine CT and in-hospital mortality in CAP patients in the ED. American Journal of Emergency Medicine, 2021, 42, 49-54.	1.6	6
178	Probing an Interfacial Ionic Pairingâ€Induced Molecular Dipole Effect in Ionovoltaic System. Small Methods, 2021, 5, e2100323.	8.6	6
179	Structural changes of hydrotalcite-based Co-containing mixed oxides with calcination temperature and their effects on NOx adsorption: A combined experimental and DFT study. Chemical Engineering Journal, 2022, 437, 135209.	12.7	6
180	Utilization of an Isovalent Doping Strategy in Cobalt-Free Ferrites for Highly Active and Stable Solid Oxide Fuel Cell Cathodes. ACS Applied Energy Materials, 2022, 5, 3417-3425.	5.1	6

#	Article	IF	Citations
181	Computational Screening of Single-Metal-Atom Embedded Graphene-Based Electrocatalysts Stabilized by Heteroatoms. Frontiers in Chemistry, 2022, 10, 873609.	3.6	6
182	Metalâ€“nitrogenâ€“carbon-based nanozymes: advances and perspectives. Journal Physics D: Applied Physics, 2022, 55, 323001.	2.8	6
183	Transparent Conductive Films Derived from Single-Walled Aluminosilicate Nanotubes. ACS Applied Nano Materials, 2019, 2, 6677-6689.	5.0	5
184	Plasmaâ€Assisted Catalytic Effects of TiO₂/Macroporous SiO₂ on the Synthesis of Light Hydrocarbons from Methane. ChemCatChem, 2020, 12, 5067-5075.	3.7	5
185	Universal prediction of strain footprints via simulation, statistics, and machine learning: low-Î£ grain boundaries. Acta Materialia, 2021, 211, 116850.	7.9	5
186	Universally characterizing atomistic strain via simulation, statistics, and machine learning: Low-angle grain boundaries. Acta Materialia, 2022, 226, 117635.	7.9	5
187	Titanium Monoxide with in Situ Grown Rutile TiO₂ Nanothorns as a Heterostructured Job-Sharing Anode Material for Lithium-Ion Storage. ACS Applied Energy Materials, 2022, 5, 5691-5703.	5.1	5
188	Manipulating the Resistive Switching in Epitaxial SrCoO_{2.5} Thin-Film-Based Memristors by Strain Engineering. ACS Applied Electronic Materials, 2022, 4, 2729-2738.	4.3	5
189	Molecular alignment descriptor to search for the most stable adsorption sites of saturated cyclic compounds on metal surfaces. Applied Surface Science, 2021, 544, 148904.	6.1	4
190	Optimization of Scaffold for a Successful Hydrogel-Seeding Method for Vascular Tissue Engineering. Key Engineering Materials, 2007, 342-343, 333-336.	0.4	3
191	Sponge-Like Li₄Ti₅O₁₂ Constructed on Graphene for High Li Electroactivities. Journal of Nanoscience and Nanotechnology, 2017, 17, 588-593.	0.9	3
192	A new etching process for zinc oxide with etching rate and crystal plane control: experiment, calculation, and membrane application. Nanoscale, 2019, 11, 12337-12346.	5.6	3
193	Improved Catalytic Activity of the High-Temperature Water Gas Shift Reaction on Metal-Exsolved La0.9Ni0.05Fe0.95O3 by Controlling Reduction Time. ChemEngineering, 2021, 5, 28.	2.4	3
194	Tuning electrochemical water oxidation towards ozone evolution with heterojunction anode architectures. Journal of Materials Chemistry A, 2022, 10, 17132-17141.	10.3	3
195	A review of smart exsolution catalysts for the application of gas phase reactions. Ceramist, 2020, 23, 211-230.	0.1	2
196	Investigation of LiO2 Adsorption on LaB1â^'xBâ€²xO3(001) for Li-Air Battery Applications: A Density Functional Theory Study. Journal of the Korean Ceramic Society, 2016, 53, 306-311.	2.3	2
197	Precise Modulation of Tripleâ€Phase Boundaries towards a Highly Functional Exsolved Catalyst for Dry Reforming of Methane under a Dilutionâ€Free System. Angewandte Chemie, 2022, 134, .	2.0	2
198	Safe and Ecological Refluxing with a Closedâ€Loop Air Cooling System. ChemSusChem, 2017, 10, 461-465.	6.8	1

#	Article	IF	Citations
199	2â€(Nâ€Methylbenzyl)pyridine: A Potential Liquid Organic Hydrogen Carrier with Fast H₂ Release and Stable Activity in Consecutive Cycles. ChemSusChem, 2018, 11, 641-641.	6.8	1
200	Catalytic Materials: Dopantâ€Driven Positive Reinforcement in Exâ€Solution Process: New Strategy to Develop Highly Capable and Durable Catalytic Materials (Adv. Mater. 46/2020). Advanced Materials, 2020, 32, 2070342.	21.0	1
201	Anion Exchange Membrane Water Electrolysis: Highâ€Efficiency Anionâ€Exchange Membrane Water Electrolyzer Enabled by Ternary Layered Double Hydroxide Anode (Small 28/2021). Small, 2021, 17, 2170147.	10.0	1
202	Dynamic Surface Evolution of Metal Oxides for Autonomous Adaptation to Catalytic Reaction Environments. Advanced Materials, 2023, 35, .	21.0	1
203	Characterization of the Gel-Spun Tubular Scaffold for Cardiovascular Tissue Engineering. Key Engineering Materials, 2007, 342-343, 321-324.	0.4	0
204	Active site structure of a lithium phosphate catalyst for the isomerization of 2,3-epoxybutane to 3-buten-2-ol. Molecular Catalysis, 2018, 445, 133-141.	2.0	0
205	Rational Design of Transition Metal Coâ€doped Ceria Catalysts for Lowâ€Temperature CO Oxidation. ChemCatChem, 2019, 11, 2225-2225.	3.7	0