Hongming Wang

List of Publications by Year
in descending order

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		186265	114465
101	4,255	28	63
papers	citations	h-index	g-index

105	105	105	5692
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Engineering bunched Pt-Ni alloy nanocages for efficient oxygen reduction in practical fuel cells. Science, 2019, 366, 850-856.	12.6	1,005
2	Anodic Hydrazine Oxidation Assists Energyâ€Efficient Hydrogen Evolution over a Bifunctional Cobalt Perselenide Nanosheet Electrode. Angewandte Chemie - International Edition, 2018, 57, 7649-7653.	13.8	352
3	Energy-saving hydrogen production coupling urea oxidation over a bifunctional nickel-molybdenum nanotube array. Nano Energy, 2019, 60, 894-902.	16.0	250
4	Bismuth Oxides with Enhanced Bismuthâ€“Oxygen Structure for Efficient Electrochemical Reduction of Carbon Dioxide to Formate. ACS Catalysis, 2020, 10, 743-750.	11.2	234
5	Preparation of nickel-iron hydroxides by microorganism corrosion for efficient oxygen evolution. Nature Communications, 2020, 11, 5075.	12.8	226
6	An Earthâ€Abundant Catalystâ€Based Seawater Photoelectrolysis System with 17.9% Solarâ€toâ€Hydrogen Efficiency. Advanced Materials, 2018, 30, e1707261.	21.0	189
7	Recent Advances in Carbon Dioxide Capture, Fixation, and Activation by using Nâ€Heterocyclic Carbenes. ChemSusChem, 2014, 7, 962-998.	6.8	162
8	Squaraine dyes: The hierarchical synthesis and its application in optical detection. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2017, 31, 84-113.	11.6	87
9	On the role of water in selective hydrogenation of cinnamaldehyde to cinnamyl alcohol on PtFe catalysts. Journal of Catalysis, 2018, 364, 192-203.	6.2	87
10	Ru/Al2O3 catalyzed CO2 hydrogenation: Oxygen-exchange on metal-support interfaces. Journal of Catalysis, 2018, 367, 194-205.	6.2	74
11	A DFT Study of Dielsâ^'Alder Reactions ofo-Quinone Methides and Various Substituted Ethenes:Â Selectivity and Reaction Mechanism. Journal of Organic Chemistry, 2005, 70, 4910-4917.	3.2	72
12	Nickel(II) Complexes with Three-Dimensional Geometry Î±-Diimine Ligands: Synthesis and Catalytic Activity toward Copolymerization of Norbornene. Organometallics, 2013, 32, 2291-2299.	2.3	63
13	An Earth-Abundant Tungstenâ€“Nickel Alloy Electrocatalyst for Superior Hydrogen Evolution. ACS Applied Nano Materials, 2018, 1, 1228-1235.	5.0	57
14	A New Mechanism for Ethanol Oxidation Mediated by Cytochrome P450 2E1: Bulk Polarity of the Active Site Makes a Difference. ChemBioChem, 2007, 8, 277-281.	2.6	53
15	A multi-responsive squaraine-based â€œturn onâ€•fluorescent chemosensor for highly sensitive detection of Al3+, Zn2+ and Cd2+ in aqueous media and its biological application. Sensors and Actuators B: Chemical, 2017, 249, 386-394.	7.8	52
16	Adsorption of CO2 on Cu2O (111) oxygen-vacancy surface: First-principles study. Chemical Physics Letters, 2013, 568-569, 84-89.	2.6	49
17	A colorimetric and fluorescent chemosensor for the highly sensitive detection of CO2 gas: experiment and DFT calculation. Sensors and Actuators B: Chemical, 2016, 233, 76-82.	7.8	45
18	Corrosion formation and phase transformation of nickel-iron hydroxide nanosheets array for efficient water oxidation. Nano Research, 2021, 14, 4528-4533.	10.4	42

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19	A squaraine-based colorimetric and F^{â^'} dependent chemosensor for recyclable CO₂ gas detection: highly sensitive offâ€“onâ€“off response. Chemical Communications, 2015, 51, 13802-13805.	4.1	37
20	Two dimensional covalent organic framework materials for chemical fixation of carbon dioxide: excellent repeatability and high selectivity. Dalton Transactions, 2017, 46, 10780-10785.	3.3	37
21	Reversible Specific Vapoluminescence Behavior in Pure Organic Crystals through Hydrogenâ€Bonding Docking Strategy. Advanced Optical Materials, 2019, 7, 1801549.	7.3	37
22	Hâ€Đimeric Nanospheres of Amphipathic Squaraine Dye with an 81.2% Photothermal Conversion Efficiency for Photothermal Therapy. Advanced Functional Materials, 2022, 32, .	14.9	37
23	Dâ€“A-Type fluorophores with efficient dual-state emission for imaging at ultralow concentration. Materials Chemistry Frontiers, 2022, 6, 155-162.	5.9	35
24	Mesogens Mediated Self-Assembly in Applications of Bulk Heterojunction Solar Cells Based on a Conjugated Polymer with Narrow Band Gap. Macromolecules, 2011, 44, 2698-2706.	4.8	34
25	Light-induced BiOBr nanosheets accelerated highly regioselective intermolecular trifluoromethylation/arylation of alkenes to synthesize CF3-containing aza-heterocycles. Tetrahedron, 2015, 71, 4344-4351.	1.9	34
26	The synergistic mechanism of graphene and MoS₂ for hydrogen generation: insights from density functional theory. Physical Chemistry Chemical Physics, 2015, 17, 11375-11381.	2.8	32
27	Physisorption of adenine DNA nucleosides on zigzag and armchair single-walled carbon nanotubes: A first-principles study. Physical Review B, 2009, 79, .	3.2	31
28	Photocatalytic reduction of CO₂coupled with selective alcohol oxidation under ambient conditions. Catalysis Science and Technology, 2015, 5, 4800-4805.	4.1	29
29	The adsorption of CO₂, H₂CO₃, HCO₃^{â^'} and CO₃^{2â^'} on Cu₂O (111) surface: Firstâ€principles study. International Journal of Quantum Chemistry, 2012, 112, 2532-2540.	2.0	28
30	Effect of Hydrotalcites Interlayer Water on Pt-Catalyzed Aqueous-Phase Selective Hydrogenation of Cinnamaldehyde. ACS Applied Materials & Interfaces, 2020, 12, 2516-2524.	8.0	28
31	Tetraphenylethylene-incorporated squaraine dyes: structural and theoretical insights into the diverse emission behaviors in solution and solid state. Journal of Materials Chemistry C, 2020, 8, 4549-4556.	5.5	27
32	A DFT study of the enantioselective reduction of prochiral ketones promoted by pinene-derived amino alcohols. Tetrahedron: Asymmetry, 2009, 20, 1020-1026.	1.8	26
33	Theoretical Study of the Mechanism of Acetaldehyde Hydroxylation by Compound I of CYP2E1. Journal of Physical Chemistry B, 2006, 110, 6154-6159.	2.6	25
34	Molecular dynamics study of dipalmitoylphosphatidylcholine lipid layer self-assembly onto a single-walled carbon nanotube. Nano Research, 2009, 2, 945-954.	10.4	25
35	The Conversion among Various B4C Clusters:Â A Density Functional Theoretical Study. Journal of Physical Chemistry A, 2007, 111, 704-709.	2.5	24
36	Conformation-induced self-assembly of rubrene on Au(111) surface. Applied Physics Letters, 2009, 95, 093102.	3.3	24

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37	Ni Supported on LaFeO3 Perovskites for Methane Steam Reforming: On the Promotional Effects of Plasma Treatment in H2â€“Ar Atmosphere. Topics in Catalysis, 2017, 60, 831-842.	2.8	24
38	Role of oxygen incorporation in electronic properties of rubrene films. Applied Physics Letters, 2010, 97, 032106.	3.3	22
39	Theoretical insights into copper(<scp>i</scp>)â€“NHC-catalyzed Câ€“H carboxylation of terminal alkynes with CO₂: the reaction mechanisms and the roles of NHC. RSC Advances, 2014, 4, 32457-32466.	3.6	21
40	Photocatalytic Reduction of CO2 to CH3OH Coupling with the Oxidation of Amine to Imine. Catalysis Letters, 2018, 148, 2382-2390.	2.6	21
41	Constructing nickelâ€“iron oxyhydroxides integrated with iron oxides by microorganism corrosion for oxygen evolution. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2202812119.	7.1	21
42	A phenyl-removal strategy for accessing an efficient dual-state emitter in the red/NIR region guided by TDDFT calculations. Journal of Materials Chemistry C, 2020, 8, 13621-13626.	5.5	20
43	A theoretical investigation of the enantioselective reduction of prochiral ketones promoted by chiral diamines. Tetrahedron: Asymmetry, 2008, 19, 779-787.	1.8	18
44	A Theoretical Investigation Into the 1,3â€Dipolar Cycloaddition of Azidotrimethylsilane Onto Nanographene. ChemPhysChem, 2012, 13, 741-750.	2.1	17
45	Controlling Crystal Structures and Multiple Thermoâ€and Vapochromic Behaviors of Benzimidazoleâ€Based Squaraine Dyes by Molecular Design and Solvent Adjustment. Chemistry - A European Journal, 2018, 24, 13205-13212.	3.3	17
46	Temperature Controlling Polymorphism and Polymorphic Interconversion in Sublimation Crystallization of 5-Methoxy-salicylaldhyde Azine. Crystal Growth and Design, 2019, 19, 320-327.	3.0	17
47	The reduction of carbon dioxide in iron biocatalyst catalytic hydrogenation reaction: a theoretical study. Dalton Transactions, 2013, 42, 11186.	3.3	16
48	THE PECULIAR ELECTRONIC STRUCTURE OF THE DI-METALLOCENE: THE EVIDENCE FOR THE STABILITY AND THE CHARACTER OF METALâ€“METAL BOND. Journal of Theoretical and Computational Chemistry, 2006, 05, 461-473.	1.8	15
49	Density functional study of the l-proline-catalyzed Î±-aminoxylation of aldehydes reaction: The reaction mechanism and selectivity. Structural Chemistry, 2006, 17, 97-104.	2.0	15
50	Theoretical evidence for a two-step mechanism in the functionalization single-walled carbon nanotube by aryl diazonium salts: Comparing effect of different substituent group. Chemical Physics Letters, 2009, 477, 176-178.	2.6	14
51	Chiral supramolecular self-assembly of rubrene. Physical Chemistry Chemical Physics, 2010, 12, 14682.	2.8	14
52	DFT study on activation of carbon dioxide by (tBuArN)3Mî€,N (Mî€Nb,V,Ta): the electronic structure and activity. Dalton Transactions, 2011, 40, 3576.	3.3	14
53	Self-assembled mesogens modified fullerene for efficiently stable bulk heterojunction solar cells. Solar Energy Materials and Solar Cells, 2012, 97, 34-42.	6.2	14
54	Understanding the mechanism of poly(3-hexylthiophene)-b-poly(4-vinylpyridine) as a nanostructuring compatibilizer for improving the performance of poly(3-hexylthiophene)/ZnO-based hybrid solar cells. Journal of Materials Chemistry A, 2013, 1, 10881.	10.3	13

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55	Experimental Investigation and Theoretical Calculation of Molecular Architectures on Carbazole for Photovoltaics. Journal of Physical Chemistry C, 2013, 117, 9581-9589.	3.1	13
56	Synthesis of 1,3-Dihydrobenzo[c]thiophene-imines via Tandem Reactions of o-(1-Alkynyl)benzamides and Lawesson's Reagent. Synthesis, 2012, 44, 920-926.	2.3	12
57	Oxidation Ability of CO₂ for the Transformation of Cinnamic Aldehydes to Acids Catalyzed by Nâ€Heterocyclic Carbene: Combining Computational and Experimental Studies. ChemCatChem, 2012, 4, 1943-1951.	3.7	12
58	The reaction mechanism of incorporation of carbon dioxide into o-alkynylaniline derivatives catalyzed by silver salt. Computational and Theoretical Chemistry, 2015, 1058, 34-40.	2.5	12
59	Highly efficient crystal red fluorescent 1,2-squaraine dyes with excellent biocompatibility and bioimaging. Dyes and Pigments, 2019, 162, 654-661.	3.7	11
60	Benzocaine-incorporated smart 1,3-squaraine dyes: Red emission, excellent stability and cell bioimaging. Dyes and Pigments, 2020, 173, 107977.	3.7	11
61	A squaraine-based fluorescence turn on chemosensor with ICT character for highly selective and sensitive detection of Al3+ in aqueous media and its application in living cell imaging. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 228, 117590.	3.9	11
62	The reaction mechanisms of boron amidinate and small molecules: a density function theory study. Research on Chemical Intermediates, 2012, 38, 113-133.	2.7	10
63	Donorâ€“acceptorâ€integrated conjugated polymers based on carbazole[3,4â€c:5,6â€c]bis[1,2,5]thiadiazole with tight Ï€â€“Ï€ stacking for photovoltaics. Journal of Polymer Science Part A, 2013, 51, 565-574.	2.3	10
64	A squaraine-based sensor for colorimetric detection of CO2 gas in an aqueous medium through an unexpected recognition mechanism: experiment and DFT calculation. Analytical Methods, 2017, 9, 6830-6838.	2.7	10
65	Electronic and steric effects of bis(oxazolinyl)pyridine ligands on asymmetric Dielsâ€“Alder reactions. Journal of Molecular Catalysis A, 2008, 285, 128-131.	4.8	9
66	Tuning the photovoltaic parameters of thiophene-linked donorâ€“acceptor liquid crystalline copolymers for organic photovoltaics. Polymer Chemistry, 2012, 3, 710.	3.9	9
67	Modulation of the molecular geometry of carbazolebis(thiadiazole)-based conjugated polymers for photovoltaic applications. Polymer Chemistry, 2013, 4, 2480.	3.9	9
68	Synthesis of Secondary Aldimines from the Hydrogenative Cross-Coupling of Nitriles and Amines over Al₂O₃-Supported Ni Catalysts. ACS Catalysis, 2019, 9, 8413-8423.	11.2	9
69	Excited state intramolecular single proton transfer mechanism of pigment yellow 101 in solid state: Experiment and DFT calculation. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 217, 93-100.	3.9	9
70	FIRST-PRINCIPLES STUDY OF OXYGEN-VACANCY Cu2O (111) SURFACE. Journal of Theoretical and Computational Chemistry, 2012, 11, 1261-1280.	1.8	8
71	One-step synthesis of alkyl 2-chloropyrimido[1,2-a]benzimidazole-3-carboxylates under catalyst-free: combined experimental and computational studies. Tetrahedron Letters, 2015, 56, 5071-5075.	1.4	8
72	Highly sensitive detection of carbon dioxide by a pyrimido[1,2-a]benzimidazole derivative: combining experimental and theoretical studies. Analyst, The, 2015, 140, 5099-5104.	3.5	8

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73	A bionic paired hydrogen-bond strategy for extending organic Ï€-conjugation to regulate emission. Journal of Materials Chemistry C, 2021, 9, 9142-9146.	5.5	8
74	Accessing conjugated and twisted structures for efficient dual-state emission fluorophore and its sensitive lysosomal imaging. Dyes and Pigments, 2022, 201, 110243.	3.7	8
75	Synthesis and characterisation of anthracene-based fluorophore and its interactions with selected metal ions. Inorganica Chimica Acta, 2010, 363, 2325-2332.	2.4	7
76	The regioselectivity and synthetic mechanism of 1,2-benzimidazole squaraines: combined experimental and theoretical studies. RSC Advances, 2013, 3, 18055.	3.6	7
77	Theoretical design of sandwich two-dimensional structures for photocatalysts and nano-optoelectronic devices. Journal of Materials Science, 2018, 53, 8274-8284.	3.7	7
78	CuMoxW(1-x)O4 Solid Solution Display Visible Light Photoreduction of CO2 to CH3OH Coupling with Oxidation of Amine to Imine. Nanomaterials, 2020, 10, 1303.	4.1	7
79	Dual-state emission and solvatofluorochromism properties of facile squaraine dyes with cis-3,5-dimethylpiperidine. Journal of Luminescence, 2021, 233, 117882.	3.1	7
80	The molecular structure and vibrational spectra of corrolazine metal complexes (CzM) by density functional theory. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2006, 64, 795-800.	3.9	6
81	Selective Decomposition of Alkyl Hydroperoxides on H-Type Zeolite via a Concerted Approach. Journal of Physical Chemistry B, 2009, 113, 1418-1422.	2.6	6
82	A novel ditopic ligand derived from 8-hydroxyquinoline: Synthesis, characterisation, and its coordination chemistry with selected metal ions. Inorganica Chimica Acta, 2012, 383, 132-136.	2.4	6
83	The Activation and Reduction of N₂ by Single/Doubleâ€Atom Electrocatalysts: A Firstâ€Principle Study. ChemistrySelect, 2021, 6, 1787-1794.	1.5	6
84	DFT study of N-Heterocyclic Olefins-catalyzed carboxylative cyclization of CO₂ with alkynol: A CO₂-promoted hydrogen abstraction mechanism. Journal of Theoretical and Computational Chemistry, 2016, 15, 1650058.	1.8	5
85	Designed synthesis of Co salenâ€based metalated crystalline polymers. Journal of Polymer Science Part A, 2019, 57, 641-647.	2.3	5
86	An alkali-free approach for recyclable detection and accurate quantification of carbon dioxide gas. Sensors and Actuators B: Chemical, 2017, 244, 252-258.	7.8	4
87	Preparation and catalytic use of the solid acid SO42â˜'/Fe2O3â€“MxOy for the reaction of crotonaldehyde with n-butanol. Journal of Molecular Catalysis A, 2006, 248, 70-75.	4.8	3
88	Density functional theory study the reduction of carbon dioxide by terminal TaH complexes. Computational and Theoretical Chemistry, 2011, 967, 129-135.	2.5	3
89	Photophysical properties of a hydrazone-based switch: A TDDFT study and comparison. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 94, 222-227.	3.9	3
90	DFT study of the formation mechanism of anthraquinone from the reaction of NO₂ and anthracene on NaCl clusters: the role of NaNO₃. Environmental Sciences: Processes and Impacts, 2016, 18, 1500-1507.	3.5	3

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91	Tuning solid state emission of semisquaraines via trimming central-ring structures. Dyes and Pigments, 2020, 173, 107926.	3.7	3
92	Density Functional Theory Investigation of Product Distribution following Reaction of Acrylonitrile on Diamond (001)-2Ã—1 Surface. Journal of Physical Chemistry B, 2006, 110, 23395-23402.	2.6	2
93	H2 adsorption and dissociation on PdO(101) films supported on rutile TiO2 (110) facet: elucidating the support effect by DFT calculations. Journal of Molecular Modeling, 2016, 22, 204.	1.8	2
94	Efficient dinitrogen fixation on porous covalent organic framework/carbon nanotubes hybrid at low overpotential. Functional Materials Letters, 2021, 14, 2151027.	1.2	2
95	Spectroscopic, Conductivity and Molecular Modeling Studies of the Inclusion Complex of TNDAB with Cucurbit[7]uril in Aqueous Solution. Zeitschrift Fur Physikalische Chemie, 2014, 228, 939-951.	2.8	1
96	Quantum chemical insight into the reactivity of 1,3-dipoles on coronene as model for nanographenes. Russian Journal of Physical Chemistry A, 2016, 90, 173-182.	0.6	1
97	First-Principles Study of the Carbon-Oxygen Nanotubes. Journal of Computational and Theoretical Nanoscience, 2008, 5, 608-613.	0.4	0
98	Functionalization of diamond (001)â€2 Ã— 1 surface by cycloaddition of 1,3â€cyclohexadiene: A theoretical study. International Journal of Quantum Chemistry, 2010, 110, 1748-1755.	2.0	0
99	A Dft Study of Styrene Polymerization using Neutral (2Z, 4E)-4-(Methylimino)Pent-2-En-2-Ol Nickel(Ii). Progress in Reaction Kinetics and Mechanism, 2011, 36, 18-26.	2.1	0
100	Spectroscopic and Molecular Modeling Studies of the Inclusion Complex of TNBAB with Î²-cyclodextrin in Aqueous Solution. Zeitschrift Fur Physikalische Chemie, 2011, 225, 859-873.	2.8	0
101	Adjusting crystal morphology and emission behavior of organic fluorophore via the synergistic effect of proton and anion. Dyes and Pigments, 2021, 195, 109696.	3.7	0