

# Hongming Wang

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98 papers	2,729 citations	24 h-index	50 g-index
105 ext. papers	3,449 ext. citations	5.6 avg, IF	5.47 L-index

#	Paper	IF	Citations
98	Engineering bunched Pt-Ni alloy nanocages for efficient oxygen reduction in practical fuel cells. <i>Science</i> , <b>2019</b> , 366, 850-856	33.3	545
97	Anodic Hydrazine Oxidation Assists Energy-Efficient Hydrogen Evolution over a Bifunctional Cobalt Perselenide Nanosheet Electrode. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 7649-7653	16.4	241
96	Recent advances in carbon dioxide capture, fixation, and activation by using N-heterocyclic carbenes. <i>ChemSusChem</i> , <b>2014</b> , 7, 962-98	8.3	136
95	Bismuth Oxides with Enhanced Bismuth-Oxygen Structure for Efficient Electrochemical Reduction of Carbon Dioxide to Formate. <i>ACS Catalysis</i> , <b>2020</b> , 10, 743-750	13.1	126
94	Energy-saving hydrogen production coupling urea oxidation over a bifunctional nickel-molybdenum nanotube array. <i>Nano Energy</i> , <b>2019</b> , 60, 894-902	17.1	125
93	An Earth-Abundant Catalyst-Based Seawater Photoelectrolysis System with 17.9% Solar-to-Hydrogen Efficiency. <i>Advanced Materials</i> , <b>2018</b> , 30, e1707261	24	110
92	Preparation of nickel-iron hydroxides by microorganism corrosion for efficient oxygen evolution. <i>Nature Communications</i> , <b>2020</b> , 11, 5075	17.4	94
91	A DFT study of Diels-Alder reactions of o-quinone methides and various substituted ethenes: selectivity and reaction mechanism. <i>Journal of Organic Chemistry</i> , <b>2005</b> , 70, 4910-7	4.2	65
90	Squaraine dyes: The hierarchical synthesis and its application in optical detection. <i>Journal of Photochemistry and Photobiology C: Photochemistry Reviews</i> , <b>2017</b> , 31, 84-113	16.4	63
89	On the role of water in selective hydrogenation of cinnamaldehyde to cinnamyl alcohol on PtFe catalysts. <i>Journal of Catalysis</i> , <b>2018</b> , 364, 192-203	7.3	55
88	Nickel(II) Complexes with Three-Dimensional Geometry $\pi$ -Diimine Ligands: Synthesis and Catalytic Activity toward Copolymerization of Norbornene. <i>Organometallics</i> , <b>2013</b> , 32, 2291-2299	3.8	54
87	Ru/Al <sub>2</sub> O <sub>3</sub> catalyzed CO <sub>2</sub> hydrogenation: Oxygen-exchange on metal-support interfaces. <i>Journal of Catalysis</i> , <b>2018</b> , 367, 194-205	7.3	50
86	A new mechanism for ethanol oxidation mediated by cytochrome P450 2E1: bulk polarity of the active site makes a difference. <i>ChemBioChem</i> , <b>2007</b> , 8, 277-81	3.8	47
85	A multi-responsive squaraine-based turn-on fluorescent chemosensor for highly sensitive detection of Al <sup>3+</sup> , Zn <sup>2+</sup> and Cd <sup>2+</sup> in aqueous media and its biological application. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 249, 386-394	8.5	44
84	A colorimetric and fluorescent chemosensor for the highly sensitive detection of CO <sub>2</sub> gas: experiment and DFT calculation. <i>Sensors and Actuators B: Chemical</i> , <b>2016</b> , 233, 76-82	8.5	37
83	Adsorption of CO <sub>2</sub> on Cu <sub>2</sub> O (111) oxygen-vacancy surface: First-principles study. <i>Chemical Physics Letters</i> , <b>2013</b> , 568-569, 84-89	2.5	35
82	An Earth-Abundant Tungsten-Nickel Alloy Electrocatalyst for Superior Hydrogen Evolution. <i>ACS Applied Nano Materials</i> , <b>2018</b> , 1, 1228-1235	5.6	34

81	Mesogens Mediated Self-Assembly in Applications of Bulk Heterojunction Solar Cells Based on a Conjugated Polymer with Narrow Band Gap. <i>Macromolecules</i> , <b>2011</b> , 44, 2698-2706	5.5	34
80	A squaraine-based colorimetric and F(-) dependent chemosensor for recyclable CO <sub>2</sub> gas detection: highly sensitive off-on-off response. <i>Chemical Communications</i> , <b>2015</b> , 51, 13802-5	5.8	30
79	Light-induced BiOBr nanosheets accelerated highly regioselective intermolecular trifluoromethylation/arylation of alkenes to synthesize CF <sub>3</sub> -containing aza-heterocycles. <i>Tetrahedron</i> , <b>2015</b> , 71, 4344-4351	2.4	30
78	The synergistic mechanism of graphene and MoS <sub>2</sub> for hydrogen generation: insights from density functional theory. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 11375-81	3.6	28
77	Physisorption of adenine DNA nucleosides on zigzag and armchair single-walled carbon nanotubes: A first-principles study. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	28
76	Two dimensional covalent organic framework materials for chemical fixation of carbon dioxide: excellent repeatability and high selectivity. <i>Dalton Transactions</i> , <b>2017</b> , 46, 10780-10785	4.3	25
75	The adsorption of CO <sub>2</sub> , H <sub>2</sub> CO <sub>3</sub> , HCO <sub>3</sub> <sup>-</sup> and CO <sub>3</sub> <sup>2-</sup> on Cu <sub>2</sub> O (111) surface: First-principles study. <i>International Journal of Quantum Chemistry</i> , <b>2012</b> , 112, 2532-2540	2.1	25
74	Conformation-induced self-assembly of rubrene on Au(111) surface. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 093102	3.4	24
73	A DFT study of the enantioselective reduction of prochiral ketones promoted by pinene-derived amino alcohols. <i>Tetrahedron: Asymmetry</i> , <b>2009</b> , 20, 1020-1026		24
72	The conversion among various B <sub>4</sub> C clusters: a density functional theoretical study. <i>Journal of Physical Chemistry A</i> , <b>2007</b> , 111, 704-9	2.8	24
71	Theoretical study of the mechanism of acetaldehyde hydroxylation by compound I of CYP2E1. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 6154-9	3.4	24
70	Role of oxygen incorporation in electronic properties of rubrene films. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 032106	3.4	22
69	Molecular dynamics study of dipalmitoylphosphatidylcholine lipid layer self-assembly onto a single-walled carbon nanotube. <i>Nano Research</i> , <b>2009</b> , 2, 945-954	10	22
68	Reversible Specific Vapoluminescence Behavior in Pure Organic Crystals through Hydrogen-Bonding Docking Strategy. <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1801549	8.1	20
67	Photocatalytic reduction of CO <sub>2</sub> coupled with selective alcohol oxidation under ambient conditions. <i>Catalysis Science and Technology</i> , <b>2015</b> , 5, 4800-4805	5.5	18
66	Theoretical insights into copper(I)-NHC-catalyzed C≡C carboxylation of terminal alkynes with CO <sub>2</sub> : the reaction mechanisms and the roles of NHC. <i>RSC Advances</i> , <b>2014</b> , 4, 32457-32466	3.7	18
65	Ni Supported on LaFeO <sub>3</sub> Perovskites for Methane Steam Reforming: On the Promotional Effects of Plasma Treatment in H <sub>2</sub> /Ar Atmosphere. <i>Topics in Catalysis</i> , <b>2017</b> , 60, 831-842	2.3	17
64	A theoretical investigation into the 1,3-dipolar cycloaddition of azidotrimethylsilane onto nanographene. <i>ChemPhysChem</i> , <b>2012</b> , 13, 741-50	3.2	17

63	A theoretical investigation of the enantioselective reduction of prochiral ketones promoted by chiral diamines. <i>Tetrahedron: Asymmetry</i> , <b>2008</b> , 19, 779-787		17
62	Photocatalytic Reduction of CO <sub>2</sub> to CH <sub>3</sub> OH Coupling with the Oxidation of Amine to Imine. <i>Catalysis Letters</i> , <b>2018</b> , 148, 2382-2390	2.8	15
61	The reduction of carbon dioxide in iron biocatalyst catalytic hydrogenation reaction: a theoretical study. <i>Dalton Transactions</i> , <b>2013</b> , 42, 11186-93	4.3	15
60	THE PECULIAR ELECTRONIC STRUCTURE OF THE DI-METALLOCENE: THE EVIDENCE FOR THE STABILITY AND THE CHARACTER OF METAL-METAL BOND. <i>Journal of Theoretical and Computational Chemistry</i> , <b>2006</b> , 05, 461-473	1.8	15
59	Density functional study of the L-proline-catalyzed $\alpha$ -aminoxylation of aldehydes reaction: The reaction mechanism and selectivity. <i>Structural Chemistry</i> , <b>2006</b> , 17, 97-104	1.8	15
58	Controlling Crystal Structures and Multiple Thermo- and Vapochromic Behaviors of Benzimidazole-Based Squaraine Dyes by Molecular Design and Solvent Adjustment. <i>Chemistry - A European Journal</i> , <b>2018</b> , 24, 13205-13212	4.8	14
57	Chiral supramolecular self-assembly of rubrene. <i>Physical Chemistry Chemical Physics</i> , <b>2010</b> , 12, 14682-5	3.6	14
56	DFT study on activation of carbon dioxide by (tBuArN)3M?N (M=Nb,V,Ta): the electronic structure and activity. <i>Dalton Transactions</i> , <b>2011</b> , 40, 3576-83	4.3	14
55	Tetraphenylethylene-incorporated squaraine dyes: structural and theoretical insights into the diverse emission behaviors in solution and solid state. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 4549-4556	7.1	13
54	Self-assembled mesogens modified fullerene for efficiently stable bulk heterojunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2012</b> , 97, 34-42	6.4	13
53	Theoretical evidence for a two-step mechanism in the functionalization single-walled carbon nanotube by aryl diazonium salts: Comparing effect of different substituent group. <i>Chemical Physics Letters</i> , <b>2009</b> , 477, 176-178	2.5	13
52	Effect of Hydrotalcites Interlayer Water on Pt-Catalyzed Aqueous-Phase Selective Hydrogenation of Cinnamaldehyde. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 2516-2524	9.5	13
51	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. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 10881	13	12
50	The reaction mechanism of incorporation of carbon dioxide into o-alkynylaniline derivatives catalyzed by silver salt. <i>Computational and Theoretical Chemistry</i> , <b>2015</b> , 1058, 34-40	2	11
49	Synthesis of 1,3-Dihydrobenzo[c]thiophene-imines via Tandem Reactions of o-(1-Alkynyl)benzamides and Lawesson's Reagent. <i>Synthesis</i> , <b>2012</b> , 44, 920-926	2.9	11
48	Corrosion formation and phase transformation of nickel-iron hydroxide nanosheets array for efficient water oxidation. <i>Nano Research</i> , <b>2021</b> , 14, 4528	10	11
47	Oxidation Ability of CO <sub>2</sub> for the Transformation of Cinnamic Aldehydes to Acids Catalyzed by N-Heterocyclic Carbene: Combining Computational and Experimental Studies. <i>ChemCatChem</i> , <b>2012</b> , 4, 1943-1951	5.2	10
46	Experimental Investigation and Theoretical Calculation of Molecular Architectures on Carbazole for Photovoltaics. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 9581-9589	3.8	10

45	The reaction mechanisms of boron amidinate and small molecules: a density function theory study. <i>Research on Chemical Intermediates</i> , <b>2012</b> , 38, 113-133	2.8	9
44	Donor-acceptor-integrated conjugated polymers based on carbazole[3,4-c:5,6-c']bis[1,2,5]thiadiazole with tight $\pi$ -stacking for photovoltaics. <i>Journal of Polymer Science Part A</i> , <b>2013</b> , 51, 565-574	2.5	9
43	A squaraine-based sensor for colorimetric detection of CO <sub>2</sub> gas in an aqueous medium through an unexpected recognition mechanism: experiment and DFT calculation. <i>Analytical Methods</i> , <b>2017</b> , 9, 6830-6838	2.2	9
42	Tuning the photovoltaic parameters of thiophene-linked donor-acceptor liquid crystalline copolymers for organic photovoltaics. <i>Polymer Chemistry</i> , <b>2012</b> , 3, 710	4.9	9
41	Electronic and steric effects of bis(oxazolinyl)pyridine ligands on asymmetric Diels-Alder reactions. <i>Journal of Molecular Catalysis A</i> , <b>2008</b> , 285, 128-131		9
40	Highly efficient crystal red fluorescent 1,2-squaraine dyes with excellent biocompatibility and bioimaging. <i>Dyes and Pigments</i> , <b>2019</b> , 162, 654-661	4.6	9
39	FIRST-PRINCIPLES STUDY OF OXYGEN-VACANCY Cu <sub>2</sub> O (111) SURFACE. <i>Journal of Theoretical and Computational Chemistry</i> , <b>2012</b> , 11, 1261-1280	1.8	8
38	A phenyl-removal strategy for accessing an efficient dual-state emitter in the red/NIR region guided by TDDFT calculations. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 13621-13626	7.1	8
37	Temperature Controlling Polymorphism and Polymorphic Interconversion in Sublimation Crystallization of 5-Methoxy-salicylaldehyde Azine. <i>Crystal Growth and Design</i> , <b>2019</b> , 19, 320-327	3.5	8
36	Highly sensitive detection of carbon dioxide by a pyrimido[1,2-a]benzimidazole derivative: combining experimental and theoretical studies. <i>Analyst</i> , <b>2015</b> , 140, 5099-104	5	7
35	The regioselectivity and synthetic mechanism of 1,2-benzimidazole squaraines: combined experimental and theoretical studies. <i>RSC Advances</i> , <b>2013</b> , 3, 18055	3.7	7
34	Modulation of the molecular geometry of carbazolebis(thiadiazole)-based conjugated polymers for photovoltaic applications. <i>Polymer Chemistry</i> , <b>2013</b> , 4, 2480	4.9	7
33	D $\pi$ A-Type fluorophores with efficient dual-state emission for imaging at ultralow concentration. <i>Materials Chemistry Frontiers</i> , <b>2022</b> , 6, 155-162	7.8	7
32	Benzocaine-incorporated smart 1,3-squaraine dyes: Red emission, excellent stability and cell bioimaging. <i>Dyes and Pigments</i> , <b>2020</b> , 173, 107977	4.6	7
31	Excited state intramolecular single proton transfer mechanism of pigment yellow 101 in solid state: Experiment and DFT calculation. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2019</b> , 217, 93-100	4.4	6
30	One-step synthesis of alkyl 2-chloropyrimido[1,2-a]benzimidazole-3-carboxylates under catalyst-free: combined experimental and computational studies. <i>Tetrahedron Letters</i> , <b>2015</b> , 56, 5071-5075	2.75	6
29	Synthesis of Secondary Aldimines from the Hydrogenative Cross-Coupling of Nitriles and Amines over Al <sub>2</sub> O <sub>3</sub> -Supported Ni Catalysts. <i>ACS Catalysis</i> , <b>2019</b> , 9, 8413-8423	13.1	6
28	A novel ditopic ligand derived from 8-hydroxyquinoline: Synthesis, characterisation, and its coordination chemistry with selected metal ions. <i>Inorganica Chimica Acta</i> , <b>2012</b> , 383, 132-136	2.7	6

27	Selective decomposition of alkyl hydroperoxides on H-type zeolite via a concerted approach. <i>Journal of Physical Chemistry B</i> , <b>2009</b> , 113, 1418-22	3.4	6
26	Synthesis and characterisation of anthracene-based fluorophore and its interactions with selected metal ions. <i>Inorganica Chimica Acta</i> , <b>2010</b> , 363, 2325-2332	2.7	6
25	The molecular structure and vibrational spectra of corrolazine metal complexes (CzM) by density functional theory. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2006</b> , 64, 795-800	4.4	6
24	H-Dimeric Nanospheres of Amphipathic Squaraine Dye with an 81.2% Photothermal Conversion Efficiency for Photothermal Therapy. <i>Advanced Functional Materials</i> , 2113098	15.6	6
23	A squaraine-based fluorescence turn on chemosensor with ICT character for highly selective and sensitive detection of Al in aqueous media and its application in living cell imaging. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2020</b> , 228, 117590	4.4	5
22	Theoretical design of sandwich two-dimensional structures for photocatalysts and nano-optoelectronic devices. <i>Journal of Materials Science</i> , <b>2018</b> , 53, 8274-8284	4.3	4
21	DFT study of N-Heterocyclic Olefins-catalyzed carboxylative cyclization of CO <sub>2</sub> with alkynol: A CO <sub>2</sub> -promoted hydrogen abstraction mechanism. <i>Journal of Theoretical and Computational Chemistry</i> , <b>2016</b> , 15, 1650058	1.8	4
20	An alkali-free approach for recyclable detection and accurate quantification of carbon dioxide gas. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 244, 252-258	8.5	3
19	Photophysical properties of a hydrazone-based switch: A TDDFT study and comparison. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2012</b> , 94, 222-7	4.4	3
18	Density functional theory study the reduction of carbon dioxide by terminal TaH complexes. <i>Computational and Theoretical Chemistry</i> , <b>2011</b> , 967, 129-135	2	3
17	Preparation and catalytic use of the solid acid SO <sub>4</sub> <sup>2-</sup> /Fe <sub>2</sub> O <sub>3</sub> /MxOy for the reaction of crotonaldehyde with n-butanol. <i>Journal of Molecular Catalysis A</i> , <b>2006</b> , 248, 70-75		3
16	CuMoWO Solid Solution Display Visible Light Photoreduction of CO to CHOH Coupling with Oxidation of Amine to Imine. <i>Nanomaterials</i> , <b>2020</b> , 10,	5.4	3
15	Tuning solid state emission of semisquaraines via trimming central-ring structures. <i>Dyes and Pigments</i> , <b>2020</b> , 173, 107926	4.6	3
14	DFT study of the formation mechanism of anthraquinone from the reaction of NO and anthracene on NaCl clusters: the role of NaNO. <i>Environmental Sciences: Processes and Impacts</i> , <b>2016</b> , 18, 1500-1507	4.3	2
13	Designed synthesis of Co salen-based metalated crystalline polymers. <i>Journal of Polymer Science Part A</i> , <b>2019</b> , 57, 641-647	2.5	2
12	Accessing conjugated and twisted structures for efficient dual-state emission fluorophore and its sensitive lysosomal imaging. <i>Dyes and Pigments</i> , <b>2022</b> , 201, 110243	4.6	2
11	Quantum chemical insight into the reactivity of 1,3-dipoles on coronene as model for nanographenes. <i>Russian Journal of Physical Chemistry A</i> , <b>2016</b> , 90, 173-182	0.7	1
10	Density functional theory investigation of product distribution following reaction of acrylonitrile on diamond (001)-2 x 1 surface. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 23395-402	3.4	1

9	H <sub>2</sub> adsorption and dissociation on PdO(101) films supported on rutile TiO <sub>2</sub> (110) facet: elucidating the support effect by DFT calculations. <i>Journal of Molecular Modeling</i> , <b>2016</b> , 22, 204	2	1
8	Dual-state emission and solvatofluorochromism properties of facile squaraine dyes with cis-3,5-dimethylpiperidine. <i>Journal of Luminescence</i> , <b>2021</b> , 233, 117882	3.8	0
7	Efficient dinitrogen fixation on porous covalent organic framework/carbon nanotubes hybrid at low overpotential. <i>Functional Materials Letters</i> , <b>2021</b> , 14, 2151027	1.2	0
6	The Activation and Reduction of N <sub>2</sub> by Single/Double-Atom Electrocatalysts: A First-Principle Study. <i>ChemistrySelect</i> , <b>2021</b> , 6, 1787-1794	1.8	0
5	A bionic paired hydrogen-bond strategy for extending organic $\pi$ -conjugation to regulate emission. <i>Journal of Materials Chemistry C</i> ,	7.1	0
4	Constructing nickel-iron oxyhydroxides integrated with iron oxides by microorganism corrosion for oxygen evolution.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119, e2202812119	11.5	0
3	A Dft Study of Styrene Polymerization using Neutral (2Z, 4E)-4-(Methylimino)Pent-2-En-2-OL Nickel(II). <i>Progress in Reaction Kinetics and Mechanism</i> , <b>2011</b> , 36, 18-26	0.5	
2	Spectroscopic and Molecular Modeling Studies of the Inclusion Complex of TNBAB with $\beta$ -cyclodextrin in Aqueous Solution. <i>Zeitschrift Fur Physikalische Chemie</i> , <b>2011</b> , 225, 859-873	3.1	
1	Adjusting crystal morphology and emission behavior of organic fluorophore via the synergistic effect of proton and anion. <i>Dyes and Pigments</i> , <b>2021</b> , 195, 109696	4.6	