

# Xian-Tai Zhou

## List of Publications by Year in descending order

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92  
papers

2,861  
citations

172457

29  
h-index

197818

49  
g-index

93  
all docs

93  
docs citations

93  
times ranked

2692  
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly efficient synthesis of cyclic carbonates from epoxides catalyzed by salen aluminum complexes with built-in $\text{CO}_2$ capture capability under mild conditions. <i>Green Chemistry</i> , 2014, 16, 1496-1506.	9.0	125
2	Charged Metalloporphyrin Polymers for Cooperative Synthesis of Cyclic Carbonates from $\text{CO}_2$ under Ambient Conditions. <i>ChemSusChem</i> , 2017, 10, 2534-2541.	6.8	122
3	Metalloporphyrin Polymers with Intercalated Ionic Liquids for Synergistic $\text{CO}_2$ Fixation via Cyclic Carbonate Production. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 1074-1082.	6.7	115
4	State-of-the-Art Aluminum Porphyrin-Based Heterogeneous Catalysts for the Chemical Fixation of $\text{CO}_2$ into Cyclic Carbonates at Ambient Conditions. <i>ChemCatChem</i> , 2017, 9, 767-773.	3.7	111
5	Photocatalytic Degradation of Methyl Orange over Metalloporphyrins Supported on TiO <sub>2</sub> Degussa P25. <i>Molecules</i> , 2012, 17, 1149-1158.	3.8	103
6	Efficient Selective Removal of Pb(II) by Using 6-Aminothiouracil-Modified Zr-Based Organic Frameworks: From Experiments to Mechanisms. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 7162-7178.	8.0	99
7	Function-oriented ionic polymers having high-density active sites for sustainable carbon dioxide conversion. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9172-9182.	10.3	91
8	New bi-functional zinc catalysts based on robust and easy-to-handle N-chelating ligands for the synthesis of cyclic carbonates from epoxides and $\text{CO}_2$ under mild conditions. <i>Green Chemistry</i> , 2014, 16, 4179-4189.	9.0	88
9	Metalloporphyrin-Based Ionic Porous Polymers as Bifunctional Catalysts for the Conversion of $\text{CO}_2$ into Valuable Chemicals. <i>ChemSusChem</i> , 2017, 10, 1526-1533.	6.8	77
10	Metal- and solvent-free synthesis of cyclic carbonates from epoxides and $\text{CO}_2$ in the presence of graphite oxide and ionic liquid under mild conditions: A kinetic study. <i>Carbon</i> , 2015, 82, 1-11.	10.3	75
11	Highly efficient selective oxidation of alcohols to carbonyl compounds catalyzed by ruthenium (III) meso-tetraphenylporphyrin chloride in the presence of molecular oxygen. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2007, 17, 6364-6368.	2.2	72
12	Selective oxidation of sulfides to sulfoxides catalyzed by ruthenium (III) meso-tetraphenylporphyrin chloride in the presence of molecular oxygen. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2007, 17, 4650-4653.	2.2	70
13	Photocatalytic Properties and Mechanistic Insights into Visible Light-Promoted Aerobic Oxidation of Sulfides to Sulfoxides via Tin Porphyrin-Based Porous Aromatic Frameworks. <i>Advanced Synthesis and Catalysis</i> , 2018, 360, 4402-4411.	4.3	67
14	Cooperative Catalytic Activation of Si-H Bonds: $\text{CO}_2$ -Based Synthesis of Formamides from Amines and Hydrosilanes under Mild Conditions. <i>ChemSusChem</i> , 2017, 10, 1224-1232.	6.8	66
15	Biomimetic kinetics and mechanism of cyclohexene epoxidation catalyzed by metalloporphyrins. <i>Chemical Engineering Journal</i> , 2010, 156, 411-417.	12.7	63
16	Imidazolium-based ionic liquid decorated zinc porphyrin catalyst for converting $\text{CO}_2$ into five-membered heterocyclic molecules. <i>Sustainable Energy and Fuels</i> , 2018, 2, 125-132.	4.9	59
17	Aerobic oxidative cleavage of cinnamaldehyde to benzaldehyde catalyzed by metalloporphyrins under mild conditions. <i>Catalysis Communications</i> , 2009, 10, 828-832.	3.3	55
18	Highly efficient aerobic oxidation of oximes to carbonyl compounds catalyzed by metalloporphyrins in the presence of benzaldehyde. <i>Tetrahedron Letters</i> , 2010, 51, 613-617.	1.4	50

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19	Hybridization of CuO with Bi <sub>2</sub> MoO <sub>6</sub> Nanosheets as a Surface Multifunctional Photocatalyst for Toluene Oxidation under Solar Irradiation. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 2259-2268.	8.0	50
20	Enhancement of the visible-light absorption and charge mobility in a zinc porphyrin polymer/g-C <sub>3</sub> N <sub>4</sub> heterojunction for promoting the oxidative coupling of amines. <i>Applied Catalysis B: Environmental</i> , 2021, 285, 119863.	20.2	49
21	Enzymatic-like mediated olefins epoxidation by molecular oxygen under mild conditions. <i>Tetrahedron Letters</i> , 2007, 48, 2691-2695.	1.4	45
22	Remarkable enhancement of aerobic epoxidation reactivity for olefins catalyzed by $\frac{1}{4}$ -oxo-bisiron(III) porphyrins under ambient conditions. <i>Tetrahedron Letters</i> , 2009, 50, 6601-6605.	1.4	44
23	Baeyer-Villiger oxidation of ketones catalyzed by iron(III) <i>meso</i> -tetraphenylporphyrin chloride in the presence of molecular oxygen. <i>Journal of Porphyrins and Phthalocyanines</i> , 2008, 12, 94-100.	0.8	43
24	Solvent-free selective oxidation of primary and secondary alcohols catalyzed by ruthenium-bis(benzimidazole)pyridinedicarboxylate complex using hydrogen peroxide as an oxidant. <i>Tetrahedron Letters</i> , 2013, 54, 3882-3885.	1.4	40
25	Highly efficient mixed-metal spinel cobaltite electrocatalysts for the oxygen evolution reaction. <i>Chinese Journal of Catalysis</i> , 2020, 41, 1855-1863.	14.0	39
26	Enhanced selective removal of Pb(II) by modification low-cost bio-sorbent: Experiment and theoretical calculations. <i>Journal of Cleaner Production</i> , 2021, 316, 128372.	9.3	38
27	Efficient oxidative coupling of amines to imines catalyzed by manganese(III) <i>meso</i> -tetraphenylporphyrin chloride under ambient conditions. <i>Catalysis Communications</i> , 2010, 12, 202-206.	3.3	37
28	Green synthesis of natural benzaldehyde from cinnamon oil catalyzed by $\beta$ -hydroxypropyl- $\beta$ -cyclodextrin. <i>Tetrahedron</i> , 2010, 66, 9888-9893.	1.9	34
29	Highly efficient controllable oxidation of alcohols to aldehydes and acids with sodium periodate catalyzed by water-soluble metalloporphyrins as biomimetic catalyst. <i>Bioorganic and Medicinal Chemistry</i> , 2010, 18, 8144-8149.	3.0	30
30	Remarkable differences between benzaldehyde and isobutyraldehyde as coreductant in the performance toward the iron(III) porphyrins-catalyzed aerobic Baeyer-Villiger oxidation of cyclohexanone, kinetic and mechanistic features. <i>Tetrahedron</i> , 2013, 69, 4241-4246.	1.9	30
31	Mechanism into selective oxidation of cinnamaldehyde using $\beta$ -cyclodextrin polymer as phase-transfer catalyst. <i>Tetrahedron</i> , 2012, 68, 5912-5919.	1.9	29
32	Insight into the cocatalyst effect of 4A molecular sieve on Sn(II) porphyrin-catalyzed $\beta$ -V oxidation of cyclohexanone. <i>Catalysis Today</i> , 2016, 264, 191-197.	4.4	29
33	Recyclable bifunctional aluminum salen catalyst for CO <sub>2</sub> fixation: the efficient formation of five-membered heterocyclic compounds. <i>Science China Chemistry</i> , 2017, 60, 979-989.	8.2	29
34	Highly efficient selective oxidation of sulfides to sulfoxides by montmorillonite-immobilized metalloporphyrins in the presence of molecular oxygen. <i>Catalysis Communications</i> , 2014, 53, 29-32.	3.3	28
35	Direct aerobic liquid phase epoxidation of propylene catalyzed by Mn(III) porphyrin under mild conditions: evidence for the existence of both peroxide and Mn(IV)-oxo species from in situ characterizations. <i>RSC Advances</i> , 2015, 5, 30014-30020.	3.6	27
36	Click-Based Porous Ionic Polymers with Intercalated High-Density Metalloporphyrin for Sustainable CO <sub>2</sub> Transformation. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 20269-20277.	3.7	26

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37	Sustainable synthesis of multifunctional porous metalloporphyrin polymers for efficient carbon dioxide transformation under mild conditions. <i>Chemical Engineering Science</i> , 2021, 232, 116380.	3.8	26
38	TiO <sub>2</sub> nanotube arrays sensitized by copper (II) porphyrins with efficient interfacial charge transfer for the photocatalytic degradation of 4-nitrophenol. <i>Journal of Hazardous Materials</i> , 2022, 422, 126869.	12.4	25
39	Cocatalytic effect of cobalt acetate on aerobic cyclohexene oxidation catalyzed by manganese porphyrin. <i>Catalysis Communications</i> , 2012, 27, 169-173.	3.3	24
40	Mimicking the environment of living organisms to achieve the oxidative coupling of amines to imines catalyzed by water-soluble metalloporphyrins. <i>Tetrahedron Letters</i> , 2012, 53, 3369-3373.	1.4	24
41	A Carbazolyl Porphyrin-Based Conjugated Microporous Polymer for Metal-Free Photocatalytic Aerobic Oxidation Reactions. <i>ChemCatChem</i> , 2020, 12, 3523-3529.	3.7	24
42	Synthesis and cytotoxic evaluation of 1-carboxamide and 1-amino side chain substituted $\beta$ -carboline. <i>European Journal of Medicinal Chemistry</i> , 2010, 45, 5513-5519.	5.5	23
43	Highly Efficient Oxidative Cleavage of Carbon-Carbon Double Bond over <i>meso</i> -Tetraphenyl Cobalt Porphyrin Catalyst in the Presence of Molecular Oxygen. <i>Chinese Journal of Chemistry</i> , 2012, 30, 2103-2108.	4.9	23
44	Metalloporphyrin-mediated aerobic oxidation of hydrocarbons in cumene: Co-substrate specificity and mechanistic consideration. <i>Molecular Catalysis</i> , 2017, 440, 36-42.	2.0	23
45	A novel system comprising metalloporphyrins and cyclohexene for the biomimetic aerobic oxidation of toluene. <i>Catalysis Communications</i> , 2018, 109, 76-79.	3.3	23
46	Efficient Solvent-free Synthesis of Chloropropene Carbonate from the Coupling Reaction of CO <sub>2</sub> and Epichlorohydrin Catalyzed by Magnesium Porphyrins as Chlorophyll-like Catalysts. <i>Chinese Journal of Chemical Engineering</i> , 2011, 19, 446-451.	3.5	22
47	Immobilization of $\beta$ -Cyclodextrin as Insoluble $\beta$ -Cyclodextrin Polymer and Its Catalytic Performance. <i>Chinese Journal of Chemical Engineering</i> , 2012, 20, 784-792.	3.5	22
48	Cytochrome P450 Enzyme-Copper Phosphate Hybrid Nano-Flowers with Superior Catalytic Performances for Selective Oxidation of Sulfides. <i>Chinese Journal of Chemistry</i> , 2017, 35, 693-698.	4.9	21
49	Zinc porphyrin-based electron donor-acceptor-conjugated microporous polymer for the efficient photocatalytic oxidative coupling of amines under visible light. <i>Applied Catalysis A: General</i> , 2020, 590, 117352.	4.3	21
50	Tannic Acid as a Polyphenol Material-Assisted Synthesis of Cyclic Carbonates Using CO <sub>2</sub> as a Feedstock: Kinetic Characteristic and Mechanism Studies. <i>Chinese Journal of Chemistry</i> , 2017, 35, 659-664.	4.9	20
51	Promoting the aerobic Baeyer-Villiger oxidation of ketones over carboxylic multi-walled carbon nanotubes. <i>Molecular Catalysis</i> , 2017, 438, 152-158.	2.0	19
52	Hybrid method integrating machine learning and particle swarm optimization for smart chemical process operations. <i>Frontiers of Chemical Science and Engineering</i> , 2022, 16, 274-287.	4.4	19
53	Cobalt Porphyrin Immobilized on Montmorillonite: A Highly Efficient and Reusable Catalyst for Aerobic Oxidation of Alcohols to Carbonyl Compounds. <i>Chinese Journal of Catalysis</i> , 2012, 33, 1906-1912.	14.0	18
54	Mechanistic Understanding towards the Role of Cyclohexene in Enhancing the Efficiency of Manganese Porphyrin-Catalyzed Aerobic Oxidation of Diphenylmethane. <i>European Journal of Inorganic Chemistry</i> , 2018, 2018, 2666-2674.	2.0	16

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55	Manganese porphyrin immobilized on montmorillonite: a highly efficient and reusable catalyst for the aerobic epoxidation of olefins under ambient conditions. <i>Journal of Porphyrins and Phthalocyanines</i> , 2012, 16, 1032-1039.	0.8	15
56	Enhanced catalytic activity and recyclability for oxidation of cinnamaldehyde catalysed by $\beta$ -cyclodextrin cross-linked with chitosan. <i>Supramolecular Chemistry</i> , 2013, 25, 233-245.	1.2	15
57	Transformation of carbon dioxide into valuable chemicals over bifunctional metallosalen catalysts bearing quaternary phosphonium salts. <i>Chinese Journal of Catalysis</i> , 2017, 38, 736-744.	14.0	15
58	Bioinspired Codoped TiO <sub>2</sub> for Carbon Dioxide Photocatalytic Reduction to Formic Acid under Visible Light Irradiation. <i>Chinese Journal of Chemistry</i> , 2018, 36, 538-544.	4.9	15
59	Ionic Liquid-Modified Co/ZSM-5 Catalyzed the Aerobic Oxidation of Cyclohexane: Toward Improving the Activity and Selectivity. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 19832-19838.	3.7	15
60	Preparation of cytochrome P450 enzyme-cobalt phosphate hybrid nano-flowers for oxidative coupling of benzylamine. <i>Enzyme and Microbial Technology</i> , 2019, 131, 109386.	3.2	15
61	Recyclable Pd supported catalysts with low loading for efficient epoxidation of olefins at ambient conditions. <i>Catalysis Communications</i> , 2016, 83, 78-81.	3.3	14
62	Self-assembled metalloporphyrins-inorganic hybrid flowers and their application to efficient epoxidation of olefins. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 2594-2605.	3.2	12
63	Biomimetic Aerobic Epoxidation of Alkenes Catalyzed by Cobalt Porphyrin under Ambient Conditions in the Presence of Sunflower Seeds Oil as a Co-Substrate. <i>ACS Omega</i> , 2020, 5, 4890-4899.	3.5	12
64	Cyclohexene Promoted Efficient Biomimetic Oxidation of Alcohols to Carbonyl Compounds Catalyzed by Manganese Porphyrin under Mild Conditions. <i>Chinese Journal of Chemistry</i> , 2020, 38, 458-464.	4.9	12
65	Enhanced oxygen transfer over bifunctional Mo-based oxametallacycle catalyst for epoxidation of propylene. <i>Journal of Colloid and Interface Science</i> , 2022, 611, 564-577.	9.4	12
66	Styrene-hydroxyethyl methacrylate copolymer microsphere immobilized porphyrinatomanganese(III) as a mild, reusable and highly efficient catalyst for epoxidation of cyclohexene with molecular oxygen. <i>Journal of Molecular Catalysis A</i> , 2010, 331, 29-34.	4.8	11
67	Zinc phthalocyanine as an efficient catalyst for halogen-free synthesis of formamides from amines via carbon dioxide hydrosilylation under mild conditions. <i>Chinese Journal of Catalysis</i> , 2017, 38, 1382-1389.	14.0	10
68	Acetylacetone as an oxygen activator to improve efficiency for aerobic oxidation of toluene and its derivatives by using cobalt meso-tetraphenylporphyrin. <i>New Journal of Chemistry</i> , 2020, 44, 10286-10291.	2.8	10
69	Oxygen Atom Transfer Mechanism for Vanadium-Oxo Porphyrin Complexes Mediated Aerobic Olefin Epoxidation. <i>Chinese Journal of Chemistry</i> , 2022, 40, 115-122.	4.9	10
70	A metal-free hydroxyl functionalized quaternary phosphine type ionic liquid polymer for cycloaddition of CO <sub>2</sub> and epoxides. <i>Dalton Transactions</i> , 2022, 51, 1303-1307.	3.3	10
71	Efficient selective oxidation of alcohols to carbonyl compounds catalyzed by Ru-terpyridine complexes with molecular oxygen. <i>Inorganic Chemistry Communication</i> , 2020, 112, 107544.	3.9	9
72	Mechanism and kinetics of the aerobic oxidation of benzyl alcohol to benzaldehyde catalyzed by cobalt porphyrin in a membrane microchannel reactor. <i>Chemical Engineering Science</i> , 2021, 245, 116847.	3.8	9

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73	$\beta$ -Cyclodextrin polymer promoted green synthesis of cinnamaldehyde to natural benzaldehyde in aqueous solution. <i>Supramolecular Chemistry</i> , 2012, 24, 379-384.	1.2	8
74	Ionic liquids modified cobalt/ZSM-5 as a highly efficient catalyst for enhancing the selectivity towards KA oil in the aerobic oxidation of cyclohexane. <i>Open Chemistry</i> , 2019, 17, 639-646.	1.9	8
75	Efficient catalytic oxidation of primary benzylic C H bonds with molecular oxygen catalyzed by cobalt porphyrins and N-hydroxyphthalimide (NHPI) in supercritical carbon dioxide. <i>Catalysis Communications</i> , 2021, 159, 106353.	3.3	8
76	Styrene-hydroxyethyl methacrylate copolymer-supported porphyrinatomanganese(III) complexes: synthesis and catalytic cyclohexane hydroxylation with molecular oxygen. <i>Transition Metal Chemistry</i> , 2010, 35, 627-632.	1.4	7
77	Kinetic and mechanism of the aqueous selective oxidation of sulfides to sulfoxides: insight into the cytochrome P450-like oxidative metabolic process. <i>Journal of Porphyrins and Phthalocyanines</i> , 2013, 17, 1104-1112.	0.8	7
78	Efficient and selective oxidation of alcohols to carbonyl compounds at room temperature by a ruthenium complex catalyst and hydrogen peroxide. <i>New Journal of Chemistry</i> , 2019, 43, 19415-19421.	2.8	7
79	Cerium(IV) Sulfate as a Cocatalyst for Promoting the Direct Epoxidation of Propylene by Ruthenium Porphyrin with Molecular Oxygen. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 19982-19988.	3.7	7
80	Highly efficient oxidation of diphenylmethane to benzophenone employing a novel ruthenium catalyst with tert-butylhydroperoxide under mild conditions. <i>Catalysis Communications</i> , 2013, 37, 60-63.	3.3	6
81	Oxidative cleavage of C=C bond of cinnamaldehyde to benzaldehyde in the presence of $\beta$ -cyclodextrin under mild conditions. <i>Supramolecular Chemistry</i> , 2012, 24, 247-254.	1.2	5
82	Dynamic Covalent Bonds of Si-OR and Si-OSi Enabled A Stiff Polymer to Heal and Recycle at Room Temperature. <i>Materials</i> , 2021, 14, 2680.	2.9	5
83	Biomimetic models of nitric oxide synthase for the oxidation of oximes to carbonyl compounds catalyzed by water-soluble manganese porphyrins in aqueous solution. <i>Journal of Porphyrins and Phthalocyanines</i> , 2011, 15, 211-216.	0.8	4
84	Highly Efficient Aerobic Oxidation of Cyclohexene Catalyzed by Iron(III) Porphyrins in Supercritical Carbon Dioxide. <i>ECS Journal of Solid State Science and Technology</i> , 2020, 9, 041014.	1.8	4
85	Substrate specificity in the biomimetic catalytic aerobic oxidation of styrene and cyclohexanone by metalloporphyrins: kinetics and mechanistic study. <i>Green Chemical Engineering</i> , 2021, 2, 217-223.	6.3	4
86	Advance in the Construction and Application of Cyclodextrin- Porphyrin Supramolecular System. <i>Chinese Journal of Organic Chemistry</i> , 2012, 32, 686.	1.3	4
87	Tubular metal organic frameworks from the curvature of 2D-honeycombed metal coordination. <i>Dalton Transactions</i> , 2020, 49, 2403-2406.	3.3	3
88	Facile Synthesis of Metalloporphyrins-Ba <sup>2+</sup> Composites as Recyclable and Efficient Catalysts for Olefins Epoxidation Reactions. <i>Chemical Research in Chinese Universities</i> , 2019, 35, 251-255.	2.6	2
89	Liquid-phase epoxidation of propylene with molecular oxygen by chloride manganese meso-tetraphenylporphyrins. <i>Chinese Journal of Chemical Engineering</i> , 2022, 48, 61-65.	3.5	1
90	Progress in the application of metalloporphyrins compounds in catalytic oxidation reactions. <i>Scientia Sinica Chimica</i> , 2022, 52, 1224-1238.	0.4	1

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91	Manganese porphyrin-mediated aerobic epoxidation of propylene with isoprene: A new strategy for simultaneously preparing propylene epoxide and isoprene monoxide. <i>Chinese Chemical Letters</i> , 2023, 34, 107658.	9.0	1
92	N-hydroxyphthalimide Catalyzed Epoxidation of Inactive Aliphatic Olefins with Air at Room Temperature. <i>Asian Journal of Organic Chemistry</i> , 0, , .	2.7	0