

# Zhongyu Yang

## List of Publications by Year in descending order

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67  
papers

3,133  
citations

186265  
28  
h-index

161849  
54  
g-index

70  
all docs

70  
docs citations

70  
times ranked

3712  
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural Insights into the Dynamic Process of $\beta_2$ -Adrenergic Receptor Signaling. <i>Cell</i> , 2015, 161, 1101-1111.	28.9	562
2	Technological advances in site-directed spin labeling of proteins. <i>Current Opinion in Structural Biology</i> , 2013, 23, 725-733.	5.7	262
3	Structural basis for nucleotide exchange in heterotrimeric G proteins. <i>Science</i> , 2015, 348, 1361-1365.	12.6	250
4	Pulsed ESR Dipolar Spectroscopy for Distance Measurements in Immobilized Spin Labeled Proteins in Liquid Solution. <i>Journal of the American Chemical Society</i> , 2012, 134, 9950-9952.	13.7	179
5	How Do Enzymes Orient When Trapped on Metal-Organic Framework (MOF) Surfaces?. <i>Journal of the American Chemical Society</i> , 2018, 140, 16032-16036.	13.7	138
6	The structure and dynamics of secretory component and its interactions with polymeric immunoglobulins. <i>ELife</i> , 2016, 5, .	6.0	86
7	Enhancing Enzyme Immobilization on Carbon Nanotubes via Metal-Organic Frameworks for Large-Substrate Biocatalysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 12133-12141.	8.0	82
8	An Approach towards the Measurement of Nanometer Range Distances Based on $\text{Cu}^{2+}$ Ions and ESR. <i>Journal of Physical Chemistry B</i> , 2010, 114, 6165-6174.	2.6	79
9	ESR spectroscopy identifies inhibitory $\text{Cu}^{2+}$ sites in a DNA-modifying enzyme to reveal determinants of catalytic specificity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, E993-1000.	7.1	70
10	Covalent Organic Framework Decorated with Vanadium as a New Platform for Prins Reaction and Sulfide Oxidation. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 3070-3079.	8.0	66
11	Mapping out the Degree of Freedom of Hosted Enzymes in Confined Spatial Environments. <i>CheM</i> , 2019, 5, 3184-3195.	11.7	62
12	On $\text{Cu(II)} \rightarrow \text{Cu(II)}$ distance measurements using pulsed electron-electron double resonance. <i>Journal of Magnetic Resonance</i> , 2007, 188, 337-343.	2.1	54
13	A triarylmethyl spin label for long-range distance measurement at physiological temperatures using $T_1$ relaxation enhancement. <i>Journal of Magnetic Resonance</i> , 2016, 269, 50-54.	2.1	50
14	Oriented Two-Dimensional Covalent Organic Framework Membranes with High Ion Flux and Smart Gating Nanofluidic Transport. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	50
15	Size-Tunable Metal-Organic Framework-Coated Magnetic Nanoparticles for Enzyme Encapsulation and Large-Substrate Biocatalysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 41794-41801.	8.0	47
16	Conformational selection and adaptation to ligand binding in T4 lysozyme cavity mutants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E4306-15.	7.1	46
17	Gum Arabic-Mediated Synthesis of Glyco-pea Protein Hydrolysate via Maillard Reaction Improves Solubility, Flavor Profile, and Functionality of Plant Protein. <i>Journal of Agricultural and Food Chemistry</i> , 2019, 67, 10195-10206.	5.2	46
18	Vanadium Docked Covalent-Organic Frameworks: An Effective Heterogeneous Catalyst for Modified Mannich-Type Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 4878-4888.	6.7	46

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19	Structure characteristics and functionality of water-soluble fraction from high-intensity ultrasound treated pea protein isolate. <i>Food Hydrocolloids</i> , 2022, 125, 107409.	10.7	46
20	Steric trapping reveals a cooperativity network in the intramembrane protease GlpG. <i>Nature Chemical Biology</i> , 2016, 12, 353-360.	8.0	45
21	Enzyme Immobilization on Graphite Oxide (GO) Surface via One-Pot Synthesis of GO/Metal-Organic Framework Composites for Large-Substrate Biocatalysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 23119-23126.	8.0	45
22	Long-Range Distance Measurements in Proteins at Physiological Temperatures Using Saturation Recovery EPR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2014, 136, 15356-15365.	13.7	43
23	Probing the Aggregation Mechanism of Gold Nanoparticles Triggered by a Globular Protein. <i>Journal of Physical Chemistry C</i> , 2017, 121, 1377-1386.	3.1	43
24	Mapping protein conformational heterogeneity under pressure with site-directed spin labeling and double electron-electron resonance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E1201-10.	7.1	40
25	From Fragile Plastic to Room-Temperature Self-Healing Elastomer: Tuning Quadruple Hydrogen Bonding Interaction through One-Pot Synthesis. <i>ACS Applied Polymer Materials</i> , 2019, 1, 425-436.	4.4	38
26	Structure-relaxation mechanism for the response of T4 lysozyme cavity mutants to hydrostatic pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E2437-46.	7.1	36
27	Probing the structural basis and adsorption mechanism of an enzyme on nano-sized protein carriers. <i>Nanoscale</i> , 2017, 9, 3512-3523.	5.6	34
28	Practical Aspects of Copper Ion-Based Double Electron Electron Resonance Distance Measurements. <i>Applied Magnetic Resonance</i> , 2010, 39, 487-500.	1.2	33
29	Conformational Flexibility Enables the Function of a BECN1 Region Essential for Starvation-Mediated Autophagy. <i>Biochemistry</i> , 2016, 55, 1945-1958.	2.5	28
30	Knockdown of delta-5-desaturase promotes the anti-cancer activity of dihomo- $\gamma$ -linolenic acid and enhances the efficacy of chemotherapy in colon cancer cells expressing COX-2. <i>Free Radical Biology and Medicine</i> , 2016, 96, 67-77.	2.9	26
31	A Mixed-Metal Porphyrinic Framework Promoting Gas-Phase CO <sub>2</sub> Photoreduction without Organic Sacrificial Agents. <i>ChemSusChem</i> , 2020, 13, 6273-6277.	6.8	26
32	A general Ca-MOM platform with enhanced acid-base stability for enzyme biocatalysis. <i>Chem Catalysis</i> , 2021, 1, 146-161.	6.1	26
33	Conformational Mobility in Cytochrome P450 3A4 Explored by Pressure-Perturbation EPR Spectroscopy. <i>Biophysical Journal</i> , 2016, 110, 1485-1498.	0.5	25
34	Improving Antioxidant Activity of $\beta$ -Lactoglobulin by Nature-Inspired Conjugation with Gentisic Acid. <i>Journal of Agricultural and Food Chemistry</i> , 2019, 67, 11741-11751.	5.2	25
35	Single-Pore versus Dual-Pore Bipyridine-Based Covalent-Organic Frameworks: An Insight into the Heterogeneous Catalytic Activity for Selective C $\equiv$ N Functionalization. <i>Small</i> , 2021, 17, e2003970.	10.0	25
36	One-pot synthesis of enzyme-metal-organic material (MOM) biocomposites for enzyme biocatalysis. <i>Green Chemistry</i> , 2021, 23, 4466-4476.	9.0	25

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37	Iridium complex immobilization on covalent organic framework for effective C-H borylation. <i>APL Materials</i> , 2019, 7, .	5.1	24
38	Optimization and validation of in-situ derivatization and headspace solid-phase microextraction for gas chromatography-mass spectrometry analysis of 3-MCPD esters, 2-MCPD esters and glycidyl esters in edible oils via central composite design. <i>Food Chemistry</i> , 2020, 307, 125542.	8.2	20
39	Conjugation of Pea Protein Isolate via Maillard-Driven Chemistry with Saccharide of Diverse Molecular Mass: Molecular Interactions Leading to Aggregation or Glycation. <i>Journal of Agricultural and Food Chemistry</i> , 2020, 68, 10157-10166.	5.2	20
40	Cu <sup>2+</sup> as an ESR Probe of Protein Structure and Function. <i>Methods in Enzymology</i> , 2015, 563, 459-481.	1.0	19
41	Biophysical and Biochemical Characterization of Avian Secretory Component Provides Structural Insights into the Evolution of the Polymeric Ig Receptor. <i>Journal of Immunology</i> , 2016, 197, 1408-1414.	0.8	17
42	Superfast and Reversible Thermoresponse of Poly( <i>N</i> -isopropylacrylamide) Hydrogels Grafted on Macroporous Poly(vinyl alcohol) Formaldehyde Sponges. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 32747-32759.	8.0	17
43	Site-directed spin labeling-electron paramagnetic resonance spectroscopy in biocatalysis: Enzyme orientation and dynamics in nanoscale confinement. <i>Chem Catalysis</i> , 2021, 1, 207-231.	6.1	17
44	Engineering Protein-Gold Nanoparticle/Nanorod Complexation via Surface Modification for Protein Immobilization and Potential Therapeutic Applications. <i>ACS Applied Nano Materials</i> , 2018, 1, 4053-4063.	5.0	16
45	Saturation Recovery EPR and Nitroxide Spin Labeling for Exploring Structure and Dynamics in Proteins. <i>Methods in Enzymology</i> , 2015, 564, 3-27.	1.0	15
46	Protocol for resolving enzyme orientation and dynamics in advanced porous materials via SDSL-EPR. <i>STAR Protocols</i> , 2021, 2, 100676.	1.2	15
47	Design, synthesis and characterization of lysozyme-gentisic acid dual-functional conjugates with antibacterial/antioxidant activities. <i>Food Chemistry</i> , 2022, 370, 131032.	8.2	15
48	Spin-labeling of polymeric micelles and application in probing micelle swelling using EPR spectroscopy. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2017, 55, 1770-1782.	2.1	14
49	Inversion of Polymeric Micelles Probed by Spin Labeled Peptide Incorporation and Electron Paramagnetic Resonance. <i>Journal of Physical Chemistry C</i> , 2018, 122, 25692-25699.	3.1	13
50	A sulfonated mesoporous silica nanoparticle for enzyme protection against denaturants and controlled release under reducing conditions. <i>Journal of Colloid and Interface Science</i> , 2019, 556, 292-300.	9.4	12
51	In situ monitoring of protein transfer into nanoscale channels. <i>Cell Reports Physical Science</i> , 2021, 2, 100576.	5.6	12
52	High-Pressure EPR and Site-Directed Spin Labeling for Mapping Molecular Flexibility in Proteins. <i>Methods in Enzymology</i> , 2015, 564, 29-57.	1.0	11
53	Protein Detection Using Quadratic Fit Analysis near the Dirac Point of Graphene Field-Effect Biosensors. <i>ACS Applied Electronic Materials</i> , 2020, 2, 913-919.	4.3	10
54	Oriented Two-Dimensional Covalent Organic Framework Membranes with High Ion Flux and Smart Gating Nanofluidic Transport. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	10

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55	Modification of $\beta$ -lactoglobulin by phenolic conjugations: Protein structural changes and physicochemical stabilities of stripped hemp oil-in-water emulsions stabilized by the conjugates. Food Hydrocolloids, 2022, 128, 107578.	10.7	10
56	Mono-/Bimetallic Neutral Iridium(III) Complexes Bearing Diketopyrrolopyrrole-Substituted N-Heterocyclic Carbene Ligands: Synthesis and Photophysics. Inorganic Chemistry, 2021, 60, 15278-15290.	4.0	9
57	Cascade/Parallel Biocatalysis via Multi-enzyme Encapsulation on Metal-Organic Materials for Rapid and Sustainable Biomass Degradation. ACS Applied Materials & Interfaces, 2021, 13, 43085-43093.	8.0	9
58	Lipid bilayer induces contraction of the denatured state ensemble of a helical-bundle membrane protein. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	9
59	Insights on the Structure, Molecular Weight and Activity of an Antibacterial Protein-Polymer Hybrid. ChemPhysChem, 2018, 19, 651-658.	2.1	8
60	Emerging applications of site-directed spin labeling electron paramagnetic resonance (SDSL-EPR) to study food protein structure, dynamics, and interaction. Trends in Food Science and Technology, 2021, 109, 37-50.	15.1	8
61	Different Single-Enzyme Conformational Dynamics upon Binding Hydrolyzable or Nonhydrolyzable Ligands. Journal of Physical Chemistry B, 2021, 125, 5750-5756.	2.6	5
62	Spatial Distribution and Solvent Polarity-Triggered Release of a Polypeptide Incorporated into Invertible Micellar Assemblies. ACS Applied Materials & Interfaces, 2020, 12, 12075-12082.	8.0	4
63	Analysis of Saturation Recovery Amplitudes to Characterize Conformational Exchange in Spin-Labeled Proteins. Applied Magnetic Resonance, 2017, 48, 1315-1340.	1.2	3
64	Maximizing the applicability of continuous wave (CW) Electron Paramagnetic Resonance (EPR): what more can we do after a century?. Journal of Magnetic Resonance Open, 2022, 10-11, 100060.	1.1	3
65	Covalent-Organic Frameworks: Single-Pore versus Dual-Pore Bipyridine-Based Covalent-Organic Frameworks: An Insight into the Heterogeneous Catalytic Activity for Selective C <sub>12</sub> H Functionalization (Small 22/2021). Small, 2021, 17, 2170109.	10.0	2
66	Real-time tracking of single-molecule collagenase on native collagen and partially structured collagen-mimic substrates. Chemical Communications, 2018, 54, 10248-10251.	4.1	1
67	Conformational Flexibility Enables Function of a BECN1 Region Essential for Starvation-Mediated Autophagy. FASEB Journal, 2016, 30, 1062.6.	0.5	0