Yan Jessie Zhang

List of Publications by Year
in descending order

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69 papers	3,413 citations	218677 26 h-index	149698 56 g-index
76 all docs	76 docs citations	76 times ranked	4320 citing authors

#	Article	IF	Citations
1	Systemic depletion of L-cyst(e)ine with cyst(e)inase increases reactive oxygen species and suppresses tumor growth. Nature Medicine, 2017, 23, 120-127.	30.7	413
2	Machine learning-aided engineering of hydrolases for PET depolymerization. Nature, 2022, 604, 662-667.	27.8	396
3	Complete Protein Characterization Using Top-Down Mass Spectrometry and Ultraviolet Photodissociation. Journal of the American Chemical Society, 2013, 135, 12646-12651.	13.7	297
4	Active Pin1 is a key target of all-trans retinoic acid in acute promyelocytic leukemia and breast cancer. Nature Medicine, 2015, 21, 457-466.	30.7	220
5	Structure-function-folding relationship in a WW domain. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10648-10653.	7.1	199
6	Death-Associated Protein Kinase 1 Phosphorylates Pin1 and Inhibits Its Prolyl Isomerase Activity and Cellular Function. Molecular Cell, 2011, 42, 147-159.	9.7	149
7	Structural Basis for High-Affinity Peptide Inhibition of Human Pin1. ACS Chemical Biology, 2007, 2, 320-328.	3.4	123
8	IgG Fc domains that bind C1q but not effector FcÎ³ receptors delineate the importance of complement-mediated effector functions. Nature Immunology, 2017, 18, 889-898.	14.5	122
9	Determinants for Dephosphorylation of the RNA Polymerase II C-Terminal Domain by Scp1. Molecular Cell, 2006, 24, 759-770.	9.7	103
10	Characterization of Native Protein Complexes Using Ultraviolet Photodissociation Mass Spectrometry. Journal of the American Chemical Society, 2014, 136, 12920-12928.	13.7	102
11	Pin1 cysteine-113 oxidation inhibits its catalytic activity and cellular function in Alzheimer's disease. Neurobiology of Disease, 2015, 76, 13-23.	4.4	91
12	Phosphorylation induces sequence-specific conformational switches in the RNA polymerase II C-terminal domain. Nature Communications, 2017, 8, 15233.	12.8	70
13	Viewing serine/threonine protein phosphatases through the eyes of drug designers. FEBS Journal, 2013, 280, 4739-4760.	4.7	62
14	Crystal structures of apo wild-typeM. jannaschiityrosyl-tRNA synthetase (TyrRS) and an engineered TyrRS specific forO-methyl-L-tyrosine. Protein Science, 2005, 14, 1340-1349.	7.6	61
15	Structural and Kinetic Analysis of Prolyl-isomerization/Phosphorylation Cross-Talk in the CTD Code. ACS Chemical Biology, 2012, 7, 1462-1470.	3.4	59
16	Structural heterogeneity in the intrinsically disordered RNA polymerase II C-terminal domain. Nature Communications, 2017, 8, 15231.	12.8	58
17	Visible Light Mediated Bidirectional Control over Carbonic Anhydrase Activity in Cells and in Vivo Using Azobenzenesulfonamides. Journal of the American Chemical Society, 2020, 142, 14522-14531.	13.7	40
18	A global view of structureâ€“function relationships in the tautomerase superfamily. Journal of Biological Chemistry, 2018, 293, 2342-2357.	3.4	39

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19	Identification of the Formycin A Biosynthetic Gene Cluster from Streptomyces kaniharaensis Illustrates the Interplay between Biological Pyrazolopyrimidine Formation and de Novo Purine Biosynthesis. Journal of the American Chemical Society, 2019, 141, 6127-6131.	13.7	38
20	Selective Inactivation of a Human Neuronal Silencing Phosphatase by a Small Molecule Inhibitor. ACS Chemical Biology, 2011, 6, 511-519.	3.4	35
21	Crystal structure of Ssu72, an essential eukaryotic phosphatase specific for the C-terminal domain of RNA polymerase II, in complex with a transition state analogue. Biochemical Journal, 2011, 434, 435-444.	3.7	35
22	Using fungible biosensors to evolve improved alkaloid biosyntheses. Nature Chemical Biology, 2022, 18, 981-989.	8.0	35
23	Design, synthesis, and biological evaluation of simplified Î±-Keto heterocycle, trifluoromethyl ketone, and formyl substituted folate analogues as potential inhibitors of GAR transformylase and AICAR transformylase. Bioorganic and Medicinal Chemistry, 2003, 11, 4487-4501.	3.0	34
24	Structural and functional analysis of the phosphoryl transfer reaction mediated by the human small Câ€terminal domain phosphatase, Scp1. Protein Science, 2010, 19, 974-986.	7.6	34
25	Snapshots of C-S Cleavage in Egt2 Reveals Substrate Specificity and Reaction Mechanism. Cell Chemical Biology, 2018, 25, 519-529.e4.	5.2	29
26	Dephosphorylating eukaryotic RNA polymerase II. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2016, 1864, 372-387.	2.3	28
27	Enzyme-mediated depletion of serum <scp>l</scp> -Met abrogates prostate cancer growth via multiple mechanisms without evidence of systemic toxicity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13000-13011.	7.1	27
28	Novel Modifications on C-terminal Domain of RNA Polymerase II Can Fine-tune the Phosphatase Activity of Ssu72. ACS Chemical Biology, 2013, 8, 2042-2052.	3.4	25
29	Mapping the Phosphorylation Pattern of Drosophila melanogaster RNA Polymerase II Carboxyl-Terminal Domain Using Ultraviolet Photodissociation Mass Spectrometry. ACS Chemical Biology, 2017, 12, 153-162.	3.4	24
30	Tyr1 phosphorylation promotes phosphorylation of Ser2 on the C-terminal domain of eukaryotic RNA polymerase II by P-TEFb. ELife, 2019, 8, .	6.0	24
31	Chemical Tools To Decipher Regulation of Phosphatases by Proline Isomerization on Eukaryotic RNA Polymerase II. ACS Chemical Biology, 2015, 10, 2405-2414.	3.4	22
32	Uncoupling Intramolecular Processing and Substrate Hydrolysis in the N-Terminal Nucleophile Hydrolase hASRGL1 by Circular Permutation. ACS Chemical Biology, 2012, 7, 1840-1847.	3.4	18
33	Crystal Structure of the Ergothioneine Sulfoxide Synthase from Candidatus Chloracidobacterium thermophilum and Structure-Guided Engineering To Modulate Its Substrate Selectivity. ACS Catalysis, 2019, 9, 6955-6961.	11.2	18
34	Kinetic, Crystallographic, and Mechanistic Characterization of TomN: Elucidation of a Function for a 4-Oxalocrotonate Tautomerase Homologue in the Tomaymycin Biosynthetic Pathway. Biochemistry, 2011, 50, 7600-7611.	2.5	17
35	Structure of Saccharomyces cerevisiae Rtr1 reveals an active site for an atypical phosphatase. Science Signaling, 2016, 9, ra24.	3.6	17
36	10-Formyl-5,10-dideaza-acyclic-5,6,7,8-tetrahydrofolic acid (10-Formyl-DDACTHF). Bioorganic and Medicinal Chemistry, 2002, 10, 2739-2749.	3.0	16

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37	Design, synthesis and biological evaluation of 10-CF3CO-DDACTHF analogues and derivatives as inhibitors of GAR Tfase and the de novo purine biosynthetic pathway. Bioorganic and Medicinal Chemistry, 2003, 11, 4511-4521.	3.0	16
38	Simplicity is the Ultimate Sophisticationâ€"Crosstalk of Post-translational Modifications on the RNA Polymerase II. Journal of Molecular Biology, 2021, 433, 166912.	4.2	16
39	Phosphatase activity of small C-terminal domain phosphatase 1 (SCP1) controls the stability of the key neuronal regulator RE1-silencing transcription factor (REST). Journal of Biological Chemistry, 2018, 293, 16851-16861.	3.4	14
40	The protein phosphatase PPM1A dephosphorylates and activates YAP to govern mammalian intestinal and liver regeneration. PLoS Biology, 2021, 19, e3001122.	5.6	13
41	A potent and selective inhibitor for the UBLCP1 proteasome phosphatase. Bioorganic and Medicinal Chemistry, 2015, 23, 2798-2809.	3.0	12
42	Computerâ€based engineering of thermostabilized antibody fragments. AICHE Journal, 2020, 66, e16864.	3.6	12
43	Kinetic and thermodynamic analysis defines roles for two metal ions in DNA polymerase specificity and catalysis. Journal of Biological Chemistry, 2021, 296, 100184.	3.4	11
44	Structural Characterization of the Hydratase-Aldolases, NahE and PhdJ: Implications for the Specificity, Catalysis, and N-Acetylneuraminate Lyase Subgroup of the Aldolase Superfamily. Biochemistry, 2018, 57, 3524-3536.	2.5	10
45	Structural determinants for accurate dephosphorylation of RNA polymerase II by its cognate C-terminal domain (CTD) phosphatase during eukaryotic transcription. Journal of Biological Chemistry, 2019, 294, 8592-8605.	3.4	10
46	Kinetic and structural characterization of a cis -3-Chloroacrylic acid dehalogenase homologue in Pseudomonas sp. UW4: A potential step between subgroups in the tautomerase superfamily. Archives of Biochemistry and Biophysics, 2017, 636, 50-56.	3.0	9
47	Cross-Talk of Phosphorylation and Prolyl Isomerization of the C-terminal Domain of RNA Polymerase II. Molecules, 2014, 19, 1481-1511.	3.8	8
48	Structural Snapshots of an Engineered Cystathionine-Î³-lyase Reveal the Critical Role of Electrostatic Interactions in the Active Site. Biochemistry, 2017, 56, 876-885.	2.5	8
49	Structural Motifs for CTD Kinase Specificity on RNA Polymerase II during Eukaryotic Transcription. ACS Chemical Biology, 2020, 15, 2259-2272.	3.4	8
50	Synthesis and biological evaluation of N-{4-[5-(2,4-diamino-6-oxo-1,6-dihydropyrimidin-5-yl)-2-(2,2,2-trifluoroacetyl)pentyl]benzoyl}-l-glutamic acid as a potential inhibitor of GAR Tfase and the de novo purine biosynthetic pathway. Bioorganic and Medicinal Chemistry, 2005, 13, 3593-3599.	3.0	7
51	Bio-molecular architects: a scaffold provided by the C-terminal domain of eukaryotic RNA polymerase II. Nano Reviews, 2010, 1, 5502.	3.7	7
52	Evaluating Spatiotemporal Dynamics of Phosphorylation of RNA Polymerase II Carboxy-Terminal Domain by Ultraviolet Photodissociation Mass Spectrometry. Journal of the American Chemical Society, 2021, 143, 8488-8498.	13.7	7
53	10-(2-Benzoxazolcarbonyl)-5,10-dideaza-acyclic-5,6,7,8-tetrahydrofolic acid. Bioorganic and Medicinal Chemistry, 2003, 11, 4503-4509.	3.0	6
54	Synthesis and biological evaluation of Î±- and Î³-carboxamide derivatives of 10-CF3CO-DDACTHF. Bioorganic and Medicinal Chemistry, 2005, 13, 3587-3592.	3.0	6

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55	Structural, Kinetic, and Mechanistic Analysis of an Asymmetric 4-Oxalocrotonate Tautomerase Trimer. Biochemistry, 2019, 58, 2617-2627.	2.5	6
56	Structural Basis for the Asymmetry of a 4-Oxalocrotonate Tautomerase Trimer. Biochemistry, 2020, 59, 1592-1603.	2.5	6
57	Mapping RNAPII CTD Phosphorylation Reveals That the Identity and Modification of Seventh Heptad Residues Direct Tyr1 Phosphorylation. ACS Chemical Biology, 2019, 14, 2264-2275.	3.4	5
58	Design, synthesis, and biological evaluation of 10-methanesulfonyl-DDACTHF, 10-methanesulfonyl-5-DACTHF, and 10-methylthio-DDACTHF as potent inhibitors of GAR Tfase and the de novo purine biosynthetic pathway. Bioorganic and Medicinal Chemistry, 2005, 13, 3577-3585.	3.0	4
59	What's all the phos about? Insights into the phosphorylation state of the RNA polymerase II C-terminal domainviamass spectrometry. RSC Chemical Biology, 2021, 2, 1084-1095.	4.1	4
60	The bacterial catabolism of polycyclic aromatic hydrocarbons: Characterization of three hydratase-aldolase-catalyzed reactions. Perspectives in Science, 2016, 9, 33-41.	0.6	3
61	Kinetic and Structural Analysis of Two Linkers in the Tautomerase Superfamily: Analysis and Implications. Biochemistry, 2021, 60, 1776-1786.	2.5	3
62	Inactivation of 4-Oxalocrotonate Tautomerase by 5-Halo-2-hydroxy-2,4-pentadienoates. Biochemistry, 2018, 57, 1012-1021.	2.5	2
63	Electrophoretic Mobility Shift Assay of in vitro Phosphorylated RNA Polymerase II Carboxyl-terminal Domain Substrates. Bio-protocol, 2020, 10, e3648.	0.4	2
64	Kinetic, Inhibition, and Structural Characterization of a Malonate Semialdehyde Decarboxylase-like Protein from Calothrix sp. PCC 6303: A Gateway to the non-Pro1 Tautomerase Superfamily Members. Biochemistry, 2022, , .	2.5	2
65	Chemical Tools for Studying the Impact of cis/trans Prolyl Isomerization on Signaling: A Case Study on RNA Polymerase II Phosphatase Activity and Specificity. Methods in Enzymology, 2018, 607, 269-297.	1.0	1
66	Advancements in chemical biology targeting the kinases and phosphatases of RNA polymerase II-mediated transcription. Current Opinion in Chemical Biology, 2021, 63, 68-77.	6.1	1
67	Modification of Ser 7 of the RNA Polymerase II Câ€terminal domain (CTD) regulates CTD phosphorylation patterns and transcription. FASEB Journal, 2019, 33, 458.6.	0.5	1
68	SCP4-STK35/PDIK1L complex is a dual phospho-catalytic signaling dependency in acute myeloid leukemia. Cell Reports, 2022, 38, 110233.	6.4	1
69	Targeted Covalent Inhibition of Small CTD Phosphatase 1 to Promote the Degradation of the REST Transcription Factor in Human Cells. Journal of Medicinal Chemistry, 2022, 65, 507-519.	6.4	1