Henning J Jessen

List of Publications by Year
in descending order

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113 papers	3,911 citations	126708 33 h-index	161609 54 g-index
145 all docs	145 docs citations	145 times ranked	3011 citing authors

#	Article	IF	Citations
1	Control of eukaryotic phosphate homeostasis by inositol polyphosphate sensor domains. Science, 2016, 352, 986-990.	6.0	438
2	4-Hydroxy-2-pyridone alkaloids: Structures and synthetic approaches. Natural Product Reports, 2010, 27, 1168.	5.2	193
3	VIH2 Regulates the Synthesis of Inositol Pyrophosphate InsP₈ and Jasmonate-Dependent Defenses in Arabidopsis. Plant Cell, 2015, 27, 1082-1097.	3.1	153
4	Inositol Pyrophosphate InsP8 Acts as an Intracellular Phosphate Signal in Arabidopsis. Molecular Plant, 2019, 12, 1463-1473.	3.9	143
5	Two bifunctional inositol pyrophosphate kinases/phosphatases control plant phosphate homeostasis. ELife, 2019, 8, .	2.8	118
6	Bioreversible Protection of Nucleoside Diphosphates. Angewandte Chemie - International Edition, 2008, 47, 8719-8722.	7.2	85
7	A Unified Approach for the Stereoselective Total Synthesis of Pyridone Alkaloids and Their Neuritogenic Activity. Angewandte Chemie - International Edition, 2011, 50, 4222-4226.	7.2	80
8	Inositol Pyrophosphate Specificity of the SPX-Dependent Polyphosphate Polymerase VTC. ACS Chemical Biology, 2017, 12, 648-653.	1.6	80
9	Synthesis of Unsymmetric Diphosphoâ€inositol Polyphosphates. Angewandte Chemie - International Edition, 2013, 52, 6912-6916.	7.2	78
10	Cellular delivery and photochemical release of a caged inositol-pyrophosphate induces PH-domain translocation in cellulo. Nature Communications, 2016, 7, 10622.	5.8	77
11	The inositol hexakisphosphate kinases IP6K1 and -2 regulate human cellular phosphate homeostasis, including XPR1-mediated phosphate export. Journal of Biological Chemistry, 2019, 294, 11597-11608.	1.6	76
12	Controlled Oxygen Release from Pyridone Endoperoxides Promotes Cell Survival under Anoxic Conditions. Journal of Medicinal Chemistry, 2013, 56, 10171-10182.	2.9	71
13	Control of XPR1-dependent cellular phosphate efflux by InsP ₈ is an exemplar for functionally-exclusive inositol pyrophosphate signaling. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3568-3574.	3.3	70
14	Analysis of inositol phosphate metabolism by capillary electrophoresis electrospray ionization mass spectrometry. Nature Communications, 2020, 11, 6035.	5.8	69
15	Vtc5, a Novel Subunit of the Vacuolar Transporter Chaperone Complex, Regulates Polyphosphate Synthesis and Phosphate Homeostasis in Yeast. Journal of Biological Chemistry, 2016, 291, 22262-22275.	1.6	67
16	Synthesis of Densely Phosphorylated Bisâ€1,5â€Diphosphoâ€myoâ€inositol Tetrakisphosphate and its Enantiomer by Bidirectional Pâ€Anhydride Formation. Angewandte Chemie - International Edition, 2014, 53, 9508-9511.	7.2	66
17	Iterative Synthesis of Nucleoside Oligophosphates with Phosphoramidites. Angewandte Chemie - International Edition, 2014, 53, 286-289.	7.2	62
18	KO of 5-InsP ₇ kinase activity transforms the HCT116 colon cancer cell line into a hypermetabolic, growth-inhibited phenotype. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11968-11973.	3.3	62

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19	Multiple Light Control Mechanisms in ATPâ€Fueled Nonâ€equilibrium DNA Systems. Angewandte Chemie - International Edition, 2020, 59, 12084-12092.	7.2	62
20	The Significance of the Bifunctional Kinase/Phosphatase Activities of Diphosphoinositol Pentakisphosphate Kinases (PPIP5Ks) for Coupling Inositol Pyrophosphate Cell Signaling to Cellular Phosphate Homeostasis. Journal of Biological Chemistry, 2017, 292, 4544-4555.	1.6	57
21	Arabidopsis ITPK1 and ITPK2 Have an Evolutionarily Conserved Phytic Acid Kinase Activity. ACS Chemical Biology, 2019, 14, 2127-2133.	1.6	53
22	Substrate recognition and mechanism revealed by ligand-bound polyphosphate kinase 2 structures. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3350-3355.	3.3	52
23	Asp1 from Schizosaccharomyces pombe Binds a [2Fe-2S]²⁺ Cluster Which Inhibits Inositol Pyrophosphate 1-Phosphatase Activity. Biochemistry, 2015, 54, 6462-6474.	1.2	51
24	ITPK1 is an InsP6/ADP phosphotransferase that controls phosphate signaling in Arabidopsis. Molecular Plant, 2021, 14, 1864-1880.	3.9	51
25	Synthesis of Withanolideâ€…A, Biological Evaluation of Its Neuritogenic Properties, and Studies on Secretase Inhibition. Angewandte Chemie - International Edition, 2011, 50, 8407-8411.	7.2	50
26	Screening a Protein Array with Synthetic Biotinylated Inorganic Polyphosphate To Define the Human PolyP-ome. ACS Chemical Biology, 2018, 13, 1958-1963.	1.6	49
27	Phosphate esters and anhydrides â€“ recent strategies targeting nature's favoured modifications. Organic and Biomolecular Chemistry, 2014, 12, 3526-3530.	1.5	46
28	Elucidating Diphosphoinositol Polyphosphate Function with Nonhydrolyzable Analogues. Angewandte Chemie - International Edition, 2014, 53, 7192-7197.	7.2	46
29	Catalytic Enantioselective Total Synthesis of (+)-Torrubiellone C. Organic Letters, 2011, 13, 4368-4370.	2.4	41
30	Inositol pyrophosphates inhibit synaptotagmin-dependent exocytosis. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8314-8319.	3.3	41
31	A 1-phytase type III effector interferes with plant hormone signaling. Nature Communications, 2017, 8, 2159.	5.8	40
32	Several Polyphosphate Kinaseâ€…2 Enzymes Catalyse the Production of Adenosine 5â€²â€²Polyphosphates. ChemBioChem, 2019, 20, 1019-1022.	1.3	39
33	Prometabolites of 5â€Diphosphoâ€myoâ€inositol Pentakisphosphate. Angewandte Chemie - International Edition, 2015, 54, 9622-9626.	7.2	38
34	Inositol Pyrophosphate Profiling of Two HCT116 Cell Lines Uncovers Variation in InsP8 Levels. PLoS ONE, 2016, 11, e0165286.	1.1	37
35	Total Synthesis and Neuritotrophic Activity of Farinosone C and Derivatives. Organic Letters, 2009, 11, 3446-3449.	2.4	36
36	A Modular Synthesis of Modified Phosphoanhydrides. Chemistry - A European Journal, 2015, 21, 10116-10122.	1.7	36

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37	Lipidic Mesophases as Novel Nanoreactor Scaffolds for Organocatalysts: Heterogeneously Catalyzed Asymmetric Aldol Reactions in Confined Water. ACS Applied Materials & Interfaces, 2018, 10, 5114-5124.	4.0	33
38	5-Diphosphoinositol pentakisphosphate (5-IP7) regulates phosphate release from acidocalcisomes and yeast vacuoles. Journal of Biological Chemistry, 2018, 293, 19101-19112.	1.6	32
39	Synthesis of Modified Nucleoside Oligophosphates Simplified: Fast, Pure, and Protecting Group Free. Journal of the American Chemical Society, 2019, 141, 15013-15017.	6.6	29
40	Rational Development of Nucleoside Diphosphate Prodrugs: DiPPro-Compounds. Current Medicinal Chemistry, 2015, 22, 3933-3950.	1.2	29
41	InsP₇is a small-molecule regulator of NUDT3-mediated mRNA decapping and processing-body dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19245-19253.	3.3	27
42	Withanolide A: synthesis and structural requirements for neurite outgrowth. Chemical Science, 2013, 4, 2851.	3.7	26
43	Development of a yeast model to study the contribution of vacuolar polyphosphate metabolism to lysine polyphosphorylation. Journal of Biological Chemistry, 2020, 295, 1439-1451.	1.6	25
44	Second-GenerationcycloSal-d4TMP Pronucleotides Bearing Esterase-Cleavable Sites â€" The â€œTrappingâ€• Concept. European Journal of Organic Chemistry, 2006, 2006, 197-206.	1.2	24
45	Truncated militarinone fragments identified by total chemical synthesis induce neurite outgrowth. MedChemComm, 2013, 4, 135-139.	3.5	23
46	Hydrophilic interaction liquid chromatographyâ€“tandem mass spectrometry for the quantitative analysis of mammalian-derived inositol poly/pyrophosphates. Journal of Chromatography A, 2018, 1573, 87-97.	1.8	23
47	Structural and biochemical characterization of Siw14: A protein-tyrosine phosphatase fold that metabolizes inositol pyrophosphates. Journal of Biological Chemistry, 2018, 293, 6905-6914.	1.6	23
48	A Phosphoramidite Analogue of Cyclotriphosphate Enables Iterative Polyphosphorylations. Angewandte Chemie - International Edition, 2019, 58, 3928-3933.	7.2	23
49	Intracellular Trapping of cycloSal-Pronucleotides: Modification of Prodrugs with Amino Acid Esters. Journal of Medicinal Chemistry, 2008, 51, 6592-6598.	2.9	22
50	Identifying Kinase Substrates via a Heavy ATP Kinase Assay and Quantitative Mass Spectrometry. Scientific Reports, 2016, 6, 28107.	1.6	22
51	Trehalose Conjugation Enhances Toxicity of Photosensitizers against Mycobacteria. ACS Central Science, 2019, 5, 644-650.	5.3	21
52	Cyclotriphosphate: A Brief History, Recent Developments, and Perspectives in Synthesis. Chemistry - A European Journal, 2020, 26, 2298-2308.	1.7	20
53	The chemistry of branched condensed phosphates. Nature Communications, 2021, 12, 5368.	5.8	20
54	Chemoselective Dimerization of Phosphates. Organic Letters, 2016, 18, 3222-3225.	2.4	19

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55	Intracellular polyphosphate length characterization in polyphosphate accumulating microorganisms (PAOs): Implications in PAO phenotypic diversity and enhanced biological phosphorus removal performance. Water Research, 2021, 206, 117726.	5.3	19
56	Photolysis of cell-permeant caged inositol pyrophosphates controls oscillations of cytosolic calcium in a Î²-cell line. Chemical Science, 2019, 10, 2687-2692.	3.7	18
57	Polyphosphate degradation by Nudt3-Zn2+ mediates oxidative stress response. Cell Reports, 2021, 37, 110004.	2.9	18
58	Inositol polyphosphates promote T cell-independent humoral immunity via the regulation of Brutonâ€™s tyrosine kinase. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12952-12957.	3.3	17
59	Magic spot nucleotides: tunable target-specific chemoenzymatic synthesis. Chemical Communications, 2019, 55, 5339-5342.	2.2	17
60	The inositol pyrophosphate 5-InsP ₇ drives sodium-potassium pump degradation by relieving an autoinhibitory domain of PI3K p85Î±. Science Advances, 2020, 6, .	4.7	16
61	Lost in Condensation: Poly-, Cyclo-, and Ultraphosphates. Accounts of Chemical Research, 2021, 54, 4036-4050.	7.6	16
62	Delivery of Inorganic Polyphosphate into Cells Using Amphipathic Oligocarbonate Transporters. ACS Central Science, 2018, 4, 1394-1402.	5.3	15
63	Use of Protein Kinaseâ€“Focused Compound Libraries for the Discovery of New Inositol Phosphate Kinase Inhibitors. SLAS Discovery, 2018, 23, 982-988.	1.4	15
64	Multiple Light Control Mechanisms in ATPâ€Fueled Nonâ€equilibrium DNA Systems. Angewandte Chemie, 2020, 132, 12182-12190.	1.6	15
65	Four Phosphates at One Blow: Access to Pentaphosphorylated Magic Spot Nucleotides and Their Analysis by Capillary Electrophoresis. Journal of Organic Chemistry, 2020, 85, 14496-14506.	1.7	15
66	New structural insights reveal an expanded reaction cycle for inositol pyrophosphate hydrolysis by human DIPP1. FASEB Journal, 2021, 35, e21275.	0.2	15
67	Absolute Quantitation of Inositol Pyrophosphates by Capillary Electrophoresis Electrospray Ionization Mass Spectrometry. Journal of Visualized Experiments, 2021, , .	0.2	15
68	Elucidating Diphosphoinositol Polyphosphate Function with Nonhydrolyzable Analogues. Angewandte Chemie, 2014, 126, 7320-7325.	1.6	13
69	Photolysis of Caged Inositol Pyrophosphate InsP8 Directly Modulates Intracellular Ca2+ Oscillations and Controls C2AB Domain Localization. Journal of the American Chemical Society, 2020, 142, 10606-10611.	6.6	13
70	Activities and Structure-Function Analysis of Fission Yeast Inositol Pyrophosphate (IPP) Kinase-Pyrophosphatase Asp1 and Its Impact on Regulation of pho1 Gene Expression. MBio, 2022, 13, e0103422.	1.8	13
71	Lipidic Mesophase-Embedded Palladium Nanoparticles: Synthesis and Tunable Catalysts in Suzukiâ€“Miyaura Cross-Coupling Reactions. Langmuir, 2019, 35, 120-127.	1.6	12
72	Pyridinium Modified Anthracenes and Their Endoperoxides Provide a Tunable Scaffold with Activity against Gram-Positive and Gram-Negative Bacteria. ACS Infectious Diseases, 2021, 7, 2073-2080.	1.8	12

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73	The Aryne Phosphate Reaction**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
74	Total Synthesis of the Marine Alkaloid Palauâ€™amine. Angewandte Chemie - International Edition, 2010, 49, 2972-2974.	7.2	11
75	Synthesis of 2-diphospho-myo-inositol 1,3,4,5,6-pentakisphosphate and a photocaged analogue. Organic and Biomolecular Chemistry, 2016, 14, 5559-5562.	1.5	11
76	Photoaffinity Capture Compounds to Profile the Magic Spot Nucleotide Interactomes**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	11
77	Inositol pyrophosphate synthesis by diphosphoinositol pentakisphosphate kinase-1 is regulated by phosphatidylinositol(4,5)bisphosphate. Bioscience Reports, 2018, 38, .	1.1	10
78	ATP-dependent hydroxylation of an unactivated primary carbon with water. Nature Communications, 2020, 11, 3906.	5.8	10
79	ePharmaLib: A Versatile Library of e-Pharmacophores to Address Small-Molecule (Poly-)Pharmacology. Journal of Chemical Information and Modeling, 2021, 61, 3659-3666.	2.5	10
80	The inositol pyrophosphate metabolism of Dictyostelium discoideum does not regulate inorganic polyphosphate (polyP) synthesis. Advances in Biological Regulation, 2022, 83, 100835.	1.4	10
81	Desymmetrization of myo-inositol derivatives by lanthanide catalyzed phosphitylation with C2-symmetric phosphites. Bioorganic and Medicinal Chemistry, 2015, 23, 2854-2861.	1.4	9
82	Biological evaluation of pyridone alkaloids on the endocannabinoid system. Bioorganic and Medicinal Chemistry, 2017, 25, 6102-6114.	1.4	9
83	New Synthetic Methods for Phosphate Labeling. Topics in Current Chemistry, 2017, 375, 51.	3.0	9
84	Dynamics of Substrate Processing by PPIP5K2, a Versatile Catalytic Machine. Structure, 2019, 27, 1022-1028.e2.	1.6	9
85	Diphosphoinositol Polyphosphates: Polar Stars in Cell Signaling. Synlett, 2014, 25, 1494-1498.	1.0	8
86	A Phosphoramidite Analogue of Cyclotriphosphate Enables Iterative Polyphosphorylations. Angewandte Chemie, 2019, 131, 3968-3973.	1.6	8
87	Structural Basis for Inhibition of ROSâ€Producing Respiratory Complex I by NADHâ€OH. Angewandte Chemie - International Edition, 2021, 60, 27277-27281.	7.2	8
88	Stable Isotope Phosphate Labelling of Diverse Metabolites is Enabled by a Family of ¹⁸Oâ€Phosphoramidites**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	8
89	Thiocoumarin Caged Nucleotides: Synthetic Access and Their Photophysical Properties. Molecules, 2020, 25, 5325.	1.7	7
90	A structural exposÃ© of noncanonical molecular reactivity within the protein tyrosine phosphatase WPD loop. Nature Communications, 2022, 13, 2231.	5.8	7

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91	Synthesis and Properties of FluorescentcycloSal Nucleotides Based on the Pyrimidine Nucleoside m5K and Its 2â€²,3â€²-Dideoxy Analog dm5K. European Journal of Organic Chemistry, 2006, 2006, 924-931.	1.2	6
92	Catalytic Enantioselective Total Synthesis of (â€“)-Pyridovericin. Synthesis, 2014, 46, 864-870.	1.2	6
93	The Hitchhikerâ€™s Guide to Organophosphate Chemistry. Synlett, 2018, 29, 699-713.	1.0	6
94	The Inositol Pyrophosphate Biosynthetic Pathway of Trypanosoma cruzi. ACS Chemical Biology, 2021, 16, 283-292.	1.6	6
95	A fully reversible 25-hydroxy steroid kinase involved in oxygen-independent cholesterol side-chain oxidation. Journal of Biological Chemistry, 2021, 297, 101105.	1.6	6
96	Beyond Triphosphates: Reagents and Methods for Chemical Oligophosphorylation. Journal of the American Chemical Society, 2022, 144, 7517-7530.	6.6	6
97	Nucleoside Diphosphate Prodrugs. Nucleic Acids Symposium Series, 2008, 52, 83-84.	0.3	5
98	Rapid stimulation of cellular Pi uptake by the inositol pyrophosphate InsP₈induced by its photothermal release from lipid nanocarriers using a near infra-red light-emitting diode. Chemical Science, 2020, 11, 10265-10278.	3.7	4
99	Arabidopsis PFA-DSP-Type Phosphohydrolases Target Specific Inositol Pyrophosphate Messengers. Biochemistry, 2022, 61, 1213-1227.	1.2	4
100	A High-Throughput Screening-Compatible Strategy for the Identification of Inositol Pyrophosphate Kinase Inhibitors. PLoS ONE, 2016, 11, e0164378.	1.1	2
101	Photo-releasable derivatives of inositol pyrophosphates. Methods in Enzymology, 2020, 641, 53-73.	0.4	2
102	Stable isotope phosphate labelling of diverse metabolites is enabled by a family of 18Oâ€phosphoramidites. Angewandte Chemie, 0, , .	1.6	2
103	Intracellular Trapping ofCycloSal-Pronucleotides by Enzymatic Cleavage. Nucleosides, Nucleotides and Nucleic Acids, 2007, 26, 827-830.	0.4	1
104	New Structural Insights Reveal an Expanded Reaction Cycle for Inositol Pyrophosphate Hydrolysis by Human DIPP1. FASEB Journal, 2021, 35, .	0.2	1
105	The 48th EUCHEMS Conference on Stereochemistry BÃ¼rgenstock Conference 2013. Chimia, 2013, 67, 671.	0.3	0
106	PD8-03 CONTROLLED OXYGEN RELEASE FROM PYRIDONE ENDOPEROXIDES FOR UROLOGIC TISSUE ENGINEERING APPLICATIONS. Journal of Urology, 2014, 191, .	0.2	0
107	The 8th Young Faculty Meeting â€“ An Active Crowd Attuned to Modern Challenges. Chimia, 2015, 69, 475.	0.3	0
108	Identification and Characterization of a Novel N- and O-Glycosyltransferase from Saccharopolyspora erythraea. Molecules, 2020, 25, 3400.	1.7	0

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109	Rapid Synthesis of Nucleoside Triphosphates and Analogues. Current Protocols in Nucleic Acid Chemistry, 2020, 81, e108.	0.5	0
110	Frontispiece: Cyclotriphosphate: A Brief History, Recent Developments, and Perspectives in Synthesis. Chemistry - A European Journal, 2020, 26, .	1.7	0
111	The aryne phosphate reaction. Angewandte Chemie, 0, , .	1.6	0
112	Innentitelbild: Stable Isotope Phosphate Labelling of Diverse Metabolites is Enabled by a Family of ¹⁸Oâ€Phosphoramidites (Angew. Chem. 5/2022). Angewandte Chemie, 2022, 134, e202117675.	1.6	0
113	Photoaffinity Capture Compounds to Profile the Magic Spot Nucleotide Interactomes**. Angewandte Chemie, 0, , .	1.6	0