

# Henning J Jessen

## List of Publications by Citations

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111  
papers

2,504  
citations

28  
h-index

46  
g-index

145  
ext. papers

3,289  
ext. citations

8.1  
avg, IF

5.31  
L-index

#	Paper	IF	Citations
111	Control of eukaryotic phosphate homeostasis by inositol polyphosphate sensor domains. <i>Science</i> , <b>2016</b> , 352, 986-90	33.3	280
110	4-Hydroxy-2-pyridone alkaloids: structures and synthetic approaches. <i>Natural Product Reports</i> , <b>2010</b> , 27, 1168-85	15.1	160
109	VIH2 Regulates the Synthesis of Inositol Pyrophosphate InsP8 and Jasmonate-Dependent Defenses in Arabidopsis. <i>Plant Cell</i> , <b>2015</b> , 27, 1082-97	11.6	99
108	A unified approach for the stereoselective total synthesis of pyridone alkaloids and their neurotogenic activity. <i>Angewandte Chemie - International Edition</i> , <b>2011</b> , 50, 4222-6	16.4	72
107	Bioreversible protection of nucleoside diphosphates. <i>Angewandte Chemie - International Edition</i> , <b>2008</b> , 47, 8719-22	16.4	70
106	Inositol Pyrophosphate InsP Acts as an Intracellular Phosphate Signal in Arabidopsis. <i>Molecular Plant</i> , <b>2019</b> , 12, 1463-1473	14.4	69
105	Synthesis of unsymmetric diphospho-inositol polyphosphates. <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 6912-6	16.4	65
104	Two bifunctional inositol pyrophosphate kinases/phosphatases control plant phosphate homeostasis. <i>ELife</i> , <b>2019</b> , 8,	8.9	63
103	Cellular delivery and photochemical release of a caged inositol-pyrophosphate induces PH-domain translocation in cellulose. <i>Nature Communications</i> , <b>2016</b> , 7, 10622	17.4	62
102	Controlled oxygen release from pyridone endoperoxides promotes cell survival under anoxic conditions. <i>Journal of Medicinal Chemistry</i> , <b>2013</b> , 56, 10171-82	8.3	56
101	Synthesis of densely phosphorylated bis-1,5-diphospho-myo-inositol tetrakisphosphate and its enantiomer by bidirectional P-anhydride formation. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 9508-11	16.4	55
100	Inositol Pyrophosphate Specificity of the SPX-Dependent Polyphosphate Polymerase VTC. <i>ACS Chemical Biology</i> , <b>2017</b> , 12, 648-653	4.9	51
99	Iterative synthesis of nucleoside oligophosphates with phosphoramidites. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 286-9	16.4	48
98	Vtc5, a Novel Subunit of the Vacuolar Transporter Chaperone Complex, Regulates Polyphosphate Synthesis and Phosphate Homeostasis in Yeast. <i>Journal of Biological Chemistry</i> , <b>2016</b> , 291, 22262-22275	5.4	45
97	Synthesis of withanolide A, biological evaluation of its neurotogenic properties, and studies on secretase inhibition. <i>Angewandte Chemie - International Edition</i> , <b>2011</b> , 50, 8407-11	16.4	44
96	The inositol hexakisphosphate kinases IP6K1 and -2 regulate human cellular phosphate homeostasis, including XPR1-mediated phosphate export. <i>Journal of Biological Chemistry</i> , <b>2019</b> , 294, 11597-11608	5.4	41
95	The Significance of the Bifunctional Kinase/Phosphatase Activities of Diphosphoinositol Pentakisphosphate Kinases (PPIP5Ks) for Coupling Inositol Pyrophosphate Cell Signaling to Cellular Phosphate Homeostasis. <i>Journal of Biological Chemistry</i> , <b>2017</b> , 292, 4544-4555	5.4	40

94	Phosphate esters and anhydrides--recent strategies targeting nature's favoured modifications. <i>Organic and Biomolecular Chemistry</i> , <b>2014</b> , 12, 3526-30	3.9	40
93	Elucidating diphosphoinositol polyphosphate function with nonhydrolyzable analogues. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 7192-7	16.4	40
92	KO of 5-InsP kinase activity transforms the HCT116 colon cancer cell line into a hypermetabolic, growth-inhibited phenotype. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 11968-11973	11.5	39
91	Catalytic enantioselective total synthesis of (+)-torrubiellone C. <i>Organic Letters</i> , <b>2011</b> , 13, 4368-70	6.2	38
90	Control of XPR1-dependent cellular phosphate efflux by InsP is an exemplar for functionally-exclusive inositol pyrophosphate signaling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 3568-3574	11.5	36
89	Multiple Light Control Mechanisms in ATP-Fueled Non-equilibrium DNA Systems. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 12084-12092	16.4	35
88	Total synthesis and neuritotrophic activity of farinosone C and derivatives. <i>Organic Letters</i> , <b>2009</b> , 11, 3446-9	6.2	35
87	Substrate recognition and mechanism revealed by ligand-bound polyphosphate kinase 2 structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 3350-3355	11.5	32
86	Inositol pyrophosphates inhibit synaptotagmin-dependent exocytosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 8314-9	11.5	30
85	Asp1 from <i>Schizosaccharomyces pombe</i> binds a [2Fe-2S](2+) cluster which inhibits inositol pyrophosphate 1-phosphatase activity. <i>Biochemistry</i> , <b>2015</b> , 54, 6462-74	3.2	29
84	ITPK1 and ITPK2 Have an Evolutionarily Conserved Phytic Acid Kinase Activity. <i>ACS Chemical Biology</i> , <b>2019</b> , 14, 2127-2133	4.9	28
83	Lipidic Mesophases as Novel Nanoreactor Scaffolds for Organocatalysts: Heterogeneously Catalyzed Asymmetric Aldol Reactions in Confined Water. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 5114-5124	9.5	28
82	Screening a Protein Array with Synthetic Biotinylated Inorganic Polyphosphate To Define the Human PolyP-ome. <i>ACS Chemical Biology</i> , <b>2018</b> , 13, 1958-1963	4.9	28
81	Prometabolites of 5-Diphospho-myo-inositol Pentakisphosphate. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 9622-6	16.4	28
80	Ein einheitlicher Ansatz zur stereoselektiven Totalsynthese von Pyridonalkaloiden und deren neuritogene Aktivität. <i>Angewandte Chemie</i> , <b>2011</b> , 123, 4308-4312	3.6	28
79	A Modular Synthesis of Modified Phosphoanhydrides. <i>Chemistry - A European Journal</i> , <b>2015</b> , 21, 10116-22.8	24.8	27
78	Several Polyphosphate Kinase 2 Enzymes Catalyse the Production of Adenosine 5'-Polyphosphates. <i>ChemBioChem</i> , <b>2019</b> , 20, 1019-1022	3.8	26
77	Inositol Pyrophosphate Profiling of Two HCT116 Cell Lines Uncovers Variation in InsP8 Levels. <i>PLoS ONE</i> , <b>2016</b> , 11, e0165286	3.7	25

76	Withanolide A: synthesis and structural requirements for neurite outgrowth. <i>Chemical Science</i> , <b>2013</b> , 4, 2851	9.4	24
75	Truncated militarinone fragments identified by total chemical synthesis induce neurite outgrowth. <i>MedChemComm</i> , <b>2013</b> , 4, 135-139	5	23
74	Second-Generation cycloSal-d4TMP Pronucleotides Bearing Esterase-Cleavable Sites – The Trapping Concept. <i>European Journal of Organic Chemistry</i> , <b>2006</b> , 2006, 197-206	3.2	23
73	Bioreversible Maskierung von Nucleosiddiphosphaten. <i>Angewandte Chemie</i> , <b>2008</b> , 120, 8847-8850	3.6	21
72	Rational Development of Nucleoside Diphosphate Prodrugs: DiPPro-Compounds. <i>Current Medicinal Chemistry</i> , <b>2015</b> , 22, 3933-50	4.3	21
71	A 1-phytase type III effector interferes with plant hormone signaling. <i>Nature Communications</i> , <b>2017</b> , 8, 2159	17.4	20
70	Intracellular trapping of cycloSal-pronucleotides: modification of prodrugs with amino acid esters. <i>Journal of Medicinal Chemistry</i> , <b>2008</b> , 51, 6592-8	8.3	20
69	5-Diphosphoinositol pentakisphosphate (5-IP) regulates phosphate release from acidocalcisomes and yeast vacuoles. <i>Journal of Biological Chemistry</i> , <b>2018</b> , 293, 19101-19112	5.4	20
68	Analysis of inositol phosphate metabolism by capillary electrophoresis electrospray ionization mass spectrometry. <i>Nature Communications</i> , <b>2020</b> , 11, 6035	17.4	19
67	Iterative Synthese von Nucleosidoligophosphaten mit Phosphoramiditen. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 290-294	3.6	18
66	A Phosphoramidite Analogue of Cyclotriphosphate Enables Iterative Polyphosphorylations. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 3928-3933	16.4	16
65	Synthesis of Unsymmetric Diphospho-Inositol Polyphosphates. <i>Angewandte Chemie</i> , <b>2013</b> , 125, 7050-7054	5.4	16
64	Chemoselective Dimerization of Phosphates. <i>Organic Letters</i> , <b>2016</b> , 18, 3222-5	6.2	15
63	Cyclotriphosphate: A Brief History, Recent Developments, and Perspectives in Synthesis. <i>Chemistry - A European Journal</i> , <b>2020</b> , 26, 2298-2308	4.8	15
62	Synthesis of Modified Nucleoside Oligophosphates Simplified: Fast, Pure, and Protecting Group Free. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 15013-15017	16.4	14
61	Photolysis of cell-permeant caged inositol pyrophosphates controls oscillations of cytosolic calcium in a cell line. <i>Chemical Science</i> , <b>2019</b> , 10, 2687-2692	9.4	14
60	Synthese von Withanolid A, Untersuchung der neuritogenen Eigenschaften und Studien zur Sekretase-Inhibierung. <i>Angewandte Chemie</i> , <b>2011</b> , 123, 8557-8561	3.6	14
59	Identifying Kinase Substrates via a Heavy ATP Kinase Assay and Quantitative Mass Spectrometry. <i>Scientific Reports</i> , <b>2016</b> , 6, 28107	4.9	12

58	Elucidating Diphosphoinositol Polyphosphate Function with Nonhydrolyzable Analogues. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 7320-7325	3.6	12
57	Lipidic Mesophase-Embedded Palladium Nanoparticles: Synthesis and Tunable Catalysts in Suzuki-Miyaura Cross-Coupling Reactions. <i>Langmuir</i> , <b>2019</b> , 35, 120-127	4	11
56	Delivery of Inorganic Polyphosphate into Cells Using Amphipathic Oligocarbonate Transporters. <i>ACS Central Science</i> , <b>2018</b> , 4, 1394-1402	16.8	11
55	Structural and biochemical characterization of Siw14: A protein-tyrosine phosphatase fold that metabolizes inositol pyrophosphates. <i>Journal of Biological Chemistry</i> , <b>2018</b> , 293, 6905-6914	5.4	11
54	Trehalose Conjugation Enhances Toxicity of Photosensitizers against Mycobacteria. <i>ACS Central Science</i> , <b>2019</b> , 5, 644-650	16.8	10
53	Synthesis of Densely Phosphorylated Bis-1,5-Diphospho-myo-Inositol Tetrakisphosphate and its Enantiomer by Bidirectional P-Anhydride Formation. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 9662-9665	3.6	10
52	Development of a yeast model to study the contribution of vacuolar polyphosphate metabolism to lysine polyphosphorylation. <i>Journal of Biological Chemistry</i> , <b>2020</b> , 295, 1439-1451	5.4	10
51	InsP is a small-molecule regulator of NUDT3-mediated mRNA decapping and processing-body dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 19245-19253	11.5	10
50	Hydrophilic interaction liquid chromatography-tandem mass spectrometry for the quantitative analysis of mammalian-derived inositol poly/pyrophosphates. <i>Journal of Chromatography A</i> , <b>2018</b> , 1573, 87-97	4.5	10
49	Inositol polyphosphates promote T cell-independent humoral immunity via the regulation of Bruton's tyrosine kinase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 12952-12957	11.5	9
48	Synthesis of 2-diphospho-myo-inositol 1,3,4,5,6-pentakisphosphate and a photocaged analogue. <i>Organic and Biomolecular Chemistry</i> , <b>2016</b> , 14, 5559-62	3.9	9
47	Total synthesis of the marine alkaloid palau'amine. <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 2972-4	16.4	9
46	Multiple Light Control Mechanisms in ATP-Fueled Non-equilibrium DNA Systems. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 12182-12190	3.6	9
45	Use of Protein Kinase-Focused Compound Libraries for the Discovery of New Inositol Phosphate Kinase Inhibitors. <i>SLAS Discovery</i> , <b>2018</b> , 23, 982-988	3.4	9
44	ITPK1 is an InsP/ADP phosphotransferase that controls phosphate signaling in Arabidopsis. <i>Molecular Plant</i> , <b>2021</b> , 14, 1864-1880	14.4	9
43	Biological evaluation of pyridone alkaloids on the endocannabinoid system. <i>Bioorganic and Medicinal Chemistry</i> , <b>2017</b> , 25, 6102-6114	3.4	8
42	Magic spot nucleotides: tunable target-specific chemoenzymatic synthesis. <i>Chemical Communications</i> , <b>2019</b> , 55, 5339-5342	5.8	8
41	Dynamics of Substrate Processing by PPIP5K2, a Versatile Catalytic Machine. <i>Structure</i> , <b>2019</b> , 27, 1022-1028.e27	10.28	8

- 40 Inositol Pyrophosphate Synthesis by Diphosphoinositol Pentakisphosphate Kinase-1 is Regulated by Phosphatidylinositol(4,5)bisphosphate. *Bioscience Reports*, **2018**, 38, 4.1 7
- 39 New Synthetic Methods for Phosphate Labeling. *Topics in Current Chemistry*, **2017**, 375, 51 7.2 6
- 38 Desymmetrization of myo-inositol derivatives by lanthanide catalyzed phosphitylation with C2-symmetric phosphites. *Bioorganic and Medicinal Chemistry*, **2015**, 23, 2854-61 3.4 6
- 37 The Hitchhiker's Guide to Organophosphate Chemistry. *Synlett*, **2018**, 29, 699-713 2.2 6
- 36 Diphosphoinositol Polyphosphates: Polar Stars in Cell Signaling. *Synlett*, **2014**, 25, 1494-1498 2.2 6
- 35 The inositol pyrophosphate 5-InsP drives sodium-potassium pump degradation by relieving an autoinhibitory domain of PI3K p85. *Science Advances*, **2020**, 6, 14.3 6
- 34 A Phosphoramidite Analogue of Cyclotriphosphate Enables Iterative Polyphosphorylations. *Angewandte Chemie*, **2019**, 131, 3968-3973 3.6 5
- 33 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 4.2 5
- 32 Nucleoside diphosphate prodrugs. *Nucleic Acids Symposium Series*, **2008**, 83-4 5
- 31 Photolysis of Caged Inositol Pyrophosphate InsP Directly Modulates Intracellular Ca Oscillations and Controls C2AB Domain Localization. *Journal of the American Chemical Society*, **2020**, 142, 10606-10611 16.4 4
- 30 Catalytic Enantioselective Total Synthesis of (R)-Pyridovericin. *Synthesis*, **2014**, 46, 864-870 2.9 4
- 29 Synthesis and Properties of Fluorescent cycloSal Nucleotides Based on the Pyrimidine Nucleoside m5K and Its 2',3'-Dideoxy Analog dm5K. *European Journal of Organic Chemistry*, **2006**, 2006, 924-931 3.2 4
- 28 ITPK1-Dependent Inositol Polyphosphates Regulate Auxin Responses in *Arabidopsis thaliana* 4
- 27 The chemistry of branched condensed phosphates. *Nature Communications*, **2021**, 12, 5368 17.4 4
- 26 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 12.5 4
- 25 Prometabolites of 5-Diphospho-myo-inositol Pentakisphosphate. *Angewandte Chemie*, **2015**, 127, 9758-9762 3.6 3
- 24 Polyphosphate degradation by Nudt3-Zn mediates oxidative stress response. *Cell Reports*, **2021**, 37, 110004 10.4 3
- 23 Lost in Condensation: Poly-, Cyclo-, and Ultraphosphates. *Accounts of Chemical Research*, **2021**, 54, 4036-4050 11.5 3

22	ATP-dependent hydroxylation of an unactivated primary carbon with water. <i>Nature Communications</i> , <b>2020</b> , 11, 3906	17.4	3
21	Pyridinium Modified Anthracenes and Their Endoperoxides Provide a Tunable Scaffold with Activity against Gram-Positive and Gram-Negative Bacteria. <i>ACS Infectious Diseases</i> , <b>2021</b> , 7, 2073-2080	5.5	2
20	A High-Throughput Screening-Compatible Strategy for the Identification of Inositol Pyrophosphate Kinase Inhibitors. <i>PLoS ONE</i> , <b>2016</b> , 11, e0164378	3.7	2
19	New structural insights reveal an expanded reaction cycle for inositol pyrophosphate hydrolysis by human DIPP1. <i>FASEB Journal</i> , <b>2021</b> , 35, e21275	0.9	2
18	Activities and Structure-Function Analysis of Fission Yeast Inositol Pyrophosphate (IPP) Kinase-Pyrophosphatase Asp1 and Its Impact on Regulation of Gene Expression.. <i>MBio</i> , <b>2022</b> , e0103422	7.8	2
17	Photo-releasable derivatives of inositol pyrophosphates. <i>Methods in Enzymology</i> , <b>2020</b> , 641, 53-73	1.7	1
16	Totalsynthese des marinen Alkaloids Palauāmin. <i>Angewandte Chemie</i> , <b>2010</b> , 122, 3034-3036	3.6	1
15	Intracellular trapping of cycloSal-pronucleotides by enzymatic cleavage. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , <b>2007</b> , 26, 827-30	1.4	1
14	Retraction: A High-Throughput Screening-Compatible Strategy for the Identification of Inositol Pyrophosphate Kinase Inhibitors. <i>PLoS ONE</i> , <b>2017</b> , 12, e0180272	3.7	1
13	The inositol pyrophosphate metabolism of Dictyostelium discoideum does not regulate inorganic polyphosphate (polyP) synthesis. <i>Advances in Biological Regulation</i> , <b>2021</b> , 100835	6.2	1
12	Two bifunctional inositol pyrophosphate kinases/phosphatases control plant phosphate homeostasis		1
11	ITPK1 is an InsP6/ADP phosphotransferase that controls systemic phosphate homeostasis in Arabidopsis		1
10	Rapid stimulation of cellular Pi uptake by the inositol pyrophosphate InsP induced by its photothermal release from lipid nanocarriers using a near infra-red light-emitting diode. <i>Chemical Science</i> , <b>2020</b> , 11, 10265-10278	9.4	1
9	ePharmaLib: A Versatile Library of e-Pharmacophores to Address Small-Molecule (Poly-)Pharmacology. <i>Journal of Chemical Information and Modeling</i> , <b>2021</b> , 61, 3659-3666	6.1	1
8	The Inositol Pyrophosphate Biosynthetic Pathway of. <i>ACS Chemical Biology</i> , <b>2021</b> , 16, 283-292	4.9	1
7	Absolute Quantitation of Inositol Pyrophosphates by Capillary Electrophoresis Electrospray Ionization Mass Spectrometry. <i>Journal of Visualized Experiments</i> , <b>2021</b> ,	1.6	1
6	A fully reversible 25-hydroxy steroid kinase involved in oxygen-independent cholesterol side-chain oxidation. <i>Journal of Biological Chemistry</i> , <b>2021</b> , 297, 101105	5.4	0
5	A structural expos[re] of noncanonical molecular reactivity within the protein tyrosine phosphatase WPD loop.. <i>Nature Communications</i> , <b>2022</b> , 13, 2231	17.4	0

- 4 Rapid Synthesis of Nucleoside Triphosphates and Analogues. *Current Protocols in Nucleic Acid Chemistry*, **2020**, 81, e108 0.5
- 3 The 8 Young Faculty Meeting - An Active Crowd Attuned to Modern Challenges. *Chimia*, **2015**, 69, 475-477.3
- 2 The 48 EUCHEMS Conference on Stereochemistry Bogenstock Conference 2013. *Chimia*, **2013**, 67, 671-673.
- 1 Innentitelbild: Stable Isotope Phosphate Labelling of Diverse Metabolites is Enabled by a Family of <sup>18</sup>O-Phosphoramidites (Angew. Chem. 5/2022). *Angewandte Chemie*, **2022**, 134, e202117675 3.6