Friedrich Hammerschmidt

List of Publications by Year
in descending order

81	1,855	236925 25	315739 38
papers	citations	h-index	g-index

86	86	86	1264
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Enzymes in organic chemistry, part 1: Enantioselective hydrolysis of Î±-(acyloxy)phosphonates by esterolytic enzymes. Tetrahedron: Asymmetry, 1993, 4, 109-120.	1.8	94
2	Transformation of Arylmethylamines into Î±-Aminophosphonic Acids via Metalated Phosphoramidates:Â Rearrangement of Partly Configurationally Stable N-Phosphorylated Î±-Aminocarbanions. Journal of Organic Chemistry, 2000, 65, 6121-6131.	3.2	86
3	Absolute Konfiguration der (2â€Aminoâ€1â€hydroxyethyl)phosphonsÃure aus Acanthamoeba castellanii (Neff) â€•Darstellung der PhosphonsÃureâ€Analoga von (+)â€•und (â€)â€Serin. Liebigs Annalen Der Chemie, 1989, 1989, 577-583.	0.8	74
4	Enzymes in organic chemistry, part 2: Lipase-catalysed hydrolysis of 1-acyloxy-2-arylethylphosphonates and synthesis of phosphonic acid analogues of L-phenylalanine and L-tyrosine. Tetrahedron, 1995, 51, 4933-4946.	1.9	66
5	Biosynthesis of natural products with a phosphorus-carbon bond. 7. Synthesis of [1,1-2H2]-, [2,2-2H2]-, (R)- and (S)-[1-2H1](2-hydroxyethyl)phosphonic acid and (R,S)-[1-2H1](1,2-dihydroxyethyl)phosphonic acid and incorporation studies into fosfomycin in Streptomyces fradiae. Journal of Organic Chemistry, 1991, 56, 2364-2370.	3.2	63
6	Biodegradation of Phosphonomycin by Rhizobium huakuii PMY1. Applied and Environmental Microbiology, 1998, 64, 356-358.	3.1	58
7	Determination of absolute configuration of Î±-hydroxyphosphonates by 31P NMR spectroscopy of corresponding mosher esters. Tetrahedron, 1994, 50, 10253-10264.	1.9	57
8	Direct liquid chromatographic enantioseparation of chiral Î±- and Î²-aminophosphonic acids employing quinine-derived chiral anion exchangers: determination of enantiomeric excess and verification of absolute configuration. Analytica Chimica Acta, 2000, 404, 169-177.	5.4	57
9	Enzymes in organic chemistry. Part 9:Chemo-enzymatic synthesis of phosphonic acid analogues of l-valine, l-leucine, l-isoleucine, l-methionine and l-Î±-aminobutyric acid of high enantiomeric excess. Tetrahedron: Asymmetry, 1999, 10, 1709-1721.	1.8	48
10	Enzymes in organic chemistry. Part 10: Chemo-enzymatic synthesis of l-phosphaserine and l-phosphaisoserine and enantioseparation of amino-hydroxyethylphosphonic acids by non-aqueous capillary electrophoresis with quinine carbamate as chiral ion pair agent. Tetrahedron: Asymmetry, 2000, 11, 2955-2964.	1.8	46
11	New Selective Inhibitors of Steroid 11Î²-Hydroxylation in the Adrenal Cortex. Synthesis and Structureâ€“Activity Relationship of Potent Etomidate Analogues. Journal of Medicinal Chemistry, 2008, 51, 2244-2253.	6.4	45
12	Crystal structure of PhnZ in complex with substrate reveals a di-iron oxygenase mechanism for catabolism of organophosphonates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5171-5176.	7.1	43
13	Biosynthesis of natural products with a Pâ€“C bond. Part 8: on the origin of the oxirane oxygen atom of fosfomycin in Streptomyces fradiae. Journal of the Chemical Society Perkin Transactions 1, 1991, , 1993-1996.	0.9	40
14	Preparation of Chiral Î±-Oxy-[2H1]methyllithiums of 99% ee and Determination of Their Configurational Stability. Journal of the American Chemical Society, 2007, 129, 914-923.	13.7	40
15	Preparation and Configurational Stability of Chiral Chloro-[D₁]methyllithiums of 98% Enantiomeric Excess. Journal of the American Chemical Society, 2008, 130, 2329-2335.	13.7	38
16	Biosynthese von Naturstoffen mit einer P ï£¿ Câ€Bindung, V. Das Oxiranâ€Sauerstoffâ€Atom des Fosfomycins entstammt nicht dem Luftâ€Sauerstoff. Liebigs Annalen Der Chemie, 1990, 1990, 1055-1061.	0.8	37
17	Strong versus weak chiral cation exchangers: Comparative evaluation for enantiomer separation of chiral bases by non-aqueous CEC. Journal of Separation Science, 2002, 25, 1269-1283.	2.5	35
18	Preparation of Î±â€Aminobenzylphosphonic Acids with a Stereogenic Quaternary Carbon Atom via Microscopically Configurationally Stable Î±â€Aminobenzyllithiums. Chemistry - A European Journal, 2008, 14, 8603-8614.	3.3	33

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19	Synthesis of chiral, nonracemic Î±-sulfanylphosphonates and derivatives. Tetrahedron: Asymmetry, 2003, 14, 1829-1836.	1.8	32
20	Enantiopure Chiral (2,4,6-Triisopropylbenzoyl)oxy-[D₁]methyllithium: Configurational Stability, Reactions, and Mechanistic Studies. Journal of Organic Chemistry, 2009, 74, 2380-2388.	3.2	32
21	Structure and reactivity of hydroxypropylphosphonic acid epoxidase in fosfomycin biosynthesis by a cation- and flavin-dependent mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14221-14226.	7.1	31
22	Configurational Stability of Oxymethyllithiums as Intermediates in Intramolecular Rearrangements. Chemistry - A European Journal, 2007, 13, 9582-9588.	3.3	31
23	Incorporation ofL-[Methyl-2H3]methionine and 2-[Hydroxy-18O]hydroxyethylphosphonic Acid into Fosfomycin inStreptomyces fradiaeâ€"An Unusual Methyl Transfer. Angewandte Chemie International Edition in English, 1994, 33, 341-342.	4.4	30
24	Direct Chemical Synthesis of Chiral Methanol of 98% ee and Its Conversion to [2H1,3H]Methyl Tosylate and [2H1,3H-Methyl]Methionine. Journal of the American Chemical Society, 2005, 127, 13934-13940.	13.7	30
25	ENZYMES IN ORGANIC CHEMISTRY 7.^[1] EVALUATION OF HOMOCHIRAL t-BUTYL(PHENYL)PHOSPHINOTHIOIC ACID FOR THE DETERMINATION OF ENANTIOMERIC EXCESSES AND ABSOLUTE CONFIGURATIONS OF Î±-SUBSTITUTED PHOSPHONATES. Phosphorus, Sulfur and Silicon and the Related Elements, 1998, 140, 79-93.	1.6	25
26	Chemoenzymatic Synthesis of Phosphonic Acid Analogues of <scp>L</scp>â€Lysine, <scp>L</scp>â€Proline, <scp>L</scp>â€Ornithine, and <scp>L</scp>â€Pipecolic Acid of 99â€‰% ee â€“ Assignment of Absolute Configuration to (â€“)â€Proline. European Journal of Organic Chemistry, 2011, 2011, 1870-1879.	2.4	25
27	Zur Stereochemie der Phosphatâ€Phosphonatâ€Umlagerung. Liebigs Annalen Der Chemie, 1986, 1986, 2053-2064.	0.8	24
28	Metallation of Phosphorylated Aliphatic Alcohols to Configurationally Stable Î±-Oxyalkyllithium Compounds â^' Use of the Phosphoryl Group as an Activating Group and Electrophile. European Journal of Organic Chemistry, 2000, 2000, 2239-2245.	2.4	24
29	Simultaneous separation of the stereoisomers of 1-amino-2-hydroxy and 2-amino-1-hydroxypropane phosphonic acids by stereoselective capillary electrophoresis employing a quinine carbamate type chiral selector. Electrophoresis, 2001, 22, 1182-1187.	2.4	24
30	C-Methylation Catalyzed by Fom3, a Cobalamin-Dependent Radical S-adenosyl-<scp>l</scp>-methionine Enzyme in Fosfomycin Biosynthesis, Proceeds with Inversion of Configuration. Biochemistry, 2018, 57, 4963-4966.	2.5	24
31	Addition von Dialkylphosphiten und Dialkyl(trimethylsilyl)phosphiten an 2â€(Benzyloxy)propanal Darstellung aller vier stereoisomeren (1,2â€Dihydroxyâ€[1â€²H₁]propyl)phosphonsÃuren aus chiralen Lactaten. Liebigs Annalen Der Chemie, 1991, 1991, 469-475.	0.8	23
32	On the Configurational Stability of Chiral, Nonracemic Fluoroâ€and Iodoâ€[D₁]Methyllithiums. Chemistry - A European Journal, 2014, 20, 4086-4091.	3.3	22
33	Preparation of Enantiopure Chiral Aminoâ€[D₁]methyllithium Compounds and Determination of Their Microâ€and Macroscopic Configurational Stabilities. Chemistry - A European Journal, 2009, 15, 5729-5739.	3.3	21
34	The Stereochemical Course of the Î±â€Hydroxyphosphonateâ€“Phosphate Rearrangement. Chemistry - A European Journal, 2015, 21, 10200-10206.	3.3	21
35	Substrate Tunnel Engineering Aided by X-ray Crystallography and Functional Dynamics Swaps the Function of MIO-Enzymes. ACS Catalysis, 2021, 11, 4538-4549.	11.2	21
36	On the Configurational Stability of Chiral Heteroatomâ€Substituted [D₁]Methylpalladium Complexes as Intermediates of Stille and Suzukiâ€“Miyaura Crossâ€Coupling Reactions. European Journal of Organic Chemistry, 2013, 2013, 5143-5148.	2.4	19

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37	On the Transformation of (S)-2-Hydroxypropylphosphonic Acid into Fosfomycin in Streptomyces fradiaeâ€"A Unique Method of Epoxide Ring Formation. ChemBioChem, 2002, 3, 829-835.	2.6	18
38	Studies on the biodegradation of fosfomycin: Growth of Rhizobium huakuii PMY1 on possible intermediates synthesised chemically. Organic and Biomolecular Chemistry, 2009, 7, 1944.	2.8	18
39	THE PHOSPHATE-PHOSPHONATE AND PHOSPHONATE-PHOSPHATE REARRANGEMENTS AND THEIR APPLICATIONS - 7[1]: USE OF ‹i›t‹/i›-BUTYL AS PROTECTING GROUP AND SYNTHESIS OF CHIRAL, NONRACEMIC Î±-HYDROXYPHOSPHONATES. Phosphorus, Sulfur and Silicon and the Related Elements, 2001, 174, 101-118.	1.6	17
40	Indirect Evidence for the Biosynthesis of (1S,2S)-1,2-Epoxypropylphosphonic Acid as a Co-Metabolite of Fosfomycin [(1R,2S)-1,2-Epoxypropylphosphonic Acid]by Streptomyces fradiae. European Journal of Organic Chemistry, 2002, 2002, 1139-1142.	2.4	16
41	An Oxidative Pathway for Microbial Utilization of Methylphosphonic Acid as a Phosphate Source. ACS Chemical Biology, 2019, 14, 735-741.	3.4	16
42	Biosynthese von Naturstoffen mit einer Pï£¿Câ€Bindung, I. Einbau von ‹scp›D‹/scp›â€[6,6â€Đ‹sub›2‹/sub›]Glucose in (2â€Aminoethyl)phosphonsÃure in ‹i›Tetrahymena thermophila‹/i›. Liebigs Annalen Der Chemie, 1988, 1988, 531-535.	0.8	15
43	On the Preparation and Determination of Configurational Stability of Chiral Thio- and Bromo[D‹sub›1‹/sub›]methyllithiums. Journal of Organic Chemistry, 2012, 77, 10021-10034.	3.2	14
44	Synthesis and preclinical characterization of 1-(6â€²-deoxy-6â€²-[18 F]fluoro-Î²- d) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 467 Td (-allofu assess tumor hypoxia. Bioorganic and Medicinal Chemistry, 2016, 24, 5326-5339.	3.0	13
45	Stereochemical Course of Methyl Transfer by Cobalamin-Dependent Radical SAM Methyltransferase in Fosfomycin Biosynthesis. Biochemistry, 2018, 57, 2069-2073.	2.5	13
46	Biosynthese von Naturstoffen mit einer Pï£¿C-Bindung, IX. Synthese und Einbau von (S)- und (R)-2-Hydroxy-[2-2H1]ethylphosphonsÃure in Fosfomycin durchStreptomyces fradiae. Liebigs Annalen Der Chemie, 1992, 1992, 553-557.	0.8	12
47	Rearrangement of lithiated S-alkyl O,O-dialkyl thiophosphates: Scope and stereochemistry of the thiophosphateâ€"mercaptophosphonate rearrangement. Organic and Biomolecular Chemistry, 2011, 9, 5220.	2.8	11
48	Câ€"H Bond Cleavage Is Rate-Limiting for Oxidative Câ€"P Bond Cleavage by the Mixed Valence Diiron-Dependent Oxygenase PhnZ. Biochemistry, 2019, 58, 5271-5280.	2.5	11
49	ENZYMES IN ORGANIC CHEMISTRY, 8.‹sup›[11‹/sup› PROTEASE-CATALYZED KINETIC RESOLUTION OF Î±-CHLOROACETOXYPHOSPHONATES IN A BIPHASIC SYSTEM. Phosphorus, Sulfur and Silicon and the Related Elements, 1998, 141, 231-238.	1.6	9
50	On the conversion of structural analogues of (S)-2-hydroxypropylphosphonic acid to epoxides by the final enzyme of fosfomycin biosynthesis in S. fradiae. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 3056-3059.	2.2	9
51	Determination of absolute configuration of the phosphonic acid moiety of fosfazinomycins. Organic and Biomolecular Chemistry, 2013, 11, 7420.	2.8	9
52	[‹sup›3‹/sup›H]Metyrapol and 4-[‹sup›131‹/sup›I]Iodometomidate Label Overlapping, but Not Identical, Binding Sites on Rat Adrenal Membranes. Molecular Pharmaceutics, 2013, 10, 1119-1130.	4.6	9
53	Phosphonateâ€"Phosphinate Rearrangement. Journal of Organic Chemistry, 2015, 80, 1082-1091.	3.2	9
54	A Methylidene Group in the Phosphonic Acid Analogue of Phenylalanine Reverses the Enantiopreference of Binding to Phenylalanine Ammoniaâ€Lyases. Advanced Synthesis and Catalysis, 2017, 359, 2109-2120.	4.3	9

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55	Phosphonodifluoropyruvate is a mechanism-based inhibitor of phosphonopyruvate decarboxylase from Bacteroides fragilis. Bioorganic and Medicinal Chemistry, 2017, 25, 4368-4374.	3.0	9
56	Biosynthese von Naturstoffen mit einer Pï£¿Câ€Bindung, IV. Synthese der (R)â€•und (S)â€(2â€Amino[2â€Ð₁]ethyl)phosphonsÃure und Hydroxylierung zu (2â€Aminoâ€1â€hydroxyethyl)phosphonsÃure in Acanthamoeba castellanii (Neff). Liebigs Annalen Der Chemie, 1988, 1988, 961-964.	0.8	8
57	Chemoenzymatic Synthesis of Stannylated Metomidate as a Precursor for Electrophilic Radiohalogenations ? Regioselective Alkylation of Methyl 1H-Imidazole-5-carboxylate [1]. Monatshefte FÃ¼r Chemie, 2005, 136, 229-239.	1.8	8
58	Conversion of nitriles to 1-aminophosphonic acids and preparation of phosphahomocysteines of high enantiomeric excess. Phosphorus, Sulfur and Silicon and the Related Elements, 2017, 192, 737-744.	1.6	8
59	The Î±-hydroxyphosphonate-phosphate rearrangement of a noncyclic substrate â€“ some new observations. Organic and Biomolecular Chemistry, 2018, 16, 3672-3680.	2.8	8
60	Biosynthesis of the Fungal Organophosphonate Fosfonochlorin Involves an Iron(II) and 2â€(Oxo)glutarate Dependent Oxacyclase. ChemBioChem, 2022, 23, .	2.6	8
61	Chemical Synthesis of (R_P)- and (S_P)-[¹⁶O,¹⁷O,¹⁸O]Phosphoenol Pyruvate. Journal of Organic Chemistry, 2017, 82, 10310-10318.	3.2	7
62	Novel formal synthesis of stereospecifically C-6 deuterated d-glucose employing configurationally stable alkoxymethyllithiums. Tetrahedron, 2010, 66, 591-598.	1.9	6
63	Chemoenzymatic Synthesis of Racemic and Enantiomerically Pure Phosphaaspartic Acid and Phosphaarginine. European Journal of Organic Chemistry, 2017, 2017, 4836-4845.	2.4	6
64	Preparation of Phosphonic Acid Analogues of Proline and Proline Analogues and Their Biological Evaluation as Î´¹-Pyrroline-5-carboxylate Reductase Inhibitors. ACS Omega, 2018, 3, 4441-4452.	3.5	6
65	Improved Synthesis of Racemate and Enantiomers of Taniguchi Lactone and Conversion of Their Câ€“C Double Bonds into Triple Bonds. Synthesis, 2018, 50, 651-657.	2.3	6
66	Overall Retention of Methyl Stereochemistry during B12-Dependent Radical SAM Methyl Transfer in Fosfomycin Biosynthesis. Biochemistry, 2021, 60, 1587-1596.	2.5	6
67	Improved Synthesis of No-Carrier-Added [*I]MIBG and Its Precursor. Synthesis, 2012, 44, 3387-3391.	2.3	5
68	Radiosynthesis of [124I]Iodometomidate and Biological Evaluation Using Small-Animal PET. Molecular Imaging and Biology, 2014, 16, 317-321.	2.6	5
69	2-Nitroimidazole-Furanoside Derivatives for Hypoxia Imagingâ€"Investigation of Nucleoside Transporter Interaction, 18F-Labeling and Preclinical PET Imaging. Pharmaceuticals, 2019, 12, 31.	3.8	5
70	Essential Functional Interplay of the Catalytic Groups in Acid Phosphatase. ACS Catalysis, 2022, 12, 3357-3370.	11.2	5
71	Studies on the Biodegradation of Fosfomycin: Synthesis of ¹³Câ€Labeled Intermediates, Feeding Experiments with Rhizobium huakuii PMY1, and Isolation of Labeled Amino Acids from Cell Mass by HPLC. Chemistry - A European Journal, 2011, 17, 13341-13348.	3.3	4
72	[18 F]Fluoro-azomycin-2Â´-deoxy- Î² - d -ribofuranoside â€" A new imaging agent for tumor hypoxia in comparison with [18 F]FAZA. Nuclear Medicine and Biology, 2016, 43, 759-769.	0.6	4

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73	On the rearrangement of N-aryl-N-Boc-phosphoramidates to N-Boc-protected o-aminoarylphosphonates. Monatshefte FÃ¼r Chemie, 2018, 149, 87-98.	1.8	4
74	Formal synthesis ofP-chiral [¹⁶O,¹⁷O,¹⁸O]phosphoenol pyruvates by means of the Î±-hydroxyphosphonate-phosphate rearrangement. Phosphorus, Sulfur and Silicon and the Related Elements, 2018, 193, 515-519.	1.6	3
75	Chemoenzymatic Synthesis of Î±-Aminophosphonic Acids. Phosphorus, Sulfur and Silicon and the Related Elements, 1999, 147, 439-439.	1.6	2
76	Phosphate-Phosphonate Rearrangement of Aliphatic Phosphates. Phosphorus, Sulfur and Silicon and the Related Elements, 1999, 147, 377-377.	1.6	2
77	Synthesis of bipyridine analogues of metomidate for conjugate formation with the 99mTc(I)-tricarbonyl complex. Monatshefte FÃ¼r Chemie, 2010, 141, 437-443.	1.8	1
78	Efficient preparation of 2-nitroimidazole nucleosides as precursors for hypoxia PET tracers. Monatshefte FÃ¼r Chemie, 2017, 148, 83-90.	1.8	1
79	Preparation of Nonradioactive Standards and a Precursor for a Hypoxia 18F PET Tracer Derived from 1-(Î²-d-Galactopyranosyl)-2-nitroimidazole. Synthesis, 2017, 49, 2933-2938.	2.3	1
80	Synthesis of Chiral, Nonracemic Î±-Sulfanylphosphonates and Derivatives.. ChemInform, 2003, 34, no.	0.0	0
81	Chemoenzymatic Synthesis of Stannylated Metomidate as a Precursor for Electrophilic Radiohalogenations â€" Regioselective Alkylation of Methyl 1H-Imidazole-5-carboxylate.. ChemInform, 2005, 36, no.	0.0	0