

David B Berkowitz

List of Publications by Year in descending order

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69
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136950

32
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51
g-index

89
all docs

89
docs citations

89
times ranked

2237
citing authors

#	ARTICLE	IF	CITATIONS
1	Stereocontrolled synthesis of quaternary $\hat{1}^2, \hat{1}^3$ -unsaturated amino acids: chain extension of d- and l- $\hat{1}^\pm$ -(2-tributylstannyl)vinyl amino acids. <i>Tetrahedron</i> , 2001, 57, 6329-6343.	1.9	152
2	($\hat{1}^\pm$ -Monofluoroalkyl)phosphonates: a class of isoacidic and "tunable" mimics of biological phosphates. <i>Journal of Fluorine Chemistry</i> , 2001, 112, 13-33.	1.7	125
3	Ready Access to Fluorinated Phosphonate Mimics of Secondary Phosphates. Synthesis of the ($\hat{1}^\pm, \hat{1}^\pm$ -Difluoroalkyl)phosphonate Analogues of l-Phosphoserine, l-Phosphoallothreonine, and l-Phosphothreonine. <i>Journal of Organic Chemistry</i> , 1996, 61, 4666-4675.	3.2	123
4	$\hat{1}^\pm$ -Vinyl amino acids: occurrence, asymmetric synthesis, and biochemical mechanisms. <i>Tetrahedron: Asymmetry</i> , 2006, 17, 869-882.	1.8	106
5	$\hat{1}^\pm$ -Fluorinated Phosphonates as Substrate Mimics for Glucose 6-Phosphate Dehydrogenase: The CHF Stereochemistry Matters. <i>Journal of Organic Chemistry</i> , 2000, 65, 4498-4508.	3.2	103
6	Use of a Robust Dehydrogenase from an Archaeal Hyperthermophile in Asymmetric Catalysis: Dynamic Reductive Kinetic Resolution Entry into (S)-Profens. <i>Journal of the American Chemical Society</i> , 2010, 132, 5930-5931.	13.7	90
7	Following an ISES Lead: The First Examples of Asymmetric Ni(0)-Mediated Allylic Amination. <i>Organic Letters</i> , 2004, 6, 2661-2664.	4.6	88
8	Enzyme-Assisted Asymmetric Total Synthesis of ($\hat{1}^\pm$)-Podophyllotoxin and ($\hat{1}^\pm$)-Picropodophyllin. <i>Journal of Organic Chemistry</i> , 2000, 65, 847-860.	3.2	87
9	Use of fluorinated functionality in enzyme inhibitor development: Mechanistic and analytical advantages. <i>Journal of Fluorine Chemistry</i> , 2008, 129, 731-742.	1.7	83
10	Synthesis of ($\hat{1}^\pm, \hat{1}^\pm$ -difluoroalkyl)phosphonates by displacement of primary triflates. <i>Journal of Organic Chemistry</i> , 1993, 58, 6174-6176.	3.2	78
11	Atomic details of near-transition state conformers for enzyme phosphoryl transfer revealed by MgF ₃ rather than by phosphoranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 4555-4560.	7.1	74
12	Exploiting Enzymatic Dynamic Reductive Kinetic Resolution (DYRKR) in Stereocontrolled Synthesis. <i>Advanced Synthesis and Catalysis</i> , 2015, 357, 1619-1632.	4.3	71
13	Synthesis of the ($\hat{1}^\pm, \hat{1}^\pm$ -difluoroalkyl)phosphonate analogue of phosphoserine. <i>Tetrahedron Letters</i> , 1994, 35, 6445-6448.	1.4	67
14	Enantioselective, Ketoreductase-Based Entry into Pharmaceutical Building Blocks: Ethanol as Tunable Nicotinamide Reductant. <i>Organic Letters</i> , 2009, 11, 305-308.	4.6	61
15	Enantiomerically Enriched α -Methyl Amino Acids. Use of an Acyclic, Chiral Alanine-Derived Dianion with a High Diastereofacial Bias. <i>Journal of Organic Chemistry</i> , 1995, 60, 1233-1238.	3.2	59
16	Diallyl (Lithiodifluoromethyl)phosphonate: A New Reagent for the Introduction of the (Difluoromethylene)phosphonate Functionality. <i>Journal of Organic Chemistry</i> , 1995, 60, 7047-7050.	3.2	56
17	Mix-and-inject XFEL crystallography reveals gated conformational dynamics during enzyme catalysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 25634-25640.	7.1	56
18	Organoselenium-Based Entry into Versatile, $\hat{1}^\pm$ -(2-Tributylstannyl)vinyl Amino Acids in Scalemic Form: A New Route to Vinyl Stannanes. <i>Journal of the American Chemical Society</i> , 2000, 122, 11031-11032.	13.7	55

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19	The β , β -Difluorinated Phosphonate L-pSer-Analogue: An Accessible Chemical Tool for Studying Kinase-Dependent Signal Transduction. <i>Chemistry and Biology</i> , 2009, 16, 928-936.	6.0	55
20	Formal α -vinylation of amino acids. Use of a new benzeneselenolate equivalent. <i>Journal of Organic Chemistry</i> , 1993, 58, 6966-6975.	3.2	54
21	Engineering Acyclic Stereocontrol in the Alkylation of Vinylglycine-Derived Dianions: Asymmetric Synthesis of Higher β -Vinyl Amino Acids. <i>Journal of Organic Chemistry</i> , 2000, 65, 2907-2918.	3.2	53
22	A new dehydrogenase from <i>Clostridium acetobutylicum</i> for asymmetric synthesis: dynamic reductive kinetic resolution entry into the Taxol's side chain. <i>Chemical Communications</i> , 2011, 47, 2420-2422.	4.1	47
23	Mono- and Bivalent Ligands Bearing Mannose 6-Phosphate (M6P) Surrogates: Targeting the M6P/Insulin-Like Growth Factor II Receptor. <i>Organic Letters</i> , 2004, 6, 4921-4924.	4.6	46
24	Double-Cuvette ISES: In Situ Estimation of Enantioselectivity and Relative Rate for Catalyst Screening. <i>Journal of the American Chemical Society</i> , 2005, 127, 8610-8611.	13.7	45
25	β -Vinyllysine and β -vinylarginine are time-dependent inhibitors of their cognate decarboxylases. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1996, 6, 2151-2156.	2.2	44
26	Zippered Synthesis by Cross-Metathesis Provides a Cystathionine β -Synthase Inhibitor that Attenuates Cellular H ₂ S Levels and Reduces Neuronal Infarction in a Rat Ischemic Stroke Model. <i>ACS Central Science</i> , 2016, 2, 242-252.	11.3	43
27	Synthesis and Deployment of an Elusive Fluorovinyl Cation Equivalent: Access to Quaternary β -(1-Fluoro)vinyl Amino Acids as Potential PLP Enzyme Inactivators. <i>Journal of the American Chemical Society</i> , 2017, 139, 14077-14089.	13.7	41
28	Facile installation of the phosphonate and (β , β -difluoromethyl)phosphonate functionalities equipped with benzyl protection. <i>Tetrahedron Letters</i> , 1999, 40, 1869-1872.	1.4	39
29	Synthesis of Quaternary Amino Acids Bearing a (2-Z)-Fluorovinyl β -Branch: Potential PLP Enzyme Inactivators. <i>Organic Letters</i> , 2004, 6, 1821-1824.	4.6	39
30	In Situ Enzymatic Screening (ISES): A Tool for Catalyst Discovery and Reaction Development. <i>Angewandte Chemie - International Edition</i> , 2002, 41, 1603-1607.	13.8	38
31	Cassette In Situ Enzymatic Screening Identifies Complementary Chiral Scaffolds for Hydrolytic Kinetic Resolution Across a Range of Epoxides. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 7010-7014.	13.8	35
32	Chemoenzymatic and Ring E-Modular Approach to the (β)-Podophyllotoxin Skeleton. Synthesis of 3,4,5-Tridemethoxy-(β)-podophyllotoxin. <i>Journal of the American Chemical Society</i> , 1996, 118, 9426-9427.	13.7	34
33	In situ enzymatic screening (ISES) of P,N-ligands for Ni(0)-mediated asymmetric intramolecular allylic amination. <i>Tetrahedron: Asymmetry</i> , 2004, 15, 2845-2851.	1.8	33
34	Examination of the New β -(2-Z-Fluoro)vinyl Trigger with Lysine Decarboxylase: The Absolute Stereochemistry Dictates the Reaction Course. <i>Journal of the American Chemical Society</i> , 2007, 129, 258-259.	13.7	32
35	Enantiomerically enriched β -vinyl amino acids via lipase-mediated reverse transesterification. <i>Tetrahedron Letters</i> , 1994, 35, 8743-8746.	1.4	31
36	Combining a Clostridial Enzyme Exhibiting Unusual Active Site Plasticity with a Remarkably Facile Sigmatropic Rearrangement: Rapid, Stereocontrolled Entry into Densely Functionalized Fluorinated Phosphonates for Chemical Biology. <i>Journal of the American Chemical Society</i> , 2015, 137, 3600-3609.	13.7	31

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37	A Formal [3,3]-Sigmatropic Rearrangement Route to Quaternary $\hat{\pm}$ -Vinyl Amino Acids: Use of Allylic N-PMP Trifluoroacetimidates. <i>Organic Letters</i> , 2006, 8, 971-974.	4.6	30
38	Displacement of Sugar Triflates with C-Nucleophiles: D-Glucopyranose and D-Ribofuranose Chain Extension and Functionalization. <i>Synthetic Communications</i> , 1994, 24, 1519-1530.	2.1	29
39	A Convenient Synthesis of L- $\hat{\pm}$ -Vinylglycine from L-Homoserine Lactone. <i>Synthesis</i> , 1996, 1996, 39-41.	2.3	29
40	A Convergent Triflate Displacement Approach to ($\hat{\pm}$ -Monofluoroalkyl)phosphonates. <i>Organic Letters</i> , 2001, 3, 2009-2012.	4.6	29
41	Combinatorial Catalysis Employing a Visible Enzymatic Beacon in Real Time: Synthetically Versatile (Pseudo)Halometalation/Carbocyclizations. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 8895-8899.	13.8	28
42	Enzymatic resolution of racemic glycals: an application of the wong acylation method. <i>Tetrahedron Letters</i> , 1991, 32, 5497-5500.	1.4	26
43	Crystal Structures of Cystathionine $\hat{\pm}$ -Synthase from <i>Saccharomyces cerevisiae</i> : One Enzymatic Step at a Time. <i>Biochemistry</i> , 2018, 57, 3134-3145.	2.5	25
44	Phosphatase-Inert Glucosamine 6-Phosphate Mimics Serve as Actuators of the <i>glmS</i> Riboswitch. <i>ACS Chemical Biology</i> , 2014, 9, 2875-2882.	3.4	23
45	Novel Reverse Kahne-Type Glycosylation: Access to O-, N-, and C-Linked Epipodophyllotoxin Conjugates. <i>Organic Letters</i> , 2000, 2, 1149-1152.	4.6	21
46	Human serine racemase structure/activity relationship studies provide mechanistic insight and point to position 84 as a hot spot for $\hat{\pm}$ -elimination function. <i>Journal of Biological Chemistry</i> , 2017, 292, 13986-14002.	3.4	21
47	Simultaneous Amino and Carboxyl Group Protection for α -Branched Amino Acids. <i>Journal of Organic Chemistry</i> , 1994, 59, 5476-5478.	3.2	19
48	Free α -Oxiranyl Amino Acids. <i>Journal of Organic Chemistry</i> , 1995, 60, 5368-5369.	3.2	19
49	A set of phosphatase-inert molecular rulers to probe for bivalent mannose 6-phosphate ligand-receptor interactions. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2008, 18, 3085-3089.	2.2	19
50	A thiocyanopalladation/carbocyclization transformation identified through enzymatic screening: stereocontrolled tandem C-SCN and C-C bond formation. <i>Chemical Science</i> , 2017, 8, 8050-8060.	7.4	19
51	Human Serine Racemase: Key Residues/Active Site Motifs and Their Relation to Enzyme Function. <i>Frontiers in Molecular Biosciences</i> , 2019, 6, 8.	3.5	19
52	Halocarbocyclization Entry into the Oxabicyclo[4.3.1]decyl Exomethylene- $\hat{\pm}$ -Lactone Cores of Linearifolin and Zaluzanin A: Exploiting Combinatorial Catalysis. <i>Organic Letters</i> , 2012, 14, 968-971.	4.6	18
53	Synthesis of higher $\hat{\pm}$ -chlorovinyl and $\hat{\pm}$ -bromovinyl amino acids: The amino protecting group determines the reaction course. <i>Tetrahedron Letters</i> , 1996, 37, 4309-4312.	1.4	17
54	Structure-Activity Analysis of Guanidine Group in Agmatine for Brain Agmatinase. <i>Annals of the New York Academy of Sciences</i> , 2003, 1009, 52-63.	3.8	17

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55	Protein Structure Similarity Clustering: Dynamic Treatment of PDB Structures Facilitates Clustering. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 7766-7770.	13.8	17
56	Unleashing a α -Ser-Mimic in the Cell. <i>Chemistry and Biology</i> , 2012, 19, 666-667.	6.0	17
57	Hydrolytic enzymatic transformation of advanced synthetic intermediates: on the choice of the organic cosolvent. <i>Tetrahedron: Asymmetry</i> , 1999, 10, 4513-4520.	1.8	15
58	In Situ Enzymatic Screening (ISES): A Tool for Catalyst Discovery and Reaction Development. <i>Angewandte Chemie</i> , 2002, 114, 1673-1677.	2.0	9
59	Mini-ISES identifies promising carbafructopyranose-based salens for asymmetric catalysis: Tuning ligand shape via the anomeric effect. <i>Science Advances</i> , 2015, 1, .	10.3	9
60	Rapid Entry into Biologically Relevant β -Difluoroalkylphosphonates Bearing Allyl Protection—Deblocking under Ru(II)/(IV)-Catalysis. <i>Organic Letters</i> , 2019, 21, 9846-9851.	4.6	8
61	A reagent for the efficient cleavage of N-benzoylhomoserine lactones: Access to β -(2-phenylseleno)ethyl amino acids. <i>Tetrahedron Letters</i> , 1992, 33, 7315-7318.	1.4	7
62	A continuous spectrophotometric assay for human cystathionine beta-synthase. <i>Analytical Biochemistry</i> , 2005, 342, 103-110.	2.4	6
63	A Hammett Study of <i>Clostridium acetobutylicum</i> Alcohol Dehydrogenase (CaADH): An Enzyme with Remarkable Substrate Promiscuity and Utility for Organic Synthesis. <i>Synlett</i> , 2020, 31, 237-247.	1.8	6
64	A useful methoxyvinyl cation equivalent: β -t-butyltrimethylsilyl- β -methoxyacetaldehyde. <i>Tetrahedron Letters</i> , 2015, 56, 3575-3579.	1.4	5
65	Integrative network analyses of transcriptomics data reveal potential drug targets for acute radiation syndrome. <i>Scientific Reports</i> , 2021, 11, 5585.	3.3	4
66	Rapid Enantioselective and Diastereoconvergent Hybrid Organic/Biocatalytic Entry into the Oseltamivir Core. <i>Journal of Organic Chemistry</i> , 2021, 86, 6494-6503.	3.2	3
67	General Linker Diversification Approach to Bivalent Ligand Assembly: Generation of an Array of Ligands for the Cation-Independent Mannose 6-Phosphate Receptor. <i>Organic Letters</i> , 2017, 19, 4267-4270.	4.6	2
68	The <i>In Situ</i> Enzymatic Screening (ISES) Approach to Reaction Discovery and Catalyst Identification. <i>Current Protocols in Chemical Biology</i> , 2017, 9, 285-305.	1.7	2
69	Synthesis of β -Vinyl Amino Acids. , 1999, 23, 467-488.		1