David B Berkowitz

List of Publications by Year
in descending order

69	2,800	136950	182427
papers	citations	32 h-index	51 g-index

89	89	89	2237
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Integrative network analyses of transcriptomics data reveal potential drug targets for acute radiation syndrome. Scientific Reports, 2021, 11, 5585.	3.3	4
2	Rapid Enantioselective and Diastereoconvergent Hybrid Organic/Biocatalytic Entry into the Oseltamivir Core. Journal of Organic Chemistry, 2021, 86, 6494-6503.	3.2	3
3	A Hammett Study of Clostridium acetobutylicum Alcohol Dehydrogenase (CaADH): An Enzyme with Remarkable Substrate Promiscuity and Utility for Organic Synthesis. Synlett, 2020, 31, 237-247.	1.8	6
4	Human Serine Racemase: Key Residues/Active Site Motifs and Their Relation to Enzyme Function. Frontiers in Molecular Biosciences, 2019, 6, 8.	3.5	19
5	Rapid Entry into Biologically Relevant Î±,Î±-Difluoroalkylphosphonates Bearing Allyl Protectionâ€“Deblocking under Ru(II)/(IV)-Catalysis. Organic Letters, 2019, 21, 9846-9851.	4.6	8
6	Mix-and-inject XFEL crystallography reveals gated conformational dynamics during enzyme catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 25634-25640.	7.1	56
7	Crystal Structures of Cystathionine Î²-Synthase from Saccharomyces cerevisiae: One Enzymatic Step at a Time. Biochemistry, 2018, 57, 3134-3145.	2.5	25
8	A thiocyanopalladation/carbocyclization transformation identified through enzymatic screening: stereocontrolled tandem Câ€“SCN and Câ€“C bond formation. Chemical Science, 2017, 8, 8050-8060.	7.4	19
9	Human serine racemase structure/activity relationship studies provide mechanistic insight and point to position 84 as a hot spot for Î²-elimination function. Journal of Biological Chemistry, 2017, 292, 13986-14002.	3.4	21
10	Synthesis and Deployment of an Elusive Fluorovinyl Cation Equivalent: Access to Quaternary Î±-(1â€²-Fluoro)vinyl Amino Acids as Potential PLP Enzyme Inactivators. Journal of the American Chemical Society, 2017, 139, 14077-14089.	13.7	41
11	General Linker Diversification Approach to Bivalent Ligand Assembly: Generation of an Array of Ligands for the Cation-Independent Mannose 6-Phosphate Receptor. Organic Letters, 2017, 19, 4267-4270.	4.6	2
12	The In Situ Enzymatic Screening (ISES) Approach to Reaction Discovery and Catalyst Identification. Current Protocols in Chemical Biology, 2017, 9, 285-305.	1.7	2
13	â€œZipped Synthesisâ€•by Cross-Metathesis Provides a Cystathionine Î²-Synthase Inhibitor that Attenuates Cellular H₂S Levels and Reduces Neuronal Infarction in a Rat Ischemic Stroke Model. ACS Central Science, 2016, 2, 242-252.	11.3	43
14	Exploiting Enzymatic Dynamic Reductive Kinetic Resolution (DYRKR) in Stereocontrolled Synthesis. Advanced Synthesis and Catalysis, 2015, 357, 1619-1632.	4.3	71
15	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. Journal of the American Chemical Society, 2015, 137, 3600-3609.	13.7	31
16	A useful methoxyvinyl cation equivalent: Î±-t-butyldimethylsilyl-Î±-methoxyacetaldehyde. Tetrahedron Letters, 2015, 56, 3575-3579.	1.4	5
17	Mini-ISES identifies promising carbafructopyranose-based salens for asymmetric catalysis: Tuning ligand shape via the anomeric effect. Science Advances, 2015, 1, .	10.3	9
18	Phosphatase-Inert Glucosamine 6-Phosphate Mimics Serve as Actuators of the glmS Riboswitch. ACS Chemical Biology, 2014, 9, 2875-2882.	3.4	23

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19	Unleashing a â€œTrueâ€•pSer-Mimic in the Cell. Chemistry and Biology, 2012, 19, 666-667.	6.0	17
20	Halocarbocyclization Entry into the Oxabicyclo[4.3.1]decyl Exomethylene-Î´-Lactone Cores of Linearifolin and Zaluzanin A: Exploiting Combinatorial Catalysis. Organic Letters, 2012, 14, 968-971.	4.6	18
21	A new dehydrogenase from Clostridium acetobutylicum for asymmetric synthesis: dynamic reductive kinetic resolution entry into the TaxotÃ¨re side chain. Chemical Communications, 2011, 47, 2420-2422.	4.1	47
22	Combinatorial Catalysis Employing a Visible Enzymatic Beacon in Real Time: Synthetically Versatile (Pseudo)Halometalation/Carbocyclizations. Angewandte Chemie - International Edition, 2011, 50, 8895-8899.	13.8	28
23	Atomic details of near-transition state conformers for enzyme phosphoryl transfer revealed by MgF3- rather than by phosphoranes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4555-4560.	7.1	74
24	Use of a Robust Dehydrogenase from an Archael Hyperthermophile in Asymmetric Catalysisâ^'Dynamic Reductive Kinetic Resolution Entry into (S)-Profens. Journal of the American Chemical Society, 2010, 132, 5930-5931.	13.7	90
25	The Î±,Î±-Difluorinated Phosphonate L-pSer-Analogue: An Accessible Chemical Tool for Studying Kinase-Dependent Signal Transduction. Chemistry and Biology, 2009, 16, 928-936.	6.0	55
26	Enantioselective, Ketoreductase-Based Entry into Pharmaceutical Building Blocks: Ethanol as Tunable Nicotinamide Reductant. Organic Letters, 2009, 11, 305-308.	4.6	61
27	Use of fluorinated functionality in enzyme inhibitor development: Mechanistic and analytical advantages. Journal of Fluorine Chemistry, 2008, 129, 731-742.	1.7	83
28	A set of phosphatase-inert â€œmolecular rulersâ€•to probe for bivalent mannose 6-phosphate ligandâ€“receptor interactions. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 3085-3089.	2.2	19
29	Examination of the New Î±-(2â€²Z-Fluoro)vinyl Trigger with Lysine Decarboxylase:Â The Absolute Stereochemistry Dictates the Reaction Course. Journal of the American Chemical Society, 2007, 129, 258-259.	13.7	32
30	â€œCassetteâ€•In Situ Enzymatic Screening Identifies Complementary Chiral Scaffolds for Hydrolytic Kinetic Resolution Across a Range of Epoxides. Angewandte Chemie - International Edition, 2007, 46, 7010-7014.	13.8	35
31	A Formal [3,3]-Sigmatropic Rearrangement Route to Quaternary Î±-Vinyl Amino Acids:â€‰ Use of AllylicN-PMP Trifluoroacetimidates. Organic Letters, 2006, 8, 971-974.	4.6	30
32	Î±-Vinylic amino acids: occurrence, asymmetric synthesis, and biochemical mechanisms. Tetrahedron: Asymmetry, 2006, 17, 869-882.	1.8	106
33	Protein Structure Similarity Clustering: Dynamic Treatment of PDB Structures Facilitates Clustering. Angewandte Chemie - International Edition, 2006, 45, 7766-7770.	13.8	17
34	A continuous spectrophotometric assay for human cystathionine beta-synthase. Analytical Biochemistry, 2005, 342, 103-110.	2.4	6
35	Double-Cuvette ISES:Â In Situ Estimation of Enantioselectivity and Relative Rate for Catalyst Screening. Journal of the American Chemical Society, 2005, 127, 8610-8611.	13.7	45
36	In situ enzymatic screening (ISES) of P,N-ligands for Ni(0)-mediated asymmetric intramolecular allylic amination. Tetrahedron: Asymmetry, 2004, 15, 2845-2851.	1.8	33

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37	Synthesis of Quaternary Amino Acids Bearing a (2â€˜Z)-Fluorovinyl Î±-Branch:â€‰ Potential PLP Enzyme Inactivators. Organic Letters, 2004, 6, 1821-1824.	4.6	39
38	Mono- and Bivalent Ligands Bearing Mannose 6-Phosphate (M6P) Surrogates:â€‰ Targeting the M6P/Insulin-Like Growth Factor II Receptor. Organic Letters, 2004, 6, 4921-4924.	4.6	46
39	Following an ISES Lead:â€‰ The First Examples of Asymmetric Ni(0)-Mediated Allylic Amination. Organic Letters, 2004, 6, 2661-2664.	4.6	88
40	Structure-Activity Analysis of Guanidine Group in Agmatine for Brain Agmatinase. Annals of the New York Academy of Sciences, 2003, 1009, 52-63.	3.8	17
41	In Situ Enzymatic Screening (ISES): A Tool for Catalyst Discovery and Reaction Development. Angewandte Chemie, 2002, 114, 1673-1677.	2.0	9
42	In Situ Enzymatic Screening (ISES): A Tool for Catalyst Discovery and Reaction Development. Angewandte Chemie - International Edition, 2002, 41, 1603-1607.	13.8	38
43	A Convergent Triflate Displacement Approach to (Î±-Monofluoroalkyl)phosphonates. Organic Letters, 2001, 3, 2009-2012.	4.6	29
44	Stereocontrolled synthesis of quaternary Î²,Î³-unsaturated amino acids: chain extension of d- and l-Î±-(2-tributylstannyl)vinyl amino acids. Tetrahedron, 2001, 57, 6329-6343.	1.9	152
45	(Î±-Monofluoroalkyl)phosphonates: a class of isoacidic and â€œtunableâ€• mimics of biological phosphates. Journal of Fluorine Chemistry, 2001, 112, 13-33.	1.7	125
46	Î±-Fluorinated Phosphonates as Substrate Mimics for Glucose 6-Phosphate Dehydrogenase:Â the CHF Stereochemistry Matters. Journal of Organic Chemistry, 2000, 65, 4498-4508.	3.2	103
47	Enzyme-Assisted Asymmetric Total Synthesis of (â^')-Podophyllotoxin and (â^')-Picropodophyllin. Journal of Organic Chemistry, 2000, 65, 847-860.	3.2	87
48	Organoselenium-Based Entry into Versatile, Î±-(2-Tributylstannyl)vinyl Amino Acids in Scalemic Form:Â A New Route to Vinyl Stannanes. Journal of the American Chemical Society, 2000, 122, 11031-11032.	13.7	55
49	Engineering Acyclic Stereocontrol in the Alkylation of Vinylglycine-Derived Dianions:Â Asymmetric Synthesis of Higher Î±-Vinyl Amino Acids. Journal of Organic Chemistry, 2000, 65, 2907-2918.	3.2	53
50	Novel â€œReverse Kahne-Type Glycosylationâ€•â€‰ Access to O-, N-, and C-Linked Epipodophyllotoxin Conjugates. Organic Letters, 2000, 2, 1149-1152.	4.6	21
51	Synthesis of Î±-Vinyl Amino Acids. , 1999, 23, 467-488.		1
52	Facile installation of the phosphonate and (Î±,Î±-difluoromethyl)phosphonate functionalities equipped with benzyl protection. Tetrahedron Letters, 1999, 40, 1869-1872.	1.4	39
53	Hydrolytic enzymatic transformation of advanced synthetic intermediates: on the choice of the organic cosolvent. Tetrahedron: Asymmetry, 1999, 10, 4513-4520.	1.8	15
54	Chemoenzymatic and Ring E-Modular Approach to the (â^')-Podophyllotoxin Skeleton. Synthesis of 3â€˜,4â€˜,5â€˜-Tridemethoxy-(â^')-podophyllotoxin. Journal of the American Chemical Society, 1996, 118, 9426-9427.	13.7	34

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55	Ready Access to Fluorinated Phosphonate Mimics of Secondary Phosphates. Synthesis of the (Î±,Î±-Difluoroalkyl)phosphonate Analogues ofl-Phosphoserine,l-Phosphoallothreonine, andl-Phosphothreonine. Journal of Organic Chemistry, 1996, 61, 4666-4675.	3.2	123
56	Î±-Vinyllysine and Î±-vinylarginine are time-dependent inhibitors of their cognate decarboxylases. Bioorganic and Medicinal Chemistry Letters, 1996, 6, 2151-2156.	2.2	44
57	Synthesis of higher Î±-chlorovinyl and Î±-bromovinyl amino acids: The amino protecting group determines the reaction course. Tetrahedron Letters, 1996, 37, 4309-4312.	1.4	17
58	A Convenient Synthesis of L-Î±-Vinylglycine from L-Homoserine Lactone. Synthesis, 1996, 1996, 39-41.	2.3	29
59	Diallyl (Lithiodifluoromethyl)phosphonate: A New Reagent for the Introduction of the (Difluoromethylene)phosphonate Functionality. Journal of Organic Chemistry, 1995, 60, 7047-7050.	3.2	56
60	Free .alpha.-Oxiranyl Amino Acids. Journal of Organic Chemistry, 1995, 60, 5368-5369.	3.2	19
61	Enantiomerically Enriched .alpha.-Methyl Amino Acids. Use of an Acyclic, Chiral Alanine-Derived Dianion with a High Diastereofacial Bias. Journal of Organic Chemistry, 1995, 60, 1233-1238.	3.2	59
62	Synthesis of the (Î±,Î±-difluoroalkyl)phosphonate analogue of phosphoserine. Tetrahedron Letters, 1994, 35, 6445-6448.	1.4	67
63	Enantiomerically enriched Î±-vinyl amino acids via lipase-mediated â€œreverse transesterificationâ€• Tetrahedron Letters, 1994, 35, 8743-8746.	1.4	31
64	Simultaneous Amino and Carboxyl Group Protection for .alpha.-Branched Amino Acids. Journal of Organic Chemistry, 1994, 59, 5476-5478.	3.2	19
65	Displacement of Sugar Triflates with C-Nucleophiles: D-Glucopyranose and D-Ribofuranose Chain Extension and Functionalization. Synthetic Communications, 1994, 24, 1519-1530.	2.1	29
66	Synthesis of (.alpha.,.alpha.-difluoroalkyl)phosphonates by displacement of primary triflates. Journal of Organic Chemistry, 1993, 58, 6174-6176.	3.2	78
67	Formal .alpha.-vinylation of amino acids. Use of a new benzeneselenolate equivalent. Journal of Organic Chemistry, 1993, 58, 6966-6975.	3.2	54
68	A reagent for the efficient cleavage of N-benzoylhomoserine lactones: Access to Î±-(2-phenylseleno)ethyl amino acids. Tetrahedron Letters, 1992, 33, 7315-7318.	1.4	7
69	Enzymatic resolution of racemic glycals: an application of the wong acylation method. Tetrahedron Letters, 1991, 32, 5497-5500.	1.4	26