Jurgen Brem

List of Publications by Year
in descending order

86	2,884	186265	206112
papers	citations	28 h-index	48 g-index

91	91	91	2660
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Structural basis of metallo-Î²-lactamase, serine-Î²-lactamase and penicillin-binding protein inhibition by cyclic boronates. Nature Communications, 2016, 7, 12406.	12.8	202
2	Bicyclic Boronate VNRX-5133 Inhibits Metallo- and Serine-Î²-Lactamases. Journal of Medicinal Chemistry, 2019, 62, 8544-8556.	6.4	139
3	Structural Basis of Metallo-Î²-Lactamase Inhibition by Captopril Stereoisomers. Antimicrobial Agents and Chemotherapy, 2016, 60, 142-150.	3.2	134
4	Rhodanine hydrolysis leads to potent thioenolate mediated metallo-Î²-lactamase inhibition. Nature Chemistry, 2014, 6, 1084-1090.	13.6	110
5	Insights into the Mechanistic Basis of Plasmid-Mediated Colistin Resistance from Crystal Structures of the Catalytic Domain of MCR-1. Scientific Reports, 2017, 7, 39392.	3.3	107
6	The road to avibactam: the first clinically useful non-Î²-lactam working somewhat like a Î²-lactam. Future Medicinal Chemistry, 2016, 8, 1063-1084.	2.3	102
7	Assay Platform for Clinically Relevant Metallo-Î²-lactamases. Journal of Medicinal Chemistry, 2013, 56, 6945-6953.	6.4	100
8	Bisthiazolidines: A Substrate-Mimicking Scaffold as an Inhibitor of the NDM-1 Carbapenemase. ACS Infectious Diseases, 2015, 1, 544-554.	3.8	100
9	Cyclic Boronates Inhibit All Classes of Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	94
10	The Chemical Biology of Human Metallo-Î²-Lactamase Fold Proteins. Trends in Biochemical Sciences, 2016, 41, 338-355.	7.5	87
11	Interaction of Avibactam with Class B Metallo-Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 2016, 60, 5655-5662.	3.2	82
12	Will morphing boron-based inhibitors beat the Î²-lactamases?. Current Opinion in Chemical Biology, 2019, 50, 101-110.	6.1	69
13	NMR-filtered virtual screening leads to non-metal chelating metallo-Î²-lactamase inhibitors. Chemical Science, 2017, 8, 928-937.	7.4	63
14	Monitoring Conformational Changes in the NDMâ€1 Metalloâ€Î²â€lactamase by ¹⁹Fâ€…NMR Spectroscopy. Angewandte Chemie - International Edition, 2014, 53, 3129-3133.	13.8	58
15	Biochemical characterization of New Delhi metallo-Î²-lactamase variants reveals differences in protein stability. Journal of Antimicrobial Chemotherapy, 2015, 70, 463-469.	3.0	57
16	Crystal structure of human persulfide dioxygenase: structural basis of ethylmalonic encephalopathy. Human Molecular Genetics, 2015, 24, 2458-2469.	2.9	48
17	Molecular Basis of Class A Î²-Lactamase Inhibition by Relebactam. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	45
18	In Silico Fragment-Based Design Identifies Subfamily B1 Metallo-Î²-lactamase Inhibitors. Journal of Medicinal Chemistry, 2018, 61, 1255-1260.	6.4	40

#	Article	IF	Citations
19	Structural/mechanistic insights into the efficacy of nonclassical Î²â€lactamase inhibitors against extensively drug resistant Stenotrophomonas maltophilia clinical isolates. Molecular Microbiology, 2017, 106, 492-504.	2.5	39
20	Imitation of Î²-lactam binding enables broad-spectrum metallo-Î²-lactamase inhibitors. Nature Chemistry, 2022, 14, 15-24.	13.6	39
21	Comparison of Verona Integron-Borne Metallo-Î²-Lactamase (VIM) Variants Reveals Differences in Stability and Inhibition Profiles. Antimicrobial Agents and Chemotherapy, 2016, 60, 1377-1384.	3.2	38
22	Studying the active-site loop movement of the SÃ£o Paolo metallo-Î²-lactamase-1. Chemical Science, 2015, 6, 956-963.	7.4	36
23	Profiling interactions of vaborbactam with metallo-Î²-lactamases. Bioorganic and Medicinal Chemistry Letters, 2019, 29, 1981-1984.	2.2	34
24	An on-demand, drop-on-drop method for studying enzyme catalysis by serial crystallography. Nature Communications, 2021, 12, 4461.	12.8	34
25	New Delhi Metallo-Î²-Lactamase 1 Catalyzes Avibactam and Aztreonam Hydrolysis. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	33
26	Crystal structures of VIMâ€1 complexes explain active site heterogeneity in VIMâ€class metalloâ€Î²â€lactamases. FEBS Journal, 2019, 286, 169-183.	4.7	30
27	Lipases A and B from Candida antarctica in the enantioselective acylation of ethyl 3-heteroaryl-3-hydroxypropanoates: aspects on the preparation and enantiopreference. Tetrahedron: Asymmetry, 2011, 22, 315-322.	1.8	29
28	Crystallographic analyses of isoquinoline complexes reveal a new mode of metallo-Î²-lactamase inhibition. Chemical Communications, 2017, 53, 5806-5809.	4.1	29
29	In vitro efficacy of imipenem-relebactam and cefepime-AAI101 against a global collection of ESBL-positive and carbapenemase-producing Enterobacteriaceae. International Journal of Antimicrobial Agents, 2020, 56, 105925.	2.5	29
30	Cephalosporins inhibit human metallo Î²-lactamase fold DNA repair nucleases SNM1A and SNM1B/apollo. Chemical Communications, 2016, 52, 6727-6730.	4.1	28
31	Mapping the Hydrophobic Substrate Binding Site of Phenylalanine Ammonia-Lyase from Petroselinum crispum. ACS Catalysis, 2019, 9, 8825-8834.	11.2	28
32	Studies on the inhibition of AmpC and other Î²-lactamases by cyclic boronates. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 742-748.	2.4	28
33	A New Mechanism for Î²â€Lactamases: Class D Enzymes Degrade 1Î²â€Methyl Carbapenems through Lactone Formation. Angewandte Chemie - International Edition, 2018, 57, 1282-1285.	13.8	27
34	Mechanistic Insights into Î²-Lactamase-Catalysed Carbapenem Degradation Through Product Characterisation. Scientific Reports, 2019, 9, 13608.	3.3	27
35	Nonâ€Hydrolytic Î²â€Lactam Antibiotic Fragmentation by <scp>l,d</scp>â€Transpeptidases and Serine Î²â€Lactamase Cysteine Variants. Angewandte Chemie - International Edition, 2019, 58, 1990-1994.	13.8	27
36	Cyclobutanone Mimics of Intermediates in Metalloâ€Î²â€Lactamase Catalysis. Chemistry - A European Journal, 2018, 24, 5734-5737.	3.3	25

#	Article	IF	Citations
37	Targeting the Mycobacterium tuberculosis transpeptidase LdtMt2 with cysteine-reactive inhibitors including ebselen. Chemical Communications, 2019, 55, 10214-10217.	4.1	25
38	Cationâ€“Ï€ Interactions Contribute to Substrate Recognition in Î³â€Butyrobetaine Hydroxylase Catalysis. Chemistry - A European Journal, 2016, 22, 1270-1276.	3.3	24
39	Binding of (5S)-Penicilloic Acid to Penicillin Binding Protein 3. ACS Chemical Biology, 2013, 8, 2112-2116.	3.4	23
40	X-ray free-electron laser studies reveal correlated motion during isopenicillin N synthase catalysis. Science Advances, 2021, 7, .	10.3	23
41	Immobilization to improve the properties of Pseudomonas fluorescens lipase for the kinetic resolution of 3-aryl-3-hydroxy esters. Process Biochemistry, 2012, 47, 119-126.	3.7	22
42	Structural and Biochemical Characterization of Rm3, a Subclass B3 Metallo-Î²-Lactamase Identified from a Functional Metagenomic Study. Antimicrobial Agents and Chemotherapy, 2016, 60, 5828-5840.	3.2	22
43	Chromophoreâ€Linked Substrate (CLS405): Probing Metalloâ€Î²â€Lactamase Activity and Inhibition. ChemMedChem, 2013, 8, 1923-1929.	3.2	21
44	Rh(<scp>iii</scp>)-Catalyzed directed Câ€“H carbenoid coupling reveals aromatic bisphosphonates inhibiting metallo- and Serine-Î²-lactamases. Organic Chemistry Frontiers, 2018, 5, 1288-1292.	4.5	21
45	Use of ferrous iron by metallo-Î²-lactamases. Journal of Inorganic Biochemistry, 2016, 163, 185-193.	3.5	20
46	¹⁹Fâ€NMR Reveals the Role of Mobile Loops in Product and Inhibitor Binding by the SÃ£o Paulo Metalloâ€Î²â€Lactamase. Angewandte Chemie - International Edition, 2017, 56, 3862-3866.	13.8	20
47	Bicyclic Boronates as Potent Inhibitors of AmpC, the Class C Î²-Lactamase from Escherichia coli. Biomolecules, 2020, 10, 899.	4.0	20
48	Cyclic boronates as versatile scaffolds for KPC-2 Î²-lactamase inhibition. RSC Medicinal Chemistry, 2020, 11, 491-496.	3.9	20
49	¹³C-Carbamylation as a mechanistic probe for the inhibition of class D Î²-lactamases by avibactam and halide ions. Organic and Biomolecular Chemistry, 2017, 15, 6024-6032.	2.8	19
50	Chemoenzymatic Preparation of 1â€Heteroarylethanamines of Low Solubility. European Journal of Organic Chemistry, 2012, 2012, 3288-3294.	2.4	18
51	Enzyme-catalyzed synthesis of (R)- and (S)-3-heteroaryl-3-hydroxy-propanoic acids and their derivatives. Tetrahedron: Asymmetry, 2009, 20, 489-496.	1.8	17
52	Lipase-catalyzed kinetic resolution of racemic 1-(10-alkyl-10H-phenothiazin-3-yl)ethanols and their butanoates. Tetrahedron: Asymmetry, 2010, 21, 1993-1998.	1.8	17
53	Enzyme-catalyzed synthesis of (R)- and (S)-3-hydroxy-3-(10-alkyl-10H-phenothiazin-3-yl)propanoic acids. Tetrahedron: Asymmetry, 2010, 21, 365-373.	1.8	17
54	Structure activity relationship studies on rhodanines and derived enethiol inhibitors of metallo-Î²-lactamases. Bioorganic and Medicinal Chemistry, 2018, 26, 2928-2936.	3.0	17

#	Article	IF	Citations
55	Structural Basis of Metallo-Î²-lactamase Inhibition byN-Sulfamoylpyrrole-2-carboxylates. ACS Infectious Diseases, 2021, 7, 1809-1817.	3.8	17
56	Lipase mediated sequential resolution of aromatic Î²-hydroxy esters using fatty acid derivatives. Tetrahedron: Asymmetry, 2011, 22, 1672-1679.	1.8	16
57	Sideromimic Modification of Lactivicin Dramatically Increases Potency against Extensively Drug-Resistant Stenotrophomonas maltophilia Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2016, 60, 4170-4175.	3.2	16
58	Lipase-catalyzed kinetic resolutions of racemic 1-(10-ethyl-10H-phenothiazin-1,2, and 4-yl)ethanols and their acetates. Tetrahedron: Asymmetry, 2011, 22, 916-923.	1.8	15
59	Assay for drug discovery: Synthesis and testing of nitrocefin analogues for use as Î²-lactamase substrates. Analytical Biochemistry, 2015, 486, 75-77.	2.4	15
60	Broad Spectrum Î²-Lactamase Inhibition by a Thioether Substituted Bicyclic Boronate. ACS Infectious Diseases, 2020, 6, 1398-1404.	3.8	15
61	High-Throughput Crystallography Reveals Boron-Containing Inhibitors of a Penicillin-Binding Protein with Di- and Tricovalent Binding Modes. Journal of Medicinal Chemistry, 2021, 64, 11379-11394.	6.4	15
62	Design and enantioselective synthesis of 3-(Î±-acrylic acid) benzoxaboroles to combat carbapenemase resistance. Chemical Communications, 2021, 57, 7709-7712.	4.1	15
63	¹⁹Fâ€...NMR Monitoring of Reversible Protein Postâ€Translational Modifications: Classâ€...D Î²â€Lactamase Carbamylation and Inhibition. Chemistry - A European Journal, 2019, 25, 11837-11841.	3.3	14
64	Faropenem reacts with serine and metallo-Î²-lactamases to give multiple products. European Journal of Medicinal Chemistry, 2021, 215, 113257.	5.5	14
65	Biosynthesis of histone messenger RNA employs a specific 3' end endonuclease. ELife, 2018, 7, .	6.0	14
66	2-Amino-3-(5-phenylfuran-2-yl)propionic Acids and 5-Phenylfuran-2-ylacrylic Acids are Novel Substrates of Phenylalanine Ammonia-Lyase. Heterocycles, 2010, 82, 1217.	0.7	13
67	A Fluorescenceâ€Based Assay for Screening Î²â€Lactams Targeting the Mycobacterium tuberculosis Transpeptidase Ldt_{Mt2}. ChemBioChem, 2020, 21, 368-372.	2.6	13
68	Ejection of structural zinc leads to inhibition of Î³-butyrobetaine hydroxylase. Bioorganic and Medicinal Chemistry Letters, 2014, 24, 4954-4957.	2.2	11
69	New chemo-enzymatic approaches for the synthesis of (R)- and (S)-bufuralol. Tetrahedron: Asymmetry, 2014, 25, 1316-1322.	1.8	11
70	Heterocycles 30: Lipase catalyzed kinetic resolution of racemic 1-(2-aryl-4-methyl-thiazol-5-yl)ethanols. Tetrahedron: Asymmetry, 2011, 22, 2165-2171.	1.8	10
71	Stereoselective preparation of lipidated carboxymethyl-proline/pipecolic acid derivatives via coupling of engineered crotonases with an alkylmalonyl-CoA synthetase. Organic and Biomolecular Chemistry, 2013, 11, 8191.	2.8	10
72	Structural Investigations of the Inhibition of Escherichia coli AmpC Î²-Lactamase by Diazabicyclooctanes. Antimicrobial Agents and Chemotherapy, 2021, 65, .	3.2	10

#	Article	IF	Citations
73	Heterocycles 32. Efficient kinetic resolution of 1-(2-arylthiazol-4-yl)ethanols and their acetates using lipase B from Candida antarctica. Journal of Molecular Catalysis B: Enzymatic, 2013, 94, 88-94.	1.8	9
74	In vitro and in vivo activity of ML302F: a thioenolate inhibitor of VIM-subfamily metallo Î²-lactamases. MedChemComm, 2016, 7, 190-193.	3.4	9
75	Development and application of ligand-based NMR screening assays for Î³-butyrobetaine hydroxylase. MedChemComm, 2016, 7, 873-880.	3.4	8
76	â€œTo Cross-Seed or Not To Cross-Seedâ€: A Pilot Study Using Metallo-Î²-lactamases. Crystal Growth and Design, 2017, 17, 913-924.	3.0	8
77	Studies on the Reactions of Biapenem with VIM Metallo Î²-Lactamases and the Serine Î²-Lactamase KPC-2. Antibiotics, 2022, 11, 396.	3.7	8
78	Studies on enmetazobactam clarify mechanisms of widely used Î²-lactamase inhibitors. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117310119.	7.1	6
79	Sequential enzymatic procedure for the preparation of enantiomerically pure 2-heteroaryl-2-hydroxyacetic acids. Tetrahedron: Asymmetry, 2012, 23, 181-187.	1.8	5
80	A New Mechanism for Î²â€Lactamases: Class D Enzymes Degrade 1Î²â€Methyl Carbapenems through Lactone Formation. Angewandte Chemie, 2018, 130, 1296-1299.	2.0	4
81	Nonâ€Hydrolytic Î²â€Lactam Antibiotic Fragmentation by <scp>l,d</scp>â€Transpeptidases and Serine Î²â€Lactamase Cysteine Variants. Angewandte Chemie, 2019, 131, 2012-2016.	2.0	4
82	¹⁹Fâ€NMR Reveals the Role of Mobile Loops in Product and Inhibitor Binding by the SÃ£o Paulo Metalloâ€Î²â€Lactamase. Angewandte Chemie, 2017, 129, 3920-3924.	2.0	3
83	The Interaction of Nitrophenylalanines with Wild Type and Mutant 4â€Methylideneimidazoleâ€5â€oneâ€less Phenylalanine Ammonia Lyase. ChemCatChem, 2013, 5, 779-783.	3.7	2
84	Monitoring protein-metal binding by 19F NMR â€“ a case study with the New Delhi metallo-Î²-lactamase 1. RSC Medicinal Chemistry, 2020, 11, 387-391.	3.9	2
85	Titelbild: Monitoring Conformational Changes in the NDM-1 Metallo-Î²-lactamase by19Fâ€…NMR Spectroscopy (Angew. Chem. 12/2014). Angewandte Chemie, 2014, 126, 3095-3095.	2.0	1
86	Frontispiece: Cationâ€“Ï€ Interactions Contribute to Substrate Recognition in Î³â€Butyrobetaine Hydroxylase Catalysis. Chemistry - A European Journal, 2016, 22, .	3.3	0