Mijoon Lee

List of Publications by Year
in descending order

112 papers	4,130 citations	101384 36 h-index	143772 57 g-index
119 all docs	119 docs citations	119 times ranked	4537 citing authors

#	Article	IF	Citations
1	Three-dimensional structure of the bacterial cell wall peptidoglycan. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4404-4409.	3.3	371
2	How allosteric control of <i>Staphylococcus aureus</i> penicillin binding protein 2a enables methicillin resistance and physiological function. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16808-16813.	3.3	235
3	Mechanism of anchoring of OmpA protein to the cell wall peptidoglycan of the gramâ€negative bacterial outer membrane. FASEB Journal, 2012, 26, 219-228.	0.2	164
4	Synthesis and Evaluation of 1,2,4-Triazolo[1,5-<i>a</i>]pyrimidines as Antibacterial Agents Against <i>Enterococcus faecium</i>. Journal of Medicinal Chemistry, 2015, 58, 4194-4203.	2.9	113
5	Co-opting the Cell Wall in Fighting Methicillin-Resistant <i>Staphylococcus aureus</i>: Potent Inhibition of PBP 2a by Two Anti-MRSA Î²-Lactam Antibiotics. Journal of the American Chemical Society, 2008, 130, 9212-9213.	6.6	111
6	Reactions of All <i>Escherichia coli</i> Lytic Transglycosylases with Bacterial Cell Wall. Journal of the American Chemical Society, 2013, 135, 3311-3314.	6.6	111
7	Inhibition of MMP-9 by a selective gelatinase inhibitor protects neurovasculature from embolic focal cerebral ischemia. Molecular Neurodegeneration, 2012, 7, 21.	4.4	93
8	Activation for Catalysis of Penicillin-Binding Protein 2a from Methicillin-ResistantStaphylococcusaureusby Bacterial Cell Wall. Journal of the American Chemical Society, 2005, 127, 2056-2057.	6.6	89
9	Structural insights into the bactericidal mechanism of human peptidoglycan recognition proteins. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8761-8766.	3.3	87
10	Validation of Matrix Metalloproteinase-9 (MMP-9) as a Novel Target for Treatment of Diabetic Foot Ulcers in Humans and Discovery of a Potent and Selective Small-Molecule MMP-9 Inhibitor That Accelerates Healing. Journal of Medicinal Chemistry, 2018, 61, 8825-8837.	2.9	82
11	Extracellular proteases as targets for treatment of cancer metastases. Chemical Society Reviews, 2004, 33, 401.	18.7	81
12	A Chemical Biological Strategy to Facilitate Diabetic Wound Healing. ACS Chemical Biology, 2014, 9, 105-110.	1.6	75
13	Recognition of peptidoglycan and Î²-lactam antibiotics by the extracellular domain of the Ser/Thr protein kinase StkP from<i>Streptococcus pneumoniae</i>. FEBS Letters, 2011, 585, 357-363.	1.3	72
14	Elucidation of the Molecular Recognition of Bacterial Cell Wall by Modular Pneumococcal Phage Endolysin CPL-1. Journal of Biological Chemistry, 2007, 282, 24990-24999.	1.6	61
15	Total Synthesis of <i>N</i>-Acetylglucosamine-1,6-anhydro-<i>N</i>-acetylmuramylpentapeptide and Evaluation of Its Turnover by AmpD from Escherichia coli. Journal of the American Chemical Society, 2009, 131, 5187-5193.	6.6	61
16	Crystal Structures of Penicillin-Binding Protein 6 from <i>Escherichia coli</i>. Journal of the American Chemical Society, 2009, 131, 14345-14354.	6.6	60
17	Synthesis of Chiral 2-(4-Phenoxyphenylsulfonylmethyl)thiiranes as Selective Gelatinase Inhibitors. Organic Letters, 2005, 7, 4463-4465.	2.4	59
18	Synthetic Peptidoglycan Substrates for Penicillin-Binding Protein 5 of Gram-Negative Bacteria. Journal of Organic Chemistry, 2004, 69, 778-784.	1.7	56

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19	Synthetic Peptidoglycan Motifs for Germination of Bacterial Spores. ChemBioChem, 2010, 11, 2525-2529.	1.3	54
20	A Mechanism-Based Inhibitor Targeting thedd-Transpeptidase Activity of Bacterial Penicillin-Binding Proteins. Journal of the American Chemical Society, 2003, 125, 16322-16326.	6.6	52
21	Synthesis of a Fragment of Bacterial Cell Wall. Journal of Organic Chemistry, 2004, 69, 2137-2146.	1.7	52
22	Bacterial AmpD at the Crossroads of Peptidoglycan Recycling and Manifestation of Antibiotic Resistance. Journal of the American Chemical Society, 2009, 131, 8742-8743.	6.6	52
23	Reactions of the Three AmpD Enzymes of <i>Pseudomonas aeruginosa</i>. Journal of the American Chemical Society, 2013, 135, 4950-4953.	6.6	50
24	From Genome to Proteome to Elucidation of Reactions for All Eleven Known Lytic Transglycosylases from <i>Pseudomonas aeruginosa</i>. Angewandte Chemie - International Edition, 2017, 56, 2735-2739.	7.2	50
25	Crystal Structures of Bacterial Peptidoglycan Amidase AmpD and an Unprecedented Activation Mechanism. Journal of Biological Chemistry, 2011, 286, 31714-31722.	1.6	49
26	Structural and Functional Insights into Peptidoglycan Access for the Lytic Amidase LytA of Streptococcus pneumoniae. MBio, 2014, 5, e01120-13.	1.8	48
27	Three-dimensional QSAR analysis and design of new 1,2,4-oxadiazole antibacterials. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 1011-1015.	1.0	48
28	Active Site Ringâ€Opening of a Thiirane Moiety and Picomolar Inhibition of Gelatinases. Chemical Biology and Drug Design, 2009, 74, 527-534.	1.5	46
29	Selective Water-Soluble Gelatinase Inhibitor Prodrugs. Journal of Medicinal Chemistry, 2011, 54, 6676-6690.	2.9	44
30	Muropeptides in <i>Pseudomonas aeruginosa</i> and their Role as Elicitors of Î²â€Lactamâ€Antibiotic Resistance. Angewandte Chemie - International Edition, 2016, 55, 6882-6886.	7.2	43
31	Muropeptide Binding and the X-ray Structure of the Effector Domain of the Transcriptional Regulator AmpR of <i>Pseudomonas aeruginosa</i>. Journal of the American Chemical Society, 2017, 139, 1448-1451.	6.6	42
32	Lytic Transglycosylase MltB of <i>Escherichia coli</i> and Its Role in Recycling of Peptidoglycan Strands of Bacterial Cell Wall. Journal of the American Chemical Society, 2008, 130, 11878-11879.	6.6	41
33	Cell-Wall Remodeling by the Zinc-Protease AmpDh3 from Pseudomonas aeruginosa. Journal of the American Chemical Society, 2013, 135, 12604-12607.	6.6	41
34	Structure and Cell Wall Cleavage by Modular Lytic Transglycosylase MltC of <i>Escherichia coli</i>. ACS Chemical Biology, 2014, 9, 2058-2066.	1.6	41
35	Metabolism of a Highly Selective Gelatinase Inhibitor Generates Active Metabolite. Chemical Biology and Drug Design, 2007, 70, 371-382.	1.5	40
36	Structural Analysis of the Role of Pseudomonas aeruginosa Penicillin-Binding Protein 5 in Î²-Lactam Resistance. Antimicrobial Agents and Chemotherapy, 2013, 57, 3137-3146.	1.4	40

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37	Reaction Products and the X-ray Structure of AmpDh2, a Virulence Determinant of Pseudomonas aeruginosa. Journal of the American Chemical Society, 2013, 135, 10318-10321.	6.6	38
38	Lytic transglycosylases LtgA and LtgD perform distinct roles in remodeling, recycling and releasing peptidoglycan in <i>Neisseria gonorrhoeae</i>. Molecular Microbiology, 2016, 102, 865-881.	1.2	38
39	Strategy in Inhibition of Cathepsin B, A Target in Tumor Invasion and Metastasis. Journal of the American Chemical Society, 2004, 126, 10271-10277.	6.6	37
40	Complications from Dual Roles of Sodium Hydride as a Base and as a Reducing Agent. Journal of Organic Chemistry, 2009, 74, 2567-2570.	1.7	37
41	Sulfonate-Containing Thiiranes as Selective Gelatinase Inhibitors. ACS Medicinal Chemistry Letters, 2011, 2, 177-181.	1.3	36
42	Inhibitors for Bacterial Cell-Wall Recycling. ACS Medicinal Chemistry Letters, 2012, 3, 238-242.	1.3	36
43	Mechanistic Basis for the Action of New Cephalosporin Antibiotics Effective against Methicillin- and Vancomycin-resistant Staphylococcus aureus. Journal of Biological Chemistry, 2006, 281, 10035-10041.	1.6	35
44	Structureâ€"Activity Relationship for Thiirane-Based Gelatinase Inhibitors. ACS Medicinal Chemistry Letters, 2012, 3, 490-495.	1.3	34
45	The Cell Shape-determining Csd6 Protein from Helicobacter pylori Constitutes a New Family of l,d-Carboxypeptidase. Journal of Biological Chemistry, 2015, 290, 25103-25117.	1.6	34
46	A Potent Gelatinase Inhibitor with Antiâ€Tumorâ€Invasive Activity and its Metabolic Disposition. Chemical Biology and Drug Design, 2009, 73, 189-202.	1.5	33
47	Thermodynamics of Interactions of Vancomycin and Synthetic Surrogates of Bacterial Cell Wall. Journal of the American Chemical Society, 2006, 128, 7736-7737.	6.6	32
48	Catalytic Spectrum of the Penicillin-Binding Protein 4 of <i>Pseudomonas aeruginosa</i>, a Nexus for the Induction of Î²-Lactam Antibiotic Resistance. Journal of the American Chemical Society, 2015, 137, 190-200.	6.6	32
49	Exolytic and endolytic turnover of peptidoglycan by lytic transglycosylase Slt of <i>Pseudomonas aeruginosa</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4393-4398.	3.3	31
50	A Practical Synthesis of Nitrocefin. Journal of Organic Chemistry, 2005, 70, 367-369.	1.7	30
51	Substrate recognition and catalysis by LytB, a pneumococcal peptidoglycan hydrolase involved in virulence. Scientific Reports, 2015, 5, 16198.	1.6	30
52	Allostery, Recognition of Nascent Peptidoglycan, and Cross-linking of the Cell Wall by the Essential Penicillin-Binding Protein 2x of <i>Streptococcus pneumoniae</i>. ACS Chemical Biology, 2018, 13, 694-702.	1.6	29
53	Structural basis of denuded glycan recognition by SPOR domains in bacterial cell division. Nature Communications, 2019, 10, 5567.	5.8	29
54	Catalytic Cycle of the <i>N</i>-Acetylglucosaminidase NagZ from <i>Pseudomonas aeruginosa</i>. Journal of the American Chemical Society, 2017, 139, 6795-6798.	6.6	28

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55	Activation by Allostery in Cell-Wall Remodeling by a Modular Membrane-Bound Lytic Transglycosylase from Pseudomonas aeruginosa. Structure, 2016, 24, 1729-1741.	1.6	27
56	Syntheses and Kinetic Evaluation of Racemic and Optically Active 2-Benzyl-2-methyl-3,4-epoxybutanoic Acids as Irreversible Inactivators for Carboxypeptidase A. Bioorganic and Medicinal Chemistry, 2002, 10, 913-922.	1.4	26
57	Amidase Activity of AmiC Controls Cell Separation and Stem Peptide Release and Is Enhanced by NlpD in Neisseria gonorrhoeae. Journal of Biological Chemistry, 2016, 291, 10916-10933.	1.6	26
58	Lysine NÎ¶-Decarboxylation Switch and Activation of the Î²-Lactam Sensor Domain of BlaR1 Protein of Methicillin-resistant Staphylococcus aureus*. Journal of Biological Chemistry, 2011, 286, 31466-31472.	1.6	25
59	A type VI secretion system delivers a cell wall amidase to target bacterial competitors. Molecular Microbiology, 2020, 114, 308-321.	1.2	25
60	Metabolism of (4â€Phenoxyphenylsulfonyl)methylthiirane, a Selective Gelatinase Inhibitor. Chemical Biology and Drug Design, 2008, 71, 187-196.	1.5	23
61	Orthologous and Paralogous AmpD Peptidoglycan Amidases from Gram-Negative Bacteria. Microbial Drug Resistance, 2016, 22, 470-476.	0.9	23
62	Transferase Versus Hydrolase: The Role of Conformational Flexibility in Reaction Specificity. Structure, 2017, 25, 295-304.	1.6	23
63	Shared Functional Attributes between the mecA Gene Product of Staphylococcus sciuri and Penicillin-Binding Protein 2a of Methicillin-Resistant Staphylococcus aureus. Biochemistry, 2007, 46, 8050-8057.	1.2	22
64	The external PASTA domain of the essential serine/threonine protein kinase PknB regulates mycobacterial growth. Open Biology, 2015, 5, 150025.	1.5	22
65	Structure of Csd3 from<i>Helicobacter pylori</i>, a cell shape-determining metallopeptidase. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 675-686.	2.5	21
66	Structural basis for the recognition of muramyltripeptide by<i>Helicobacter pylori</i>Csd4, a<scp>D</scp>,<scp>L</scp>-carboxypeptidase controlling the helical cell shape. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 2800-2812.	2.5	20
67	Water-Soluble MMP-9 Inhibitor Reduces Lesion Volume after Severe Traumatic Brain Injury. ACS Chemical Neuroscience, 2015, 6, 1658-1664.	1.7	20
68	Use of Silver Carbonate in the Wittig Reaction. Journal of Organic Chemistry, 2013, 78, 12224-12228.	1.7	19
69	Regioselective Control of the S_NAr Amination of 5-Substituted-2,4-Dichloropyrimidines Using Tertiary Amine Nucleophiles. Journal of Organic Chemistry, 2015, 80, 7757-7763.	1.7	18
70	Potentiation of the activity of Î²-lactam antibiotics by farnesol and its derivatives. Bioorganic and Medicinal Chemistry Letters, 2018, 28, 642-645.	1.0	18
71	2-Benzyl-2-methylsuccinic acid as inhibitor for carboxypeptidase A. synthesis and evaluation. Bioorganic and Medicinal Chemistry, 1999, 7, 1755-1760.	1.4	17
72	Selective MMP-9 Inhibitor (<i>R</i>)-ND-336 Alone or in Combination with Linezolid Accelerates Wound Healing in Infected Diabetic Mice. ACS Pharmacology and Translational Science, 2021, 4, 107-117.	2.5	17

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73	Structural Basis of the Heterodimer Formation between Cell Shape-Determining Proteins Csd1 and Csd2 from Helicobacter pylori. PLoS ONE, 2016, 11, e0164243.	1.1	17
74	A new type of carboxypeptidase a inhibitors designed using an imidazole as a zinc coordinating ligand. Bioorganic and Medicinal Chemistry, 1997, 5, 1989-1998.	1.4	16
75	Hippuryl-Î±-methylphenylalanine and hippuryl-Î±-methylphenyllactic acid as substrates for carboxypeptidase A. Syntheses, kinetic evaluation and mechanistic implication. Bioorganic and Medicinal Chemistry, 2000, 8, 815-823.	1.4	16
76	Turnover of Bacterial Cell Wall by SltB3, a Multidomain Lytic Transglycosylase of <i>Pseudomonas aeruginosa</i>. ACS Chemical Biology, 2016, 11, 1525-1531.	1.6	16
77	The Streptococcal Protease SpeB Antagonizes the Biofilms of the Human Pathogen<i>Staphylococcus aureus</i>USA300 through Cleavage of the Staphylococcal SdrC Protein. Journal of Bacteriology, 2020, 202, .	1.0	16
78	Regiospecific Syntheses of 6Î±-(1R-Hydroxyoctyl)penicillanic Acid and 6Î²-(1R-Hydroxyoctyl)penicillanic Acid as Mechanistic Probes of Class D Î²-Lactamases. Organic Letters, 2009, 11, 2515-2518.	2.4	15
79	Hyperbaric oxygen therapy accelerates wound healing in diabetic mice by decreasing active matrix metalloproteinaseâ€9. Wound Repair and Regeneration, 2020, 28, 194-201.	1.5	15
80	The crystal structure of the major pneumococcal autolysin LytA in complex with a large peptidoglycan fragment reveals the pivotal role of glycans for lytic activity. Molecular Microbiology, 2016, 101, 954-967.	1.2	14
81	Peptidoglycan reshaping by a noncanonical peptidase for helical cell shape in Campylobacter jejuni. Nature Communications, 2020, 11, 458.	5.8	14
82	Synthesis, Kinetic Characterization and Metabolism of Diastereomeric 2â€(1â€(4â€Phenoxyphenylsulfonyl)ethyl)thiiranes as Potent Gelatinase and MT1â€MMP Inhibitors. Chemical Biology and Drug Design, 2009, 74, 535-546.	1.5	13
83	Sulfonylation-Induced <i>N</i>- to <i>O</i>-Acetyl Migration in 2-Acetamidoethanol Derivatives. Journal of Organic Chemistry, 2010, 75, 3515-3517.	1.7	12
84	Synthesis and NMR Characterization of (<i>Z</i>,<i>Z</i>,<i>Z</i>,<i>Z</i>,<i>E</i>,<i>E</i>,Ï‰)-Heptaprenol. Journal of the American Chemical Society, 2012, 134, 13881-13888.	6.6	12
85	Deciphering the Nature of Enzymatic Modifications of Bacterial Cell Walls. ChemBioChem, 2017, 18, 1696-1702.	1.3	12
86	Expression of active matrix metalloproteinase-9 as a likely contributor to the clinical failure of aclerastide in treatment of diabetic foot ulcers. European Journal of Pharmacology, 2018, 834, 77-83.	1.7	11
87	Catalytic Cycle of Glycoside Hydrolase BglX from <i>Pseudomonas aeruginosa</i> and Its Implications for Biofilm Formation. ACS Chemical Biology, 2020, 15, 189-196.	1.6	11
88	Transforming growth factor Î² (TGF-Î²) receptor signaling regulates kinase networks and phosphatidylinositol metabolism during T-cell activation. Journal of Biological Chemistry, 2020, 295, 8236-8251.	1.6	11
89	Water-Soluble MMP-9 Inhibitor Prodrug Generates Active Metabolites That Cross the Bloodâ€“Brain Barrier. ACS Chemical Neuroscience, 2013, 4, 1168-1173.	1.7	9
90	The Natural Product Essramycin and Three of Its Isomers Are Devoid of Antibacterial Activity. Journal of Natural Products, 2016, 79, 1219-1222.	1.5	9

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91	Synergistic and additive interactions between receptor signaling networks drive the regulatory T cell versus T helper 17 cell fate choice. Journal of Biological Chemistry, 2021, 297, 101330.	1.6	9
92	Effects of Inactivation of <scp>d</scp> , <scp>d</scp> -Transpeptidases of Acinetobacter baumannii on Bacterial Growth and Susceptibility to Î²-Lactam Antibiotics. Antimicrobial Agents and Chemotherapy, 2022, 66, AAC0172921.	1.4	9
93	Conformational analyses of thiirane-based gelatinase inhibitors. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 3064-3067.	1.0	8
94	C6 Hydroxymethyl-Substituted Carbapenem MA-1-206 Inhibits the Major <i>Acinetobacter baumannii</i> Carbapenemase OXA-23 by Impeding Deacylation. MBio, 2022, 13, e0036722.	1.8	7
95	Horizontal-Acquisition of a Promiscuous Peptidoglycan-Recycling Enzyme Enables Aphids To Influence Symbiont Cell Wall Metabolism. MBio, 2021, 12, e0263621.	1.8	6
96	Synthetic Efforts in Preparations of Components of the Bacterial Cell Wall. ACS Symposium Series, 2008, , 54-78.	0.5	5
97	Facile Preparation of a Highly Functionalized Tetrahydropyran by Catalytic Hydrogenation of an Oxazoline. Journal of Organic Chemistry, 2008, 73, 7349-7352.	1.7	5
98	From Genome to Proteome to Elucidation of Reactions for All Eleven Known Lytic Transglycosylases from <i>Pseudomonas aeruginosa</i>. Angewandte Chemie, 2017, 129, 2779-2783.	1.6	5
99	Synthesis and shift-reagent-assisted full NMR assignment of bacterial (Z8,E2,Ï‰)-undecaprenol. Chemical Communications, 2017, 53, 12774-12777.	2.2	5
100	Muropeptides in Pseudomonas aeruginosa and their Role as Elicitors of Î²â€Lactamâ€Antibiotic Resistance. Angewandte Chemie, 2016, 128, 6996-7000.	1.6	3
101	Turnover Chemistry and Structural Characterization of the Cj0843c Lytic Transglycosylase of <i>Campylobacter jejuni</i>. Biochemistry, 2021, 60, 1133-1144.	1.2	3
102	Prophylactic Activation of Shh Signaling Attenuates TBI-Induced Seizures in Zebrafish by Modulating Glutamate Excitotoxicity through Eaat2a. Biomedicines, 2022, 10, 32.	1.4	3
103	Key side products due to reactivity of dimethylmaleoyl moiety as amine protective group. Chemical Papers, 2009, 63, 592-597.	1.0	2
104	A Structural Dissection of the Active Site of the Lytic Transglycosylase MltE from <i>Escherichia coli</i>. Biochemistry, 2018, 57, 6090-6098.	1.2	2
105	Inhibition of the <i>Clostridioides difficile</i> Class D Î²-Lactamase CDD-1 by Avibactam. ACS Infectious Diseases, 2021, 7, 1164-1176.	1.8	2
106	Integrative structural biology of the penicillin-binding protein-1 from Staphylococcus aureus, an essential component of the divisome machinery. Computational and Structural Biotechnology Journal, 2021, 19, 5392-5405.	1.9	2
107	Enantiomers of a selective gelatinase inhibitor: (R)- and (S)-2-[(4-phenoxyphenyl)sulfonylmethyl]thiirane. Acta Crystallographica Section C, Structural Chemistry, 2014, 70, 1003-1006.	0.2	1
108	Ensemble of Pinanones from the Permanganate Oxidation of Myrtenal. Journal of Organic Chemistry, 2016, 81, 5705-5709.	1.7	1

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109	Extracellular Proteases as Targets for Treatment of Cancer Metatases. ChemInform, 2005, 36, no.	0.1	0
110	Structural basis of the peptidoglycan binding to LytA, the major pneumococcal autolysin. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s225-s225.	0.0	0
111	Turnover chemistry and structural characterization of the Cj0843c lytic transglycosylase of Campylobacter jejuni. FASEB Journal, 2021, 35, .	0.2	0
112	Metabolism of (4-Phenoxyphenylsulfonyl)methylthiirane, a Selective Gelatinase Inhibitor. Chemical Biology and Drug Design, 2008, .	1.5	0