Jian Liu

List of Publications by Year
in descending order

153 papers	8,755 citations	38660 50 h-index	48187 88 g-index
159 all docs	159 docs citations	159 times ranked	5603 citing authors

#	ARTICLE	IF	CITATIONS
1	A Novel Role for 3-O-Sulfated Heparan Sulfate in Herpes Simplex Virus 1 Entry. Cell, 1999, 99, 13-22.	13.5	948
2	Chemoenzymatic Synthesis of Homogeneous Ultralow Molecular Weight Heparins. Science, 2011, 334, 498-501.	6.0	353
3	Cell surface heparan sulfate and its roles in assisting viral infections. Medicinal Research Reviews, 2002, 22, 1-25.	5.0	278
4	Multiple Isoforms of Heparan Sulfate d-Glucosaminyl 3-O-Sulfotransferase. Journal of Biological Chemistry, 1999, 274, 5170-5184.	1.6	219
5	Fibronectin on the Surface of Myeloma Cell-derived Exosomes Mediates Exosome-Cell Interactions. Journal of Biological Chemistry, 2016, 291, 1652-1663.	1.6	219
6	Homogeneous low-molecular-weight heparins with reversible anticoagulant activity. Nature Chemical Biology, 2014, 10, 248-250.	3.9	173
7	Chemoenzymatic synthesis of heparan sulfate and heparin. Natural Product Reports, 2014, 31, 1676-1685.	5.2	169
8	Expression of Heparan Sulfate d-Glucosaminyl 3-O-Sulfotransferase Isoforms Reveals Novel Substrate Specificities. Journal of Biological Chemistry, 1999, 274, 5185-5192.	1.6	166
9	Molecular Cloning and Expression of Mouse and Human cDNAs Encoding Heparan Sulfate d-Glucosaminyl 3-O-Sulfotransferase. Journal of Biological Chemistry, 1997, 272, 28008-28019.	1.6	155
10	Heparan Sulfate 3-O-Sulfotransferase Isoform 5 Generates Both an Antithrombin-binding Site and an Entry Receptor for Herpes Simplex Virus, Type 1. Journal of Biological Chemistry, 2002, 277, 37912-37919.	1.6	153
11	Solution Structures of Chemoenzymatically Synthesized Heparin and Its Precursors. Journal of the American Chemical Society, 2008, 130, 12998-13007.	6.6	149
12	Characterization of a Heparan Sulfate Octasaccharide That Binds to Herpes Simplex Virus Type 1 Glycoprotein D. Journal of Biological Chemistry, 2002, 277, 33456-33467.	1.6	145
13	Chemoenzymatic Design of Heparan Sulfate Oligosaccharides*. Journal of Biological Chemistry, 2010, 285, 34240-34249.	1.6	138
14	Molecular Cloning and Characterization of a Human Uronyl 2-Sulfotransferase That Sulfates Iduronyl and Glucuronyl Residues in Dermatan/Chondroitin Sulfate. Journal of Biological Chemistry, 1999, 274, 10474-10480.	1.6	134
15	Anticoagulant heparan sulfate: structural specificity and biosynthesis. Applied Microbiology and Biotechnology, 2007, 74, 263-272.	1.7	126
16	Chemoenzymatic synthesis of glycosaminoglycans: Re-creating, re-modeling and re-designing nature's longest or most complex carbohydrate chains. Glycobiology, 2013, 23, 764-777.	1.3	126
17	Using a 3-<i>O</i>-Sulfated Heparin Octasaccharide To Inhibit the Entry of Herpes Simplex Virus Type 1. Biochemistry, 2008, 47, 5774-5783.	1.2	117
18	Purification of Heparan Sulfate D-Glucosaminyl 3-O-Sulfotransferase. Journal of Biological Chemistry, 1996, 271, 27072-27082.	1.6	112

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19	Enzymatic Redesigning of Biologically Active Heparan Sulfate. Journal of Biological Chemistry, 2005, 280, 42817-42825.	1.6	109
20	Preactivationâ€Based, Oneâ€Pot Combinatorial Synthesis of Heparinâ€like Hexasaccharides for the Analysis of Heparinâ€“Protein Interactions. Chemistry - A European Journal, 2010, 16, 8365-8375.	1.7	104
21	Characterization of heparan sulphate 3-O-sulphotransferase isoform 6 and its role in assisting the entry of herpes simplex virus type 1. Biochemical Journal, 2005, 385, 451-459.	1.7	103
22	Recent progress and applications in glycosaminoglycan and heparin research. Current Opinion in Chemical Biology, 2009, 13, 633-640.	2.8	103
23	Using an Enzymatic Combinatorial Approach to Identify Anticoagulant Heparan Sulfate Structures. Chemistry and Biology, 2007, 14, 986-993.	6.2	98
24	Anti-heparan Sulfate Peptides That Block Herpes Simplex Virus Infection in Vivo. Journal of Biological Chemistry, 2011, 286, 25406-25415.	1.6	96
25	The US regulatory and pharmacopeia response to the global heparin contamination crisis. Nature Biotechnology, 2016, 34, 625-630.	9.4	93
26	Heparan Sulfate d-Glucosaminyl 3-O-Sulfotransferase-3A SulfatesN-Unsubstituted Glucosamine Residues. Journal of Biological Chemistry, 1999, 274, 38155-38162.	1.6	91
27	Quantification of Heparan Sulfate Disaccharides Using Ion-Pairing Reversed-Phase Microflow High-Performance Liquid Chromatography with Electrospray Ionization Trap Mass Spectrometry. Analytical Chemistry, 2009, 81, 4349-4355.	3.2	84
28	Chemoenzymatic synthesis of heparan sulfate and heparin oligosaccharides and NMR analysis: paving the way to a diverse library for glycobiologists. Chemical Science, 2017, 8, 7932-7940.	3.7	83
29	Synthetic oligosaccharides can replace animal-sourced lowâ€“molecular weight heparins. Science Translational Medicine, 2017, 9, .	5.8	82
30	Design of biologically active heparan sulfate and heparin using an enzyme-based approach. Natural Product Reports, 2009, 26, 610.	5.2	81
31	Synthesis of 3-<i>O</i>-Sulfated Oligosaccharides to Understand the Relationship between Structures and Functions of Heparan Sulfate. Journal of the American Chemical Society, 2017, 139, 5249-5256.	6.6	79
32	Circulating heparan sulfate fragments mediate septic cognitive dysfunction. Journal of Clinical Investigation, 2019, 129, 1779-1784.	3.9	79
33	A role for 3-O-sulfated heparan sulfate in cell fusion induced by herpes simplex virus type 1. Journal of General Virology, 2004, 85, 805-809.	1.3	77
34	Structural Analysis of the Sulfotransferase (3-O-Sulfotransferase Isoform 3) Involved in the Biosynthesis of an Entry Receptor for Herpes Simplex Virus 1. Journal of Biological Chemistry, 2004, 279, 45185-45193.	1.6	77
35	6-O-Sulfotransferase-1 Represents a Critical Enzyme in the Anticoagulant Heparan Sulfate Biosynthetic Pathway. Journal of Biological Chemistry, 2001, 276, 42311-42321.	1.6	76
36	Synthetic heparin. Current Opinion in Pharmacology, 2012, 12, 217-219.	1.7	74

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37	3â€·<i>O</i>â€·Sulfation of Heparan Sulfate Enhances Tau Interaction and Cellular Uptake. Angewandte Chemie - International Edition, 2020, 59, 1818-1827.	7.2	71
38	Engineering sulfotransferases to modify heparan sulfate. Nature Chemical Biology, 2008, 4, 200-202.	3.9	70
39	Expression of heparan sulfate sulfotransferases in Kluyveromyces lactis and preparation of 3'-phosphoadenosine-5'-phosphosulfate. Glycobiology, 2011, 21, 771-780.	1.3	69
40	The Dominating Role of N-Deacetylase/N-Sulfotransferase 1 in Forming Domain Structures in Heparan Sulfate. Journal of Biological Chemistry, 2011, 286, 19768-19776.	1.6	69
41	Multi-faceted substrate specificity of heparanase. Matrix Biology, 2013, 32, 223-227.	1.5	67
42	Crystal Structure and Mutational Analysis of Heparan Sulfate 3-O-Sulfotransferase Isoform 1. Journal of Biological Chemistry, 2004, 279, 25789-25797.	1.6	64
43	Hs3st3-Modified Heparan Sulfate Controls KIT+ Progenitor Expansion by Regulating 3-O-Sulfotransferases. Developmental Cell, 2014, 29, 662-673.	3.1	64
44	Using heparin molecules to manage COVIDâ€·2019. Research and Practice in Thrombosis and Haemostasis, 2020, 4, 518-523.	1.0	64
45	Unraveling the Specificity of Heparanase Utilizing Synthetic Substrates. Journal of Biological Chemistry, 2010, 285, 14504-14513.	1.6	62
46	Chemoenzymatic Synthesis of Uridine Diphosphate-GlcNAc and Uridine Diphosphate-GalNAc Analogs for the Preparation of Unnatural Glycosaminoglycans. Journal of Organic Chemistry, 2012, 77, 1449-1456.	1.7	61
47	Design of anti-inflammatory heparan sulfate to protect against acetaminophen-induced acute liver failure. Science Translational Medicine, 2020, 12, .	5.8	60
48	Expanding the 3-<i>O</i>-Sulfate Proteomeâ€"Enhanced Binding of Neuropilin-1 to 3-<i>O</i>-Sulfated Heparan Sulfate Modulates Its Activity. ACS Chemical Biology, 2016, 11, 971-980.	1.6	57
49	Enzymatic Modification of Heparan Sulfate on a Biochip Promotes Its Interaction with Antithrombin III. Biochemical and Biophysical Research Communications, 2000, 276, 292-297.	1.0	56
50	Enzymatic Synthesis of Homogeneous Chondroitin Sulfate Oligosaccharides. Angewandte Chemie - International Edition, 2017, 56, 11784-11787.	7.2	56
51	Uncovering Biphasic Catalytic Mode of C5-epimerase in Heparan Sulfate Biosynthesis. Journal of Biological Chemistry, 2012, 287, 20996-21002.	1.6	55
52	Uncovering the Relationship between Sulphation Patterns and Conformation of Iduronic Acid in Heparan Sulphate. Scientific Reports, 2016, 6, 29602.	1.6	53
53	Dissecting the substrate recognition of 3- <i>O</i> -sulfotransferase for the biosynthesis of anticoagulant heparin. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5265-5270.	3.3	51
54	Chemoenzymatic Synthesis of Heparin Oligosaccharides with both Anti-factor Xa and Anti-factor IIa Activities. Journal of Biological Chemistry, 2012, 287, 29054-29061.	1.6	51

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55	Application of chiral materials in electrochemical sensors. Mikrochimica Acta, 2020, 187, 676.	2.5	51
56	Redirecting the substrate specificity of heparan sulfate 2- <i>O</i> -sulfotransferase by structurally guided mutagenesis. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18724-18729.	3.3	50
57	Deciphering Mode of Action of Heparanase Using Structurally Defined Oligosaccharides. Journal of Biological Chemistry, 2012, 287, 34836-34843.	1.6	50
58	Divergent Synthesis of Heparan Sulfate Oligosaccharides. Journal of Organic Chemistry, 2015, 80, 12265-12279.	1.7	50
59	Control of the heparosan N-deacetylation leads to an improved bioengineered heparin. Applied Microbiology and Biotechnology, 2011, 91, 91-99.	1.7	49
60	Controlled Chemoenzymatic Synthesis of Heparan Sulfate Oligosaccharides. Angewandte Chemie - International Edition, 2018, 57, 5340-5344.	7.2	49
61	Structural Analysis of Heparin-Derived 3- O -Sulfated Tetrasaccharides: Antithrombin Binding Site Variants. Journal of Pharmaceutical Sciences, 2017, 106, 973-981.	1.6	48
62	Determination of the Substrate Specificities ofN-Acetyl-d-glucosaminyltransferaseâ€. Biochemistry, 2006, 45, 12358-12365.	1.2	47
63	Circulating heparin oligosaccharides rapidly target the hippocampus in sepsis, potentially impacting cognitive functions. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 9208-9213.	3.3	45
64	Inhibition or Activation of Apert Syndrome FGFR2 (S252W) Signaling by Specific Glycosaminoglycans. Journal of Biological Chemistry, 2006, 281, 6924-6930.	1.6	44
65	Enzymatic Synthesis of Glycosaminoglycan Heparin. Seminars in Thrombosis and Hemostasis, 2007, 33, 453-465.	1.5	44
66	Epitope mapping by a Wnt-blocking antibody: evidence of the Wnt binding domain in heparan sulfate. Scientific Reports, 2016, 6, 26245.	1.6	44
67	The principal neuronal gD-type 3-O-sulfotransferases and their products in central and peripheral nervous system tissuesâ˜†. Matrix Biology, 2007, 26, 442-455.	1.5	43
68	Heparosanâ€Derived Heparan Sulfate/Heparinâ€Like Compounds: One Kind of Potential Therapeutic Agents. Medicinal Research Reviews, 2013, 33, 665-692.	5.0	43
69	Heparan Sulfate Domains Required for Fibroblast Growth Factor 1 and 2 Signaling through Fibroblast Growth Factor Receptor 1c. Journal of Biological Chemistry, 2017, 292, 2495-2509.	1.6	43
70	Biosynthesis of 3-O-sulfated heparan sulfate: unique substrate specificity of heparan sulfate 3-O-sulfotransferase isoform 5. Glycobiology, 2003, 13, 785-794.	1.3	42
71	Enzymatic synthesis of heparin related polysaccharides on sensor chips: Rapid screening of heparinâ€"protein interactions. Biochemical and Biophysical Research Communications, 2006, 339, 597-602.	1.0	41
72	Characterization of the N-deacetylase domain from the heparan sulfate N-deacetylase/N-sulfotransferase 2. Biochemical and Biophysical Research Communications, 2006, 339, 1232-1237.	1.0	41

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73	Construction and characterisation of a heparan sulphate heptasaccharide microarray. Chemical Communications, 2017, 53, 1743-1746.	2.2	40
74	Probing Structural Selectivity of Synthetic Heparin Binding to Stabilin Protein Receptors. Journal of Biological Chemistry, 2012, 287, 20774-20783.	1.6	39
75	Molecular Mechanism of Substrate Specificity for Heparan Sulfate 2-O-Sulfotransferase. Journal of Biological Chemistry, 2014, 289, 13407-13418.	1.6	39
76	Shotgun ion mobility mass spectrometry sequencing of heparan sulfate saccharides. Nature Communications, 2020, 11, 1481.	5.8	39
77	Strategy for the sequence analysis of heparin. Glycobiology, 1995, 5, 765-774.	1.3	38
78	Expedient Synthesis of Core Disaccharide Building Blocks from Natural Polysaccharides for Heparan Sulfate Oligosaccharide Assembly. Angewandte Chemie - International Edition, 2019, 58, 18577-18583.	7.2	38
79	Use of biosynthetic enzymes in heparin and heparan sulfate synthesis. Bioorganic and Medicinal Chemistry, 2013, 21, 4786-4792.	1.4	36
80	Structure Based Substrate Specificity Analysis of Heparan Sulfate 6-<i>O</i>-Sulfotransferases. ACS Chemical Biology, 2017, 12, 73-82.	1.6	36
81	Understanding the substrate specificity of the heparan sulfate sulfotransferases by an integrated biosynthetic and crystallographic approach. Current Opinion in Structural Biology, 2012, 22, 550-557.	2.6	35
82	Anticoagulant Heparan Sulfate Precursor Structures in F9 Embryonal Carcinoma Cells. Journal of Biological Chemistry, 1999, 274, 5681-5691.	1.6	34
83	The biosynthesis of anticoagulant heparan sulfate by the heparan sulfate 3-O-sulfotransferase isoform 5. Biochimica Et Biophysica Acta - General Subjects, 2004, 1671, 34-43.	1.1	34
84	Role of Deacetylase Activity of N-Deacetylase/N-Sulfotransferase 1 in Forming N-Sulfated Domain in Heparan Sulfate. Journal of Biological Chemistry, 2015, 290, 20427-20437.	1.6	32
85	Cell-free Synthesis of Anticoagulant Heparan Sulfate Reveals a Limiting Converting Activity That Modifies an Excess Precursor Pool. Journal of Biological Chemistry, 1996, 271, 27063-27071.	1.6	31
86	The Retinoic Acid and cAMP-dependent Up-regulation of 3-O-Sulfotransferase-1 Leads to a Dramatic Augmentation of Anticoagulantly Active Heparan Sulfate Biosynthesis in F9 Embryonal Carcinoma Cells. Journal of Biological Chemistry, 1998, 273, 27998-28003.	1.6	31
87	Syndecanâ€1 limits the progression of liver injury and promotes liver repair in acetaminophenâ€induced liver injury in mice. Hepatology, 2017, 66, 1601-1615.	3.6	30
88	Chemoenzymatic synthesis and structural characterization of 2-O-sulfated glucuronic acid-containing heparan sulfate hexasaccharides. Glycobiology, 2014, 24, 681-692.	1.3	29
89	Using structurally defined oligosaccharides to understand the interactions between proteins and heparan sulfate. Current Opinion in Structural Biology, 2018, 50, 155-161.	2.6	29
90	Analysis of the interaction between adeno-associated virus and heparan sulfate using atomic force microscopy. Glycobiology, 2004, 14, 969-977.	1.3	28

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91	Substrate specificity of 6-O-endosulfatase (Sulf-2) and its implications in synthesizing anticoagulant heparan sulfate. Glycobiology, 2012, 22, 1353-1362.	1.3	26
92	Fibroblast Growth Factor-based Signaling through Synthetic Heparan Sulfate Blocks Copolymers Studied Using High Cell Density Three-dimensional Cell Printing. Journal of Biological Chemistry, 2014, 289, 9754-9765.	1.6	26
93	2-O-Sulfated Domains in Syndecan-1 Heparan Sulfate Inhibit Neutrophil Cathelicidin and Promote Staphylococcus aureus Corneal Infection. Journal of Biological Chemistry, 2015, 290, 16157-16167.	1.6	26
94	Mutational Study of Heparan Sulfate 2-O-Sulfotransferase and Chondroitin Sulfate 2-O-Sulfotransferase. Journal of Biological Chemistry, 2007, 282, 8356-8367.	1.6	24
95	Discovery of a Small-Molecule Modulator of Glycosaminoglycan Sulfation. ACS Chemical Biology, 2017, 12, 3126-3133.	1.6	24
96	Synthesis of Uridine 5â€²-diphosphoiduronic Acid: A Potential Substrate for the Chemoenzymatic Synthesis of Heparin. Journal of Organic Chemistry, 2008, 73, 7631-7637.	1.7	23
97	Expression of chondroitin-4-O-sulfotransferase in Escherichia coli and Pichia pastoris. Applied Microbiology and Biotechnology, 2017, 101, 6919-6928.	1.7	23
98	Molecular mechanisms of heparin-induced modulation of human interleukin 12 bioactivity. Journal of Biological Chemistry, 2019, 294, 4412-4424.	1.6	23
99	Enzymatic Synthesis of Chondroitin Sulfate E to Attenuate Bacteria Lipopolysaccharide-Induced Organ Damage. ACS Central Science, 2020, 6, 1199-1207.	5.3	23
100	Directing the biological activities of heparan sulfate oligosaccharides using a chemoenzymatic approach. Glycobiology, 2012, 22, 96-106.	1.3	22
101	Affinity, Kinetic, and Structural Study of the Interaction of 3-O-Sulfotransferase Isoform 1 with Heparan Sulfateâ€. Biochemistry, 2006, 45, 5122-5128.	1.2	21
102	Using Engineered 2-O-Sulfotransferase to Determine the Activity of Heparan Sulfate C5-epimerase and Its Mutants. Journal of Biological Chemistry, 2010, 285, 11106-11113.	1.6	19
103	Characterization of the structure of antithrombin-binding heparan sulfate generated by heparan sulfate 3-O-sulfotransferase 5. Biochimica Et Biophysica Acta - General Subjects, 2005, 1725, 190-200.	1.1	18
104	Toward the chemoenzymatic synthesis of heparan sulfate oligosaccharides: oxidative cleavage of p-nitrophenyl group with ceric ammonium salts. Tetrahedron Letters, 2013, 54, 4471-4474.	0.7	18
105	Gas-Phase Analysis of the Complex of Fibroblast GrowthFactor 1 with Heparan Sulfate: A Traveling Wave Ion Mobility Spectrometry (TWIMS) and Molecular Modeling Study. Journal of the American Society for Mass Spectrometry, 2017, 28, 96-109.	1.2	18
106	Assays for determining heparan sulfate and heparin O-sulfotransferase activity and specificity. Analytical and Bioanalytical Chemistry, 2014, 406, 525-536.	1.9	17
107	Enzymatic Placement of 6-<i>O</i>-Sulfo Groups in Heparan Sulfate. Biochemistry, 2011, 50, 4382-4391.	1.2	16
108	De novo synthesis of a narrow size distribution low-molecular-weight heparin. Glycobiology, 2014, 24, 476-486.	1.3	16

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109	Facile chemoenzymatic synthesis of biotinylated heparosan hexasaccharide. Organic and Biomolecular Chemistry, 2015, 13, 5098-5101.	1.5	16
110	Chemoenzymatic synthesis of unmodified heparin oligosaccharides: cleavage of p-nitrophenyl glucuronide by alkaline and Smith degradation. Organic and Biomolecular Chemistry, 2017, 15, 1222-1227.	1.5	16
111	Quantitative analysis of heparan sulfate using isotopically labeled calibrants. Communications Biology, 2020, 3, 425.	2.0	16
112	Construction of heparan sulfate microarray for investigating the binding of specific saccharide sequences to proteins. Glycobiology, 2021, 31, 188-199.	1.3	16
113	Investigation of the biological functions of heparan sulfate using a chemoenzymatic synthetic approach. RSC Chemical Biology, 2021, 2, 702-712.	2.0	16
114	Insights into the role of 3-O-sulfotransferase in heparan sulfate biosynthesis. Organic and Biomolecular Chemistry, 2017, 15, 6792-6799.	1.5	14
115	Synthesis of 3-<i>O</i>-Sulfated Disaccharide and Tetrasaccharide Standards for Compositional Analysis of Heparan Sulfate. Biochemistry, 2020, 59, 3186-3192.	1.2	13
116	Synthetic anticoagulant heparan sulfate attenuates liver ischemia reperfusion injury. Scientific Reports, 2020, 10, 17187.	1.6	13
117	A Conformational Change in Heparan Sulfate 3-O-Sulfotransferase-1 Is Induced by Binding to Heparan Sulfateâ€. Biochemistry, 2004, 43, 4680-4688.	1.2	12
118	Characterization of the interaction between platelet factor 4 and homogeneous synthetic low molecular weight heparins. Journal of Thrombosis and Haemostasis, 2020, 18, 390-398.	1.9	12
119	Expression in Escherichia coli, Purification and Kinetic Characterization of Human Heparan Sulfate 3-O-Sulfotransferase-1. Biochemical and Biophysical Research Communications, 2002, 290, 1206-1213.	1.0	11
120	Downstream Products are Potent Inhibitors of the Heparan Sulfate 2-O-Sulfotransferase. Scientific Reports, 2018, 8, 11832.	1.6	11
121	Analysis of 3-<i>O</i>-Sulfated Heparan Sulfate Using Isotopically Labeled Oligosaccharide Calibrants. Analytical Chemistry, 2022, 94, 2950-2957.	3.2	11
122	Chemoenzymatic synthesis of heparan sulfate and heparin. Biocatalysis and Biotransformation, 2012, 30, 296-308.	1.1	10
123	Controlled Chemoenzymatic Synthesis of Heparan Sulfate Oligosaccharides. Angewandte Chemie, 2018, 130, 5438-5442.	1.6	10
124	Design and synthesis of active heparan sulfate-based probes. Chemical Communications, 2015, 51, 11019-11021.	2.2	9
125	Degeneracy of the Antithrombin Binding Sequence in Heparin: 2â€•Oâ€•Sulfated Iduronic Acid Can Replace the Critical Glucuronic Acid. Chemistry - A European Journal, 2020, 26, 11814-11818.	1.7	9
126	Neutralizing the anticoagulant activity of ultraâ€•lowâ€•molecularâ€•weight heparins using <i>N</i>â€•acetylglucosamine 6â€•sulfatase. FEBS Journal, 2013, 280, 2523-2532.	2.2	8

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127	Investigation of the substrate specificity of K5 lyase A from K5A bacteriophage. Glycobiology, 2013, 23, 132-141.	1.3	8
128	Enzymatic Synthesis of Homogeneous Chondroitin Sulfate Oligosaccharides. Angewandte Chemie, 2017, 129, 11946-11949.	1.6	8
129	Expedient Synthesis of Core Disaccharide Building Blocks from Natural Polysaccharides for Heparan Sulfate Oligosaccharide Assembly. Angewandte Chemie, 2019, 131, 18750-18756.	1.6	8
130	Recombinant dermatan sulfate is a potent activator of heparin cofactor II-dependent inhibition of thrombin. Glycobiology, 2019, 29, 446-451.	1.3	8
131	Comparison of angiopoietin-like protein 3 and 4 reveals structural and mechanistic similarities. Journal of Biological Chemistry, 2021, 296, 100312.	1.6	8
132	Synthesis of 3-<i>O</i>-Sulfated Heparan Sulfate Oligosaccharides Using 3-<i>O</i>-Sulfotransferase Isoform 4. ACS Chemical Biology, 2021, 16, 2026-2035.	1.6	8
133	A rechargeable anti-thrombotic coating for blood-contacting devices. Biomaterials, 2021, 276, 121011.	5.7	8
134	Automated solid phase assisted synthesis of a heparan sulfate disaccharide library. Organic Chemistry Frontiers, 2022, 9, 2910-2920.	2.3	8
135	Using engineered 6-<i>O</i>-sulfotransferase to improve the synthesis of anticoagulant heparin. Organic and Biomolecular Chemistry, 2020, 18, 8094-8102.	1.5	7
136	Potential Use of Anti-Inflammatory Synthetic Heparan Sulfate to Attenuate Liver Damage. Biomedicines, 2020, 8, 503.	1.4	6
137	Deciphering the substrate recognition mechanisms of the heparan sulfate 3-<i>O</i>-sulfotransferase-3. RSC Chemical Biology, 2021, 2, 1239-1248.	2.0	6
138	Improving the Sensitivity for Quantifying Heparan Sulfate from Biological Samples. Analytical Chemistry, 2021, 93, 11191-11199.	3.2	6
139	Emerging chemical and biochemical tools for studying 3-<i>O</i>-sulfated heparan sulfate. American Journal of Physiology - Cell Physiology, 2022, 322, C1166-C1175.	2.1	6
140	Structure, Biosynthesis, and Function of Glycosaminoglycans. , 2010, , 407-427.		5
141	N-Sulfotestosteronan, A Novel Substrate for Heparan Sulfate 6-O-Sulfotransferases and its Analysis by Oxidative Degradation. Biopolymers, 2013, 99, 675-685.	1.2	5
142	Modernization of Enoxaparin Molecular Weight Determination Using Homogeneous Standards. Pharmaceuticals, 2017, 10, 66.	1.7	5
143	Advances in Clinical and Basic Science of Coagulation: Illustrated abstracts of the 9th Chapel Hill Symposium on Hemostasis. Research and Practice in Thrombosis and Haemostasis, 2018, 2, 407-428.	1.0	5
144	Structural and Substrate Specificity Analysis of 3-<i>O</i>-Sulfotransferase Isoform 5 to Synthesize Heparan Sulfate. ACS Catalysis, 2021, 11, 14956-14966.	5.5	5

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145	Chemoenzymatic Synthesis of Homogeneous Heparan Sulfate and Chondroitin Sulfate Chimeras. ACS Chemical Biology, 2022, 17, 1207-1214.	1.6	5
146	Heparan Sulfate D-Glucosaminyl 3-O-Sulfotransferase-1, -2, -3, and -4. , 2002, , 475-483.		4
147	Chemical, Molecular, and Single-nucleus Analysis Reveal Chondroitin Sulfate Proteoglycan Aberrancy in Fibrolamellar Carcinoma. Cancer Research Communications, 2022, 2, 663-678.	0.7	3
148	Enzymatic Synthesis of Heparin. , 2010, , 259-277.		2
149	3â€•O â€•Sulfation of Heparan Sulfate Enhances Tau Interaction and Cellular Uptake. Angewandte Chemie, 2020, 132, 1834-1843.	1.6	2
150	Enzyme-Based Methods to Synthesize Homogeneous Glycosaminoglycan Oligosaccharides. , 2021, , 706-714.		1
151	Heparan Sulfate (Glucosamine) 3-O-Sulfotransferase 1-6 (HS3ST1-6). , 2014, , 1081-1089.		1
152	Complex Natural Product Heparin: Biosynthesis, Biology, and Application via Synthetic Heparins. AAPS Advances in the Pharmaceutical Sciences Series, 2019, , 45-58.	0.2	0
153	Chemoenzymatic Synthesis of Dâ€•Glucaroâ€•Î´â€•lactam Containing Oligosaccharides as Putative Heparanase Inhibitors. ChemistrySelect, 2021, 6, 11690-11695.	0.7	0