Fuming Zhang

List of Publications by Year
in descending order

267 papers	9,228 citations	41344 49 h-index	64796 79 g-index
279 all docs	279 docs citations	279 times ranked	10381 citing authors

#	Article	IF	Citations
1	Improving fatty acids production by engineering dynamic pathway regulation and metabolic control. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11299-11304.	7.1	423
2	Cellular Binding of Hepatitis C Virus Envelope Glycoprotein E2 Requires Cell Surface Heparan Sulfate. Journal of Biological Chemistry, 2003, 278, 41003-41012.	3.4	403
3	Sulfated polysaccharides effectively inhibit SARS-CoV-2 in vitro. Cell Discovery, 2020, 6, 50.	6.7	246
4	Characterization of heparin and severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) spike glycoprotein binding interactions. Antiviral Research, 2020, 181, 104873.	4.1	233
5	Designer DNA architecture offers precise and multivalent spatial pattern-recognition for viral sensing and inhibition. Nature Chemistry, 2020, 12, 26-35.	13.6	193
6	Effective Inhibition of SARS-CoV-2 Entry by Heparin and Enoxaparin Derivatives. Journal of Virology, 2021, 95, .	3.4	176
7	Structural basis by which alternative splicing modulates the organizer activity of FGF8 in the brain. Genes and Development, 2006, 20, 185-198.	5.9	171
8	Insights into the molecular basis for fibroblast growth factor receptor autoinhibition and ligand-binding promiscuity. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 935-940.	7.1	168
9	Kinetic Model for FGF, FGFR, and Proteoglycan Signal Transduction Complex Assemblyâ€. Biochemistry, 2004, 43, 4724-4730.	2.5	163
10	Molecular mechanisms of bioactive polysaccharides from Ganoderma lucidum (Lingzhi), a review. International Journal of Biological Macromolecules, 2020, 150, 765-774.	7.5	152
11	Nanostructured glycan architecture is important in the inhibition of influenza A virus infection. Nature Nanotechnology, 2017, 12, 48-54.	31.5	131
12	Intravenous fluid resuscitation is associated with septic endothelial glycocalyx degradation. Critical Care, 2019, 23, 259.	5.8	121
13	Urinary Glycosaminoglycans Predict Outcomes in Septic Shock and Acute Respiratory Distress Syndrome. American Journal of Respiratory and Critical Care Medicine, 2016, 194, 439-449.	5.6	114
14	Binding affinities of vascular endothelial growth factor (VEGF) for heparin-derived oligosaccharides. Bioscience Reports, 2012, 32, 71-81.	2.4	111
15	E. coli K5 fermentation and the preparation of heparosan, a bioengineered heparin precursor. Biotechnology and Bioengineering, 2010, 107, 964-973.	3.3	106
16	Engineering of routes to heparin and related polysaccharides. Applied Microbiology and Biotechnology, 2012, 93, 1-16.	3.6	106
17	Top-Down Approach for the Direct Characterization of Low Molecular Weight Heparins Using LC-FT-MS. Analytical Chemistry, 2012, 84, 8822-8829.	6.5	103
18	Interaction of Zika Virus Envelope Protein with Glycosaminoglycans. Biochemistry, 2017, 56, 1151-1162.	2.5	102

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19	Structural Characterization of Pharmaceutical Heparins Prepared from Different Animal Tissues. Journal of Pharmaceutical Sciences, 2013, 102, 1447-1457.	3.3	99
20	Isolation of a lectin binding rhamnogalacturonan-I containing pectic polysaccharide from pumpkin. Carbohydrate Polymers, 2017, 163, 330-336.	10.2	99
21	Structure and bioactivity of a polysaccharide containing uronic acid from Polyporus umbellatus sclerotia. Carbohydrate Polymers, 2016, 152, 222-230.	10.2	90
22	Prominent members of the human gut microbiota express endo-acting O-glycanases to initiate mucin breakdown. Nature Communications, 2020, 11, 4017.	12.8	81
23	Circulating heparan sulfate fragments mediate septic cognitive dysfunction. Journal of Clinical Investigation, 2019, 129, 1779-1784.	8.2	79
24	Crystallographic Analysis of Calcium-dependent Heparin Binding to Annexin A2. Journal of Biological Chemistry, 2006, 281, 31689-31695.	3.4	78
25	Rapid and accurate determination of the lignin content of lignocellulosic biomass by solid-state NMR. Fuel, 2015, 141, 39-45.	6.4	74
26	Analysis of Total Human Urinary Glycosaminoglycan Disaccharides by Liquid Chromatographyâ€“Tandem Mass Spectrometry. Analytical Chemistry, 2015, 87, 6220-6227.	6.5	73
27	Isolation and characterization of heparan sulfate from various murine tissues. Glycoconjugate Journal, 2006, 23, 555-563.	2.7	72
28	Heparin Oligosaccharides Inhibit Chemokine (CXC Motif) Ligand 12 (CXCL12) Cardioprotection by Binding Orthogonal to the Dimerization Interface, Promoting Oligomerization, and Competing with the Chemokine (CXC Motif) Receptor 4 (CXCR4) N Terminus. Journal of Biological Chemistry, 2013, 288, 737-746.	3.4	72
29	Kinetic and Structural Studies on Interactions between Heparin or Heparan Sulfate and Proteins of the Hedgehog Signaling Pathway. Biochemistry, 2007, 46, 3933-3941.	2.5	71
30	A mutant-cell library for systematic analysis of heparan sulfate structureâ€“function relationships. Nature Methods, 2018, 15, 889-899.	19.0	71
31	3â€Oâ€Sulfation of Heparan Sulfate Enhances Tau Interaction and Cellular Uptake. Angewandte Chemie - International Edition, 2020, 59, 1818-1827.	13.8	71
32	Analysis of pharmaceutical heparins and potential contaminants using 1H-NMR and PAGE. Journal of Pharmaceutical Sciences, 2009, 98, 4017-4026.	3.3	70
33	Oversulfated chondroitin sulfate interaction with heparin-binding proteins: New insights into adverse reactions from contaminated heparins. Biochemical Pharmacology, 2009, 78, 292-300.	4.4	69
34	Identification and Characterization of a Glycosaminoglycan Recognition Element of the C Chemokine Lymphotactin. Journal of Biological Chemistry, 2004, 279, 12598-12604.	3.4	68
35	Glycan Determinants of Heparin-Tau Interaction. Biophysical Journal, 2017, 112, 921-932.	0.5	68
36	Porphyrin-based compounds and their applications in materials and medicine. Dyes and Pigments, 2021, 188, 109136.	3.7	68

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37	Compositional Analysis of Heparin/Heparan Sulfate Interacting with Fibroblast Growth FactorÂ·Fibroblast Growth Factor Receptor Complexes. Biochemistry, 2009, 48, 8379-8386.	2.5	67
38	Metabolic engineering of Chinese hamster ovary cells: Towards a bioengineered heparin. Metabolic Engineering, 2012, 14, 81-90.	7.0	67
39	Fibroblast Growth Factor Signaling Mediates Pulmonary Endothelial Glycocalyx Reconstitution. American Journal of Respiratory Cell and Molecular Biology, 2017, 56, 727-737.	2.9	67
40	Extraction, structure and bioactivities of the polysaccharides from Pleurotus eryngii: A review. International Journal of Biological Macromolecules, 2020, 150, 1342-1347.	7.5	67
41	Ultra-performance ion-pairing liquid chromatography with on-line electrospray ion trap mass spectrometry for heparin disaccharide analysis. Analytical Biochemistry, 2011, 415, 59-66.	2.4	66
42	Polymorphic factor H-binding activity of CspA protects Lyme borreliae from the host complement in feeding ticks to facilitate tick-to-host transmission. PLoS Pathogens, 2018, 14, e1007106.	4.7	63
43	Structural characterization of heparins from different commercial sources. Analytical and Bioanalytical Chemistry, 2011, 401, 2793-2803.	3.7	62
44	Control of Promatrilysin (MMP7) Activation and Substrate-specific Activity by Sulfated Glycosaminoglycans. Journal of Biological Chemistry, 2009, 284, 27924-27932.	3.4	61
45	Functional role of glycosaminoglycans in decellularized lung extracellular matrix. Acta Biomaterialia, 2020, 102, 231-246.	8.3	60
46	Design of anti-inflammatory heparan sulfate to protect against acetaminophen-induced acute liver failure. Science Translational Medicine, 2020, 12, .	12.4	60
47	A novel structural fucosylated chondroitin sulfate from Holothuria Mexicana and its effects on growth factors binding and anticoagulation. Carbohydrate Polymers, 2018, 181, 1160-1168.	10.2	58
48	Cocaine Exposure Modulates Perineuronal Nets and Synaptic Excitability of Fast-Spiking Interneurons in the Medial Prefrontal Cortex. ENeuro, 2018, 5, ENEURO.0221-18.2018.	1.9	57
49	Comparison of the Interactions of Different Growth Factors and Glycosaminoglycans. Molecules, 2019, 24, 3360.	3.8	56
50	High Structural Resolution Hydroxyl Radical Protein Footprinting Reveals an Extended Robo1-Heparin Binding Interface. Journal of Biological Chemistry, 2015, 290, 10729-10740.	3.4	54
51	Extraction temperature is a decisive factor for the properties of pectin. Food Hydrocolloids, 2021, 112, 106160.	10.7	54
52	A Highly Stable Covalent Conjugated Heparin Biochip for Heparinâ€“Protein Interaction Studies. Analytical Biochemistry, 2002, 304, 271-273.	2.4	52
53	The structure-activity relationship of the interactions of SARS-CoV-2 spike glycoproteins with glucuronomannan and sulfated galactofucan from Saccharina japonica. International Journal of Biological Macromolecules, 2020, 163, 1649-1658.	7.5	52
54	Isolation of bovine corneal keratan sulfate and its growth factor and morphogen binding. FEBS Journal, 2013, 280, 2285-2293.	4.7	51

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55	Capillary Electrophoresisâ€“Mass Spectrometry for the Analysis of Heparin Oligosaccharides and Low Molecular Weight Heparin. Analytical Chemistry, 2016, 88, 1937-1943.	6.5	51
56	A Structural Analysis of Glycosaminoglycans from Lethal and Nonlethal Breast Cancer Tissues: Toward a Novel Class of Theragnostics for Personalized Medicine in Oncology?. OMICS A Journal of Integrative Biology, 2012, 16, 79-89.	2.0	50
57	Structural Analysis of Heparin-Derived 3- O -Sulfated Tetrasaccharides: Antithrombin Binding Site Variants. Journal of Pharmaceutical Sciences, 2017, 106, 973-981.	3.3	48
58	Pharmacokinetics and Pharmacodynamics of Oral Heparin Solid Dosage Form in Healthy Human Subjects. Journal of Clinical Pharmacology, 2007, 47, 1508-1520.	2.0	47
59	Structural and immunological studies on the polysaccharide from spores of a medicinal entomogenous fungus Paecilomyces cicadae. Carbohydrate Polymers, 2021, 254, 117462.	10.2	47
60	Analysis of Heparins Derived From Bovine Tissues and Comparison to Porcine Intestinal Heparins. Clinical and Applied Thrombosis/Hemostasis, 2016, 22, 520-527.	1.7	41
61	Analysis of heparin oligosaccharides by capillary electrophoresisâ€“negative-ion electrospray ionization mass spectrometry. Analytical and Bioanalytical Chemistry, 2017, 409, 411-420.	3.7	41
62	Purification and structural elucidation of a water-soluble polysaccharide from the fruiting bodies of the Grifola frondosa. International Journal of Biological Macromolecules, 2018, 115, 221-226.	7.5	41
63	Metabolic engineering of cyanobacteria for photoautotrophic production of heparosan, a pharmaceutical precursor of heparin. Algal Research, 2019, 37, 57-63.	4.6	41
64	Construction and characterisation of a heparan sulphate heptasaccharide microarray. Chemical Communications, 2017, 53, 1743-1746.	4.1	40
65	Sequencing the Dermatan Sulfate Chain of Decorin. Journal of the American Chemical Society, 2017, 139, 16986-16995.	13.7	40
66	Epithelial Heparan Sulfate Contributes to Alveolar Barrier Function and Is Shed during Lung Injury. American Journal of Respiratory Cell and Molecular Biology, 2018, 59, 363-374.	2.9	40
67	The Application of Seaweed Polysaccharides and Their Derived Products with Potential for the Treatment of Alzheimerâ€™s Disease. Marine Drugs, 2021, 19, 89.	4.6	40
68	Copper regulates the interactions of antimicrobial piscidin peptides from fish mast cells with formyl peptide receptors and heparin. Journal of Biological Chemistry, 2018, 293, 15381-15396.	3.4	38
69	A flexible carbon/sulfur-cellulose core-shell structure for advanced lithiumâ€“sulfur batteries. Energy Storage Materials, 2018, 15, 388-395.	18.0	38
70	Expedient Synthesis of Core Disaccharide Building Blocks from Natural Polysaccharides for Heparan Sulfate Oligosaccharide Assembly. Angewandte Chemie - International Edition, 2019, 58, 18577-18583.	13.8	38
71	Biotechnology progress for removal of indoor gaseous formaldehyde. Applied Microbiology and Biotechnology, 2020, 104, 3715-3727.	3.6	38
72	Analysis of the Glycosaminoglycan Chains of Proteoglycans. Journal of Histochemistry and Cytochemistry, 2021, 69, 121-135.	2.5	38

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73	Microscale isolation and analysis of heparin from plasma using an anion-exchange spin column. Analytical Biochemistry, 2006, 353, 284-286.	2.4	36
74	Analysis of 3-O-sulfo group-containing heparin tetrasaccharides in heparin by liquid chromatographyâ€“mass spectrometry. Analytical Biochemistry, 2014, 455, 3-9.	2.4	36
75	Heavy Heparin: A Stable Isotopeâ€Enriched, Chemoenzymaticallyâ€Synthesized, Polyâ€Component Drug. Angewandte Chemie - International Edition, 2019, 58, 5962-5966.	13.8	35
76	Heparan Sulfate Facilitates Spike Protein-Mediated SARS-CoV-2 Host Cell Invasion and Contributes to Increased Infection of SARS-CoV-2 G614 Mutant and in Lung Cancer. Frontiers in Molecular Biosciences, 2021, 8, 649575.	3.5	35
77	Structural determinants of heparan sulfate interactions with Slit proteins. Biochemical and Biophysical Research Communications, 2004, 317, 352-357.	2.1	34
78	Major Differences between the Self-Assembly and Seeding Behavior of Heparin-Induced and in Vitro Phosphorylated Tau and Their Modulation by Potential Inhibitors. ACS Chemical Biology, 2019, 14, 1363-1379.	3.4	34
79	Characterization of Interactions between Heparin/Glycosaminoglycan and Adeno-Associated Virus. Biochemistry, 2013, 52, 6275-6285.	2.5	32
80	Method to Detect Contaminants in Heparin Using Radical Depolymerization and Liquid Chromatographyâ€“Mass Spectrometry. Analytical Chemistry, 2014, 86, 326-330.	6.5	32
81	Structure and conformation of Î±-glucan extracted from Agaricus blazei Murill by high-speed shearing homogenization. International Journal of Biological Macromolecules, 2018, 113, 558-564.	7.5	32
82	Structure and Activity of a New Low-Molecular-Weight Heparin Produced by Enzymatic Ultrafiltration. Journal of Pharmaceutical Sciences, 2014, 103, 1375-1383.	3.3	31
83	Structural and kinetic analyses of holothurian sulfated glycans suggest potential treatment for SARS-CoV-2 infection. Journal of Biological Chemistry, 2021, 297, 101207.	3.4	31
84	Response surface optimization of the heparosan N-deacetylation in producing bioengineered heparin. Journal of Biotechnology, 2011, 156, 188-196.	3.8	30
85	The 2.8ÂÃ… Electron Microscopy Structure of Adeno-Associated Virus-DJ Bound by a Heparinoid Pentasaccharide. Molecular Therapy - Methods and Clinical Development, 2017, 5, 1-12.	4.1	30
86	Biodegradable and Bioactive PCLâ€“PGS Coreâ€“Shell Fibers for Tissue Engineering. ACS Omega, 2017, 2, 6321-6328.	3.5	30
87	Anti-SARS-CoV-2 Activity of Rhamnan Sulfate from Monostroma nitidum. Marine Drugs, 2021, 19, 685.	4.6	30
88	Heparin: An old drug for new clinical applications. Carbohydrate Polymers, 2022, 295, 119818.	10.2	30
89	Structural characterization of glycosaminoglycans from zebrafish in different ages. Glycoconjugate Journal, 2009, 26, 211-218.	2.7	29
90	Heparin/heparan sulfate analysis by covalently modified reverse polarity capillary zone electrophoresis-mass spectrometry. Journal of Chromatography A, 2018, 1545, 75-83.	3.7	29

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91	Glycosaminoglycan Compositional Analysis of Relevant Tissues in Zika Virus Pathogenesis and in Vitro Evaluation of Heparin as an Antiviral against Zika Virus Infection. Biochemistry, 2019, 58, 1155-1166.	2.5	28
92	Synthetic heparan sulfate standards and machine learning facilitate the development of solid-state nanopore analysis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
93	Compositional analysis and structural elucidation of glycosaminoglycans in chicken eggs. Glycoconjugate Journal, 2014, 31, 593-602.	2.7	27
94	Divergent effect of glycosaminoglycans on the inÂvitro aggregation of serum amyloid A. Biochimie, 2014, 104, 70-80.	2.6	27
95	Surface modification of a polyethylene film for anticoagulant and antimicrobial catheter. Reactive and Functional Polymers, 2016, 100, 142-150.	4.1	27
96	Optimization of bioprocess conditions improves production of a CHO cellâ€derived, bioengineered heparin. Biotechnology Journal, 2015, 10, 1067-1081.	3.5	26
97	Comprehensive Identification and Quantitation of Basic Building Blocks for Low-Molecular Weight Heparin. Analytical Chemistry, 2016, 88, 7738-7744.	6.5	26
98	Glycosaminoglycans and glycolipids as potential biomarkers in lung cancer. Glycoconjugate Journal, 2017, 34, 661-669.	2.7	26
99	Impact of Autoclave Sterilization on the Activity and Structure of Formulated Heparin. Journal of Pharmaceutical Sciences, 2011, 100, 3396-3404.	3.3	25
100	Immobilized enzymes to convert N-sulfo, N-acetyl heparosan to a critical intermediate in the production of bioengineered heparin. Journal of Biotechnology, 2013, 167, 241-247.	3.8	25
101	Characterization of the interaction between Robo1 and heparin and other glycosaminoglycans. Biochimie, 2013, 95, 2345-2353.	2.6	25
102	Kinetic and Structural Studies of Interactions between Glycosaminoglycans and Langerin. Biochemistry, 2016, 55, 4552-4559.	2.5	25
103	Comparative Genomics Reveals Specific Genetic Architectures in Nicotine Metabolism of Pseudomonas sp. JY-Q. Frontiers in Microbiology, 2017, 8, 2085.	3.5	25
104	Borrelia burgdorferi glycosaminoglycan-binding proteins: a potential target for new therapeutics against Lyme disease. Microbiology (United Kingdom), 2017, 163, 1759-1766.	1.8	25
105	Changes in composition and sulfation patterns of glycoaminoglycans in renal cell carcinoma. Glycoconjugate Journal, 2016, 33, 103-112.	2.7	24
106	Structural analysis of urinary glycosaminoglycans from healthy human subjects. Glycobiology, 2020, 30, 143-151.	2.5	24
107	Urinary metabolomics analysis reveals the anti-diabetic effect of stachyose in high-fat diet/streptozotocin-induced type 2 diabetic rats. Carbohydrate Polymers, 2020, 229, 115534.	10.2	24
108	Akebia saponin D reverses corticosterone hypersecretion in an Alzheimerâ€™s disease rat model. Biomedicine and Pharmacotherapy, 2018, 107, 219-225.	5.6	23

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109	Enzymatic Synthesis of Chondroitin Sulfate E to Attenuate Bacteria Lipopolysaccharide-Induced Organ Damage. ACS Central Science, 2020, 6, 1199-1207.	11.3	23
110	Structural Studies of the Interaction of Crataeva tapia Bark Protein with Heparin and Other Glycosaminoglycans. Biochemistry, 2013, 52, 2148-2156.	2.5	22
111	Heparin stability by determining unsubstituted amino groups using hydrophilic interaction chromatography mass spectrometry. Analytical Biochemistry, 2014, 461, 46-48.	2.4	22
112	Circadian control of heparan sulfate levels times phagocytosis of amyloid beta aggregates. PLoS Genetics, 2022, 18, e1009994.	3.5	22
113	Glycosaminoglycans of the Porcine Central Nervous System. Biochemistry, 2010, 49, 9839-9847.	2.5	21
114	Biophysical characterization of glycosaminoglycan-IL-7 interactions using SPR. Biochimie, 2012, 94, 242-249.	2.6	21
115	SPR Biosensor Probing the Interactions between TIMP-3 and Heparin/GAGs. Biosensors, 2015, 5, 500-512.	4.7	21
116	Decline in arylsulfatase B expression increases EGFR expression by inhibiting the protein-tyrosine phosphatase SHP2 and activating JNK in prostate cells. Journal of Biological Chemistry, 2018, 293, 11076-11087.	3.4	21
117	Endothelial Glycocalyx Shedding Predicts Donor Organ Acceptability and Is Associated With Primary Graft Dysfunction in Lung Transplant Recipients. Transplantation, 2019, 103, 1277-1285.	1.0	21
118	Regulation of PTP1B activation through disruption of redox-complex formation. Nature Chemical Biology, 2020, 16, 122-125.	8.0	21
119	Combined genomic and transcriptomic analysis of the dibutyl phthalate metabolic pathway in Arthrobacter sp. ZJUTW. Biotechnology and Bioengineering, 2020, 117, 3712-3726.	3.3	21
120	Heparan sulfates from bat and human lung and their binding to the spike protein of SARS-CoV-2 virus. Carbohydrate Polymers, 2021, 260, 117797.	10.2	21
121	Novel method for measurement of heparin anticoagulant activity using SPR. Analytical Biochemistry, 2017, 526, 39-42.	2.4	20
122	Glycosaminoglycans from fish swim bladder: isolation, structural characterization and bioactive potential. Glycoconjugate Journal, 2018, 35, 87-94.	2.7	20
123	Bottom-up and top-down profiling of pentosan polysulfate. Analyst, The, 2019, 144, 4781-4786.	3.5	20
124	Unique Cell Surface Mannan of Yeast Pathogen Candida auris with Selective Binding to IgG. ACS Infectious Diseases, 2020, 6, 1018-1031.	3.8	20
125	Potential Anti-SARS-CoV-2 Activity of Pentosan Polysulfate and Mucopolysaccharide Polysulfate. Pharmaceuticals, 2022, 15, 258.	3.8	20
126	A comparative secretome analysis of industrial Aspergillus oryzae and its spontaneous mutant ZJGS-LZ-21. International Journal of Food Microbiology, 2017, 248, 1-9.	4.7	19

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127	Enzymatic Generation of Highly Anticoagulant Bovine Intestinal Heparin. Journal of Medicinal Chemistry, 2017, 60, 8673-8679.	6.4	19
128	Glycosaminoglycans from bovine eye vitreous humour and interaction with collagen type II. Glycoconjugate Journal, 2018, 35, 119-128.	2.7	19
129	Keratan sulfate glycosaminoglycan from chicken egg white. Glycobiology, 2016, 26, 693-700.	2.5	18
130	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.	2.8	18
131	Structural and Functional Components of the Skate Sensory Organ Ampullae of Lorenzini. ACS Chemical Biology, 2018, 13, 1677-1685.	3.4	18
132	Digestibility of squash polysaccharide under simulated salivary, gastric and intestinal conditions and its impact on short-chain fatty acid production in type-2 diabetic rats. Carbohydrate Polymers, 2020, 235, 115904.	10.2	18
133	Microanalysis of stomach cancer glycosaminoglycans. Glycoconjugate Journal, 2013, 30, 701-707.	2.7	17
134	Characterization of human placental glycosaminoglycans and regional binding to VAR2CSA in malaria infected erythrocytes. Glycoconjugate Journal, 2014, 31, 109-116.	2.7	17
135	High Cell Density Cultivation of Recombinant Escherichia coli Strains Expressing 2-O-Sulfotransferase and C5-Epimerase for the Production of Bioengineered Heparin. Applied Biochemistry and Biotechnology, 2015, 175, 2986-2995.	2.9	17
136	Structural elucidation of polysaccharide containing 3-O-methyl galactose from fruiting bodies of Pleurotus citrinopileatus. Carbohydrate Research, 2016, 434, 72-76.	2.3	17
137	Top-down and bottom-up analysis of commercial enoxaparins. Journal of Chromatography A, 2017, 1480, 32-40.	3.7	17
138	Online capillary zone electrophoresis negative electron transfer dissociation tandem mass spectrometry of glycosaminoglycan mixtures. International Journal of Mass Spectrometry, 2019, 445, 116209.	1.5	17
139	The degree of polymerization and sulfation patterns in heparan sulfate are critical determinants of cytomegalovirus entry into host cells. PLoS Pathogens, 2021, 17, e1009803.	4.7	17
140	Stable Isotopic Analysis of Porcine, Bovine, and Ovine Heparins. Journal of Pharmaceutical Sciences, 2015, 104, 457-463.	3.3	16
141	Parent heparin and daughter LMW heparin correlation analysis using LC-MS and NMR. Analytica Chimica Acta, 2017, 961, 91-99.	5.4	16
142	Antithrombin III-Binding Site Analysis of Low-Molecular-Weight Heparin Fractions. Journal of Pharmaceutical Sciences, 2018, 107, 1290-1295.	3.3	16
143	Glycosaminoglycans in human cerebrospinal fluid determined by LC-MS/MS MRM. Analytical Biochemistry, 2019, 567, 82-84.	2.4	16
144	Chemometric analysis of porcine, bovine and ovine heparins. Journal of Pharmaceutical and Biomedical Analysis, 2019, 164, 345-352.	2.8	16

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145	â€stimulated crosslinking of catecholâ€conjugated hydroxyethyl chitosan as a tissue adhesive. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 582-593.	3.4	16
146	Construction of heparan sulfate microarray for investigating the binding of specific saccharide sequences to proteins. Glycobiology, 2021, 31, 188-199.	2.5	16
147	The Sulfation Code of Tauopathies: Heparan Sulfate Proteoglycans in the Prion Like Spread of Tau Pathology. Frontiers in Molecular Biosciences, 2021, 8, 671458.	3.5	16
148	Soluble Î±-klotho and heparin modulate the pathologic cardiac actions of fibroblast growth factor 23 in chronic kidney disease. Kidney International, 2022, 102, 261-279.	5.2	16
149	Examination of Glycosaminoglycan Binding Sites on the XCL1 Dimer. Biochemistry, 2016, 55, 1214-1225.	2.5	15
150	Effects of fermentation on the hemolytic activity and degradation of Camellia oleifera saponins by Lactobacillus crustorum and Bacillus subtilis. FEMS Microbiology Letters, 2018, 365, .	1.8	15
151	Glycan Markers of Human Stem Cells Assigned with Beam Search Arrays*[S]. Molecular and Cellular Proteomics, 2019, 18, 1981-2002.	3.8	15
152	Loss of endothelial sulfatase-1 after experimental sepsis attenuates subsequent pulmonary inflammatory responses. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2019, 317, L667-L677.	2.9	15
153	Structural analysis of a glucoglucuronan derived from laminarin and the mechanisms of its anti-lung cancer activity. International Journal of Biological Macromolecules, 2020, 163, 776-787.	7.5	15
154	Structural analysis of a novel sulfated galacto-fuco-xylo-glucurono-mannan from Sargassum fusiforme and its anti-lung cancer activity. International Journal of Biological Macromolecules, 2020, 149, 450-458.	7.5	15
155	Platelet factor 4 polyanion immune complexes: heparin induced thrombocytopenia and vaccine-induced immune thrombotic thrombocytopenia. Thrombosis Journal, 2021, 19, 66.	2.1	15
156	Surprising absence of heparin in the intestinal mucosa of baby pigs. Glycobiology, 2017, 27, 57-63.	2.5	14
157	Impact of Temperature on Heparin and Protein Interactions. Biochemistry & Physiology, 2018, 07, .	0.2	14
158	Highly purified fucosylated chondroitin sulfate oligomers with selective intrinsic factor Xase complex inhibition. Carbohydrate Polymers, 2019, 222, 115025.	10.2	14
159	Mechanism of enhanced oral absorption of akebia saponin D by a self-nanoemulsifying drug delivery system loaded with phospholipid complex. Drug Development and Industrial Pharmacy, 2019, 45, 124-129.	2.0	14
160	Recent Progress of Marine Polypeptides as Anticancer Agents. Recent Patents on Anti-Cancer Drug Discovery, 2018, 13, 445-454.	1.6	14
161	Designer DNA nanostructures for viral inhibition. Nature Protocols, 2022, 17, 282-326.	12.0	14
162	Selective, switchable fluorescent probe for heparin based onÂaggregation-induced emission. Analytical Biochemistry, 2016, 514, 48-54.	2.4	13

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163	A simple strategy for the separation and purification of water-soluble polysaccharides from the fresh Spirulina platensis. Separation Science and Technology, 2017, 52, 456-466.	2.5	13
164	Evaluating Heparin Products for Heparin-Induced Thrombocytopenia Using Surface Plasmon Resonance. Journal of Pharmaceutical Sciences, 2020, 109, 975-980.	3.3	13
165	FAM20B-catalyzed glycosaminoglycans control murine tooth number by restricting FGFR2b signaling. BMC Biology, 2020, 18, 87.	3.8	13
166	Structural characterization and anti-lung cancer activity of a sulfated glucurono-xylo-rhamnan from Enteromorpha prolifera. Carbohydrate Polymers, 2020, 237, 116143.	10.2	13
167	The abnormal accumulation of heparan sulfate in patients with mucopolysaccharidosis prevents the elastolytic activity of cathepsin V. Carbohydrate Polymers, 2021, 253, 117261.	10.2	13
168	Fractionation of sulfated galactan from the red alga Botryocladia occidentalis separates its anticoagulant and anti-SARS-CoV-2 properties. Journal of Biological Chemistry, 2022, 298, 101856.	3.4	13
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