

Wengang Chai

List of Publications by Year in descending order

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66343

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times ranked

6479
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#	ARTICLE	IF	CITATIONS
1	Oligosaccharide microarrays for high-throughput detection and specificity assignments of carbohydrate-protein interactions. <i>Nature Biotechnology</i> , 2002, 20, 1011-1017.	17.5	613
2	GM1 structure determines SV40-induced membrane invagination and infection. <i>Nature Cell Biology</i> , 2010, 12, 11-18.	10.3	535
3	Ligands for the Î ² -Glucan Receptor, Dectin-1, Assigned Using "Designer" Microarrays of Oligosaccharide Probes (Neoglycolipids) Generated from Glucan Polysaccharides. <i>Journal of Biological Chemistry</i> , 2006, 281, 5771-5779.	3.4	329
4	Receptor-binding specificity of pandemic influenza A (H1N1) 2009 virus determined by carbohydrate microarray. <i>Nature Biotechnology</i> , 2009, 27, 797-799.	17.5	299
5	Carbohydrate microarrays " a new set of technologies at the frontiers of glycomics. <i>Current Opinion in Structural Biology</i> , 2003, 13, 637-645.	5.7	290
6	Oligosaccharide ligands for NKR-P1 protein activate NK cells and cytotoxicity. <i>Nature</i> , 1994, 372, 150-157.	27.8	282
7	Adhesion of Plasmodium falciparum-infected erythrocytes to hyaluronic acid in placental malaria. <i>Nature Medicine</i> , 2000, 6, 86-90.	30.7	275
8	Novel sulfated ligands for the cell adhesion molecule E-selectin revealed by the neoglycolipid technology among O-linked oligosaccharides on an ovarian cystadenoma glycoprotein. <i>Biochemistry</i> , 1992, 31, 9126-9131.	2.5	261
9	Oligosaccharide microarrays to decipher the glyco code. <i>Nature Reviews Molecular Cell Biology</i> , 2004, 5, 582-588.	37.0	237
10	Comparison of structures and anticoagulant activities of fucosylated chondroitin sulfates from different sea cucumbers. <i>Carbohydrate Polymers</i> , 2011, 83, 688-696.	10.2	224
11	Negative-Ion Electrospray Mass Spectrometry of Neutral Underivatized Oligosaccharides. <i>Analytical Chemistry</i> , 2001, 73, 651-657.	6.5	203
12	The Cysteine-Rich Domain of the Macrophage Mannose Receptor Is a Multispecific Lectin That Recognizes Chondroitin Sulfates a and B and Sulfated Oligosaccharides of Blood Group Lewisx and Lewisy Types in Addition to the Sulfated N-Glycans of Lutropin. <i>Journal of Experimental Medicine</i> , 2000, 191, 1117-1126.	8.5	163
13	N-Glycolyl GM1 Ganglioside as a Receptor for Simian Virus 40. <i>Journal of Virology</i> , 2007, 81, 12846-12858.	3.4	150
14	Sequence determination and anticoagulant and antithrombotic activities of a novel sulfated fucan isolated from the sea cucumber <i>Isostichopus badionotus</i> . <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2012, 1820, 989-1000.	2.4	129
15	Neoglycolipid Probes Prepared via Oxime Ligation for Microarray Analysis of Oligosaccharide-Protein Interactions. <i>Chemistry and Biology</i> , 2007, 14, 847-859.	6.0	126
16	Branching pattern and sequence analysis of underivatized oligosaccharides by combined MS/MS of singly and doubly charged molecular ions in negative-ion electrospray mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2002, 13, 670-679.	2.8	122
17	High prevalence of 2-mono- and 2,6-di-substituted Manol-terminating sequences among O-glycans released from brain glycopeptides by reductive alkaline hydrolysis. <i>FEBS Journal</i> , 1999, 263, 879-888.	0.2	119
18	Brain Contains HNK-1 Immunoreactive O-Glycans of the Sulfoglucuronyl Lactosamine Series that Terminate in 2-Linked or 2,6-Linked Hexose (Mannose). <i>Journal of Biological Chemistry</i> , 1997, 272, 8924-8931.	3.4	118

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19	Mechanism of mild acid hydrolysis of galactan polysaccharides with highly ordered disaccharide repeats leading to a complete series of exclusively odd-numbered oligosaccharides. <i>FEBS Journal</i> , 2009, 276, 2125-2137.	4.7	112
20	Characterization of Heparin Oligosaccharide Mixtures as Ammonium Salts Using Electrospray Mass Spectrometry. <i>Analytical Chemistry</i> , 1998, 70, 2060-2066.	6.5	103
21	Sulfation pattern of the fucose branch is important for the anticoagulant and antithrombotic activities of fucosylated chondroitin sulfates. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2013, 1830, 3054-3066.	2.4	98
22	Fucosylated Chondroitin Sulfates from the Body Wall of the Sea Cucumber <i>Holothuria forskali</i> . <i>Journal of Biological Chemistry</i> , 2014, 289, 28284-28298.	3.4	88
23	The neoglycolipid (NGL)-based oligosaccharide microarray system poised to decipher the meta-glycome. <i>Current Opinion in Chemical Biology</i> , 2014, 18, 87-94.	6.1	79
24	Neutral oligosaccharides of bovine submaxillary mucin. A combined mass spectrometry and ¹ H-NMR study. <i>FEBS Journal</i> , 1992, 203, 257-268.	0.2	72
25	Sequence analysis of alginate-derived oligosaccharides by negative-ion electrospray tandem mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2006, 17, 621-630.	2.8	70
26	Polysialic acid is a cellular receptor for human adenovirus 52. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E4264-E4273.	7.1	70
27	Sequence Determination of Sulfated Carrageenan-Derived Oligosaccharides by High-Sensitivity Negative-Ion Electrospray Tandem Mass Spectrometry. <i>Analytical Chemistry</i> , 2006, 78, 8499-8505.	6.5	65
28	Neoglycolipid-Based Oligosaccharide Microarray System: Preparation of NGLs and Their Noncovalent Immobilization on Nitrocellulose-Coated Glass Slides for Microarray Analyses. <i>Methods in Molecular Biology</i> , 2012, 808, 117-136.	0.9	64
29	The Structural Motif in Chondroitin Sulfate for Adhesion of <i>Plasmodium falciparum</i> -infected Erythrocytes Comprises Disaccharide Units of 4-O-Sulfated and Non-sulfated N-Acetylgalactosamine Linked to Glucuronic Acid. <i>Journal of Biological Chemistry</i> , 2002, 277, 22438-22446.	3.4	63
30	Microscale sequencing of O-linked oligosaccharides using mild periodate oxidation of alditols, coupling to phospholipid and TLC-MS analysis of the resulting neoglycolipids. <i>FEBS Journal</i> , 1990, 189, 499-507.	0.2	60
31	Sulfation of a squid ink polysaccharide and its inhibitory effect on tumor cell metastasis. <i>Carbohydrate Polymers</i> , 2010, 81, 560-566.	10.2	60
32	10E4 Antigen of Scrapie Lesions Contains an Unusual Nonsulfated Heparan Motif. <i>Journal of Biological Chemistry</i> , 2001, 276, 12539-12545.	3.4	59
33	The Role of Sialyl Glycan Recognition in Host Tissue Tropism of the Avian Parasite <i>Eimeria tenella</i> . <i>PLoS Pathogens</i> , 2011, 7, e1002296.	4.7	58
34	Unravelling Glucan Recognition Systems by Glycome Microarrays Using the Designer Approach and Mass Spectrometry. <i>Molecular and Cellular Proteomics</i> , 2015, 14, 974-988.	3.8	58
35	Heparin increases the infectivity of Human Papillomavirus Type 16 independent of cell surface proteoglycans and induces L1 epitope exposure. <i>Cellular Microbiology</i> , 2013, 15, n/a-n/a.	2.1	57
36	Sequence determination of a non-sulfated glycosaminoglycan-like polysaccharide from melanin-free ink of the squid <i>Ommastrephes bartrami</i> by negative-ion electrospray tandem mass spectrometry and NMR spectroscopy. <i>Glycoconjugate Journal</i> , 2008, 25, 481-492.	2.7	55

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37	Neoglycolipid Technology: Deciphering Information Content of Glycome. <i>Methods in Enzymology</i> , 2003, 362, 160-195.	1.0	54
38	Mannan detecting C-type lectin receptor probes recognise immune epitopes with diverse chemical, spatial and phylogenetic heterogeneity in fungal cell walls. <i>PLoS Pathogens</i> , 2020, 16, e1007927.	4.7	52
39	Carbohydrate Sequence of the Prostate Cancer-associated Antigen F77 Assigned by a Mucin O-Glycome Designer Array. <i>Journal of Biological Chemistry</i> , 2014, 289, 16462-16477.	3.4	51
40	Structural Basis for Multiple Sugar Recognition of Jacalin-related Human ZG16p Lectin. <i>Journal of Biological Chemistry</i> , 2014, 289, 16954-16965.	3.4	47
41	Profiling of Sialylated Oligosaccharides in Mammalian Milk Using Online Solid Phase Extraction-Hydrophilic Interaction Chromatography Coupled with Negative-Ion Electrospray Mass Spectrometry. <i>Analytical Chemistry</i> , 2018, 90, 3174-3182.	6.5	46
42	Determination by electrospray mass spectrometry and ¹ H-NMR spectroscopy of primary structures of variously fucosylated neutral oligosaccharides based on the iso- β -lacto-N-octaoase core. <i>FEBS Journal</i> , 2004, 271, 1172-1186.	0.2	45
43	Structural determination of novel lacto-N-decaose and its monofucosylated analogue from human milk by electrospray tandem mass spectrometry and ¹ H NMR spectroscopy. <i>Archives of Biochemistry and Biophysics</i> , 2005, 434, 116-127.	3.0	45
44	On-Line Overpressure Thin-Layer Chromatographic Separation and Electrospray Mass Spectrometric Detection of Glycolipids. <i>Analytical Chemistry</i> , 2003, 75, 118-125.	6.5	42
45	Generation and Structural Characterization of a Range of Unmodified Chondroitin Sulfate Oligosaccharide Fragments. <i>Analytical Biochemistry</i> , 1996, 237, 88-102.	2.4	41
46	Fucosylated chondroitin sulfate from <i>Isostichopus badionotus</i> alleviates metabolic syndromes and gut microbiota dysbiosis induced by high-fat and high-fructose diet. <i>International Journal of Biological Macromolecules</i> , 2019, 124, 377-388.	7.5	41
47	Characterisation by LSI-MS and ¹ H NMR spectroscopy of tetra-, hexa-, and octa-saccharides of porcine intestinal heparin. <i>Carbohydrate Research</i> , 1995, 269, 139-156.	2.3	40
48	Fluorescent neoglycolipids. <i>FEBS Journal</i> , 2000, 267, 1795-1804.	0.2	40
49	Effect and Limitation of Excess Ammonium on the Release of O-Glycans in Reducing Forms from Glycoproteins under Mild Alkaline Conditions for Glycomic and Functional Analysis. <i>Analytical Chemistry</i> , 2010, 82, 9534-9542.	6.5	40
50	Galactose Recognition by the Apicomplexan Parasite <i>Toxoplasma gondii</i> . <i>Journal of Biological Chemistry</i> , 2012, 287, 16720-16733.	3.4	40
51	Analysis of Chain and Blood Group Type and Branching Pattern of Sialylated Oligosaccharides by Negative Ion Electrospray Tandem Mass Spectrometry. <i>Analytical Chemistry</i> , 2006, 78, 1581-1592.	6.5	39
52	Inhibition of Adhesion of <i>Plasmodium falciparum</i> -Infected Erythrocytes by Structurally Defined Hyaluronic Acid Dodecasaccharides. <i>Infection and Immunity</i> , 2001, 69, 420-425.	2.2	37
53	Influence of oligosaccharide presentation on the interactions of carbohydrate sequence-specific antibodies and the selectins. <i>Journal of Immunological Methods</i> , 1999, 227, 109-119.	1.4	36
54	Specificities of <i>Ricinus communis</i> agglutinin 120 interaction with sulfated galactose. <i>FEBS Letters</i> , 2011, 585, 3927-3934.	2.8	30

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55	Novel monoclonal antibody L2A5 specifically targeting sialyl-Tn and short glycans terminated by alpha-6 sialic acids. <i>Scientific Reports</i> , 2018, 8, 12196.	3.3	29
56	Preparation of Neoglycolipids with Ring-Closed Cores via Chemoselective Oxime-Ligation for Microarray Analysis of Carbohydrate-Protein Interactions. <i>Methods in Enzymology</i> , 2006, 415, 326-340.	1.0	28
57	Characterisation by mass spectrometry and 1H-NMR of novel hexasaccharides among the acidic O-linked carbohydrate chains of bovine submaxillary mucin. <i>FEBS Journal</i> , 1992, 207, 973-980.	0.2	27
58	Sulfated Glycosaminoglycans as Viral Decoy Receptors for Human Adenovirus Type 37. <i>Viruses</i> , 2019, 11, 247.	3.3	27
59	SARS-CoV-2 spike protein causes blood coagulation and thrombosis by competitive binding to heparan sulfate. <i>International Journal of Biological Macromolecules</i> , 2021, 193, 1124-1129.	7.5	25
60	Specificity of mild periodate oxidation of oligosaccharidealditols: relevance to the analysis of the core-branching pattern of O-linked glycoprotein oligosaccharides. <i>Carbohydrate Research</i> , 1993, 239, 107-115.	2.3	23
61	Structural characterization of natural ideal 6-O-sulfated agarose from red alga <i>Gloiopeltis furcata</i> . <i>Carbohydrate Polymers</i> , 2012, 89, 883-889.	10.2	23
62	Glycan Binding Specificity and Mechanism of Human and Porcine P[6]/P[19] Rotavirus VP8*s. <i>Journal of Virology</i> , 2018, 92, .	3.4	23
63	O-Glycome Beam Search Arrays for Carbohydrate Ligand Discovery. <i>Molecular and Cellular Proteomics</i> , 2018, 17, 121-133.	3.8	23
64	Toward Automated Identification of Glycan Branching Patterns Using Multistage Mass Spectrometry with Intelligent Precursor Selection. <i>Analytical Chemistry</i> , 2018, 90, 14412-14422.	6.5	23
65	Mucin O-glycan microarrays. <i>Current Opinion in Structural Biology</i> , 2019, 56, 187-197.	5.7	23
66	Two Families of Murine Carbohydrate Ligands for E-Selectin. <i>Biochemical and Biophysical Research Communications</i> , 1996, 218, 610-615.	2.1	22
67	The human epithelial carcinoma antigen recognized by monoclonal antibody AE3 is expressed on a sulfoglycolipid in addition to neoplastic mucins. <i>Biochemical and Biophysical Research Communications</i> , 2011, 408, 548-552.	2.1	22
68	Chemoenzymatic Synthesis of α -Mannose Glycans Containing Sulfated or Nonsulfated HNK-1 Epitope. <i>Journal of the American Chemical Society</i> , 2019, 141, 19351-19359.	13.7	22
69	First Synthesis of Heparan Sulfate Tetrasaccharides Containing both N-Acetylated and N-Unsubstituted Glucosamine-Search for Putative 10E4 Epitopes. <i>ChemBioChem</i> , 2006, 7, 1856-1858.	2.6	21
70	Human Group C Rotavirus VP8*s Recognize Type A Histo-Blood Group Antigens as Ligands. <i>Journal of Virology</i> , 2018, 92, .	3.4	21
71	Chikungunya Virus Strains from Each Genetic Clade Bind Sulfated Glycosaminoglycans as Attachment Factors. <i>Journal of Virology</i> , 2020, 94, .	3.4	21
72	Structural characterisation of two hexasaccharides and an octasaccharide from chondroitin sulphate C containing the unusual sequence (4-sulpho)-N-acetylgalactosamine-beta1-4-(2-sulpho)-glucuronic acid-beta1-3-(6-sulpho)-N-acetylgalactosamine. <i>FEBS Journal</i> , 1998, 251, 114-121.	0.2	20

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73	The effect of N-glycosylation of SARS-CoV-2 spike protein on the virus interaction with the host cell ACE2 receptor. <i>IScience</i> , 2021, 24, 103272.	4.1	20
74	Structural Basis of Glycan Recognition in Globally Predominant Human P[8] Rotavirus. <i>Virologica Sinica</i> , 2020, 35, 156-170.	3.0	19
75	Siglec-15 recognition of sialoglycans on tumor cell lines can occur independently of sialyl Tn antigen expression. <i>Glycobiology</i> , 2021, 31, 44-54.	2.5	19
76	Typing of Blood-Group Antigens on Neutral Oligosaccharides by Negative-Ion Electrospray Ionization Tandem Mass Spectrometry. <i>Analytical Chemistry</i> , 2013, 85, 5940-5949.	6.5	18
77	Relative Susceptibilities of the Glucosamine~Glucuronic Acid and N-Acetylglucosamine~Glucuronic Acid Linkages to Heparin Lyase III. <i>Biochemistry</i> , 2004, 43, 8590-8599.	2.5	17
78	Conformational Analysis of the Streptococcus pneumoniae Hyaluronate Lyase and Characterization of Its Hyaluronan-specific Carbohydrate-binding Module. <i>Journal of Biological Chemistry</i> , 2014, 289, 27264-27277.	3.4	17
79	Generation and characterization of β 1,2-gluco-oligosaccharide probes from <i>Brucella abortus</i> cyclic β -glucan and their recognition by C-type lectins of the immune system. <i>Glycobiology</i> , 2016, 26, 1086-1096.	2.5	16
80	Glycan Markers of Human Stem Cells Assigned with Beam Search Arrays*[S]. <i>Molecular and Cellular Proteomics</i> , 2019, 18, 1981-2002.	3.8	15
81	An investigation of the interactions of E-selectin with fuco-oligosaccharides of the blood group family. <i>Glycobiology</i> , 2002, 12, 829-835.	2.5	14
82	Profiling of Human Milk Oligosaccharides for Lewis Epitopes and Secretor Status by Electrostatic Repulsion Hydrophilic Interaction Chromatography Coupled with Negative-Ion Electrospray Tandem Mass Spectrometry. <i>Analytical Chemistry</i> , 2019, 91, 8199-8206.	6.5	13
83	Linkage and sequence analysis of neutral oligosaccharides by negative-ion MALDI tandem mass spectrometry with laser-induced dissociation. <i>Analytica Chimica Acta</i> , 2019, 1071, 25-35.	5.4	13
84	Characterization of rat and mouse acidic milk oligosaccharides based on hydrophilic interaction chromatography coupled with electrospray tandem mass spectrometry. <i>Carbohydrate Polymers</i> , 2021, 259, 117734.	10.2	13
85	Negative-Ion Electrospray Tandem Mass Spectrometry and Microarray Analyses of Developmentally Regulated Antigens Based on Type 1 and Type 2 Backbone Sequences. <i>Analytical Chemistry</i> , 2015, 87, 11871-11878.	6.5	12
86	Insights Into Glucan Polysaccharide Recognition Using Glucooligosaccharide Microarrays With Oxime-Linked Neoglycolipid Probes. <i>Methods in Enzymology</i> , 2018, 598, 139-167.	1.0	10
87	Multifaceted Approaches Including Neoglycolipid Oligosaccharide Microarrays to Ligand Discovery for Malectin. <i>Methods in Enzymology</i> , 2010, 478, 265-286.	1.0	9
88	Molecular basis for the preferential recognition of β 1,3- β 1,4-glycans by the family 11 carbohydrate-binding module from <i>Clostridium thermocellum</i> . <i>FEBS Journal</i> , 2020, 287, 2723-2743.	4.7	9
89	Defining the Glycosaminoglycan Interactions of Complement Factor H-Related Protein 5. <i>Journal of Immunology</i> , 2021, 207, 534-541.	0.8	9
90	Expression of glycoconjugates bearing the Lewis X epitope during neural differentiation of P19 EC cells. <i>FEBS Letters</i> , 2001, 488, 23-28.	2.8	8

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91	Neoglycolipid-Based "Designer" Oligosaccharide Microarrays to Define β -Glucan Ligands for Dectin-1. <i>Methods in Molecular Biology</i> , 2012, 808, 337-359.	0.9	8
92	Abnormally High Content of Free Glucosamine Residues Identified in a Preparation of Commercially Available Porcine Intestinal Heparan Sulfate. <i>Analytical Chemistry</i> , 2016, 88, 6648-6652.	6.5	8
93	Identification of carbohydrate peripheral epitopes important for recognition by positive-ion MALDI multistage mass spectrometry. <i>Carbohydrate Polymers</i> , 2020, 229, 115528.	10.2	7
94	Direct observation of a diiodo derivative and phosphonium intermediates in iodolactonization by fast-atom-bombardment mass spectrometry. <i>Journal of Organic Chemistry</i> , 1987, 52, 1617-1619.	3.2	6
95	Multistage mass spectrometry with intelligent precursor selection for N-glycan branching pattern analysis. <i>Carbohydrate Polymers</i> , 2020, 237, 116122.	10.2	6
96	Noncovalent microarrays from synthetic amino-terminating glycans: Implications in expanding glycan microarray diversity and platform comparison. <i>Glycobiology</i> , 2021, 31, 931-946.	2.5	6
97	Assignment by Negative-Ion Electrospray Tandem Mass Spectrometry of the Tetrasaccharide Backbones of Monosialylated Glycans Released from Bovine Brain Gangliosides. <i>Journal of the American Society for Mass Spectrometry</i> , 2018, 29, 1308-1318.	2.8	3
98	Mapping Molecular Recognition of β 1,3-1,4-Glucans by a Surface Glycan-Binding Protein from the Human Gut Symbiont <i>Bacteroides ovatus</i> . <i>Microbiology Spectrum</i> , 2021, 9, e0182621.	3.0	3