Nicola L B Pohl

List of Publications by Year
in descending order

115	3,944	136950	138484
papers	citations	32 h-index	58 g-index

132	132	132	3946
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Strength in numbers: non-natural polyvalent carbohydrate derivatives. Chemistry and Biology, 1996, 3, 71-77.	6.0	360
2	Fluorous-Based Carbohydrate Microarrays. Journal of the American Chemical Society, 2005, 127, 13162-13163.	13.7	229
3	Substrate specificity of bacterial oligosaccharyltransferase suggests a common transfer mechanism for the bacterial and eukaryotic systems. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 7088-7093.	7.1	177
4	Toward solution-phase automated iterative synthesis: fluorous-tag assisted solution-phase synthesis of linear and branched mannose oligomers. Organic and Biomolecular Chemistry, 2008, 6, 2686.	2.8	124
5	Mannose-Functionalized â€œPathogen-likeâ€•Polyanhydride Nanoparticles Target C-Type Lectin Receptors on Dendritic Cells. Molecular Pharmaceutics, 2011, 8, 1877-1886.	4.6	118
6	Overcoming the limited availability of human milk oligosaccharides: challenges and opportunities for research and application. Nutrition Reviews, 2016, 74, 635-644.	5.8	109
7	Advancing Solutions to the Carbohydrate Sequencing Challenge. Journal of the American Chemical Society, 2019, 141, 14463-14479.	13.7	108
8	Spectral and thermodynamic properties of Ag(I), Au(III), Cd(II), Co(II), Fe(III), Hg(II), Mn(II), Ni(II), Pb(II), U(IV), and Zn(II) binding by methanobactin from Methylosinus trichosporium OB3b. Journal of Inorganic Biochemistry, 2006, 100, 2150-2161.	3.5	106
9	Recent Advances in the Analysis of Complex Glycoproteins. Analytical Chemistry, 2017, 89, 389-413.	6.5	106
10	Synthesis and Quantitative Evaluation of Glyceroâ€<scp>D</scp>â€mannoâ€heptose Binding to Concanavalinâ€…A by Fluorousâ€Tag Assistance. Angewandte Chemie - International Edition, 2008, 47, 1707-1710.	13.8	94
11	Cloning, Nucleotide Sequence, and Heterologous Expression of the Biosynthetic Gene Cluster for R1128, a Non-steroidal Estrogen Receptor Antagonist. Journal of Biological Chemistry, 2000, 275, 33443-33448.	3.4	86
12	Tailoring the immune response by targeting C-type lectin receptors on alveolar macrophages using â€œpathogen-likeâ€•amphiphilic polyanhydride nanoparticles. Biomaterials, 2012, 33, 4762-4772.	11.4	80
13	Automated Solution-Phase Synthesis of Î²-1,4-Mannuronate and Î²-1,4-Mannan. Organic Letters, 2015, 17, 2642-2645.	4.6	74
14	Noncovalent fluorous interactions for the synthesis of carbohydrate microarrays. Journal of Fluorine Chemistry, 2006, 127, 571-579.	1.7	66
15	Fluorous Tags Catching on Microarrays. Angewandte Chemie - International Edition, 2008, 47, 3868-3870.	13.8	65
16	Synthesis of Fluorous Tags for Incorporation of Reducing Sugars into a Quantitative Microarray Platform. Organic Letters, 2008, 10, 785-788.	4.6	64
17	Bismuth(V)â€Mediated Thioglycoside Activation. Angewandte Chemie - International Edition, 2013, 52, 8441-8445.	13.8	63
18	Unusually Broad Substrate Tolerance of a Heat-Stable Archaeal Sugar Nucleotidyltransferase for the Synthesis of Sugar Nucleotides. Journal of the American Chemical Society, 2004, 126, 15993-15998.	13.7	60

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19	Complete Hexose Isomer Identification with Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2015, 26, 677-685.	2.8	55
20	Bacterial CMP-sialic acid synthetases: production, properties, and applications. Applied Microbiology and Biotechnology, 2008, 80, 757-65.	3.6	49
21	Recent liquid chromatographic approaches and developments for the separation and purification of carbohydrates. Analytical Methods, 2017, 9, 3579-3593.	2.7	47
22	Surprising Bacterial Nucleotidyltransferase Selectivity in the Conversion of Carbaglucose-1-phosphate. Journal of the American Chemical Society, 2004, 126, 13188-13189.	13.7	46
23	Monosaccharide Identification as a First Step toward de Novo Carbohydrate Sequencing: Mass Spectrometry Strategy for the Identification and Differentiation of Diastereomeric and Enantiomeric Pentose Isomers. Analytical Chemistry, 2015, 87, 4566-4571.	6.5	46
24	Selectin-Saccharide Interactions: Revealing Structure-Function Relationships with Chemical Synthesis. Journal of Organic Chemistry, 1995, 60, 6254-6255.	3.2	44
25	Carbohydrate arrays: recent developments in fabrication and detection methods with applications. Current Opinion in Chemical Biology, 2009, 13, 626-632.	6.1	44
26	Remarkably Broad Substrate Tolerance of Malonyl-CoA Synthetase, an Enzyme Capable of Intracellular Synthesis of Polyketide Precursors. Journal of the American Chemical Society, 2001, 123, 5822-5823.	13.7	42
27	Synthesis of Multivalent Tuberculosis and Leishmania-Associated Capping Carbohydrates Reveals Structure-Dependent Responses Allowing Immune Evasion. Journal of the American Chemical Society, 2010, 132, 11428-11430.	13.7	42
28	Functionalization of polyanhydride microparticles with di-mannose influences uptake by and intracellular fate within dendritic cells. Acta Biomaterialia, 2013, 9, 8902-8909.	8.3	41
29	Safety and Biocompatibility of Carbohydrate-Functionalized Polyanhydride Nanoparticles. AAPS Journal, 2015, 17, 256-267.	4.4	41
30	Protecting-Group-Based Colorimetric Monitoring of Fluorous-Phase and Solid-Phase Synthesis of Oligoglucosamines. Organic Letters, 2008, 10, 5381-5384.	4.6	38
31	Para-chlorobenzyl protecting groups as stabilizers of the glycosidic linkage: Synthesis of the 3â€²-O-sulfated Lewis x trisaccharide. Tetrahedron Letters, 1997, 38, 6985-6988.	1.4	35
32	Protic acid-catalyzed polymerization of Î²-lactones for the synthesis of chiral polyesters. Tetrahedron: Asymmetry, 2003, 14, 3249-3252.	1.8	35
33	Fluorous-Tag Assisted Syntheses of Sulfated Keratan Sulfate Oligosaccharide Fragments. Organic Letters, 2016, 18, 1414-1417.	4.6	34
34	A Research Module for the Organic Chemistry Laboratory: Multistep Synthesis of a Fluorous Dye Molecule. Journal of Chemical Education, 2014, 91, 126-130.	2.3	33
35	General assay for sugar nucleotidyltransferases using electrospray ionization mass spectrometry. Analytical Biochemistry, 2004, 328, 196-202.	2.4	32
36	Phosphomannose isomerase/GDP-mannose pyrophosphorylase from Pyrococcus furiosus: a thermostable biocatalyst for the synthesis of guanidinediphosphate-activated and mannose-containing sugar nucleotides. Organic and Biomolecular Chemistry, 2009, 7, 2135.	2.8	32

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37	A Fluorous Phosphate Protecting Group with Applications to Carbohydrate Synthesis. Organic Letters, 2011, 13, 1824-1827.	4.6	32
38	Discovery of the Chemical Function of Glycosidases:â€‰ Design, Synthesis, and Evaluation of Mass-Differentiated Carbohydrate Libraries. Organic Letters, 2004, 6, 2031-2033.	4.6	30
39	Quantitative Determination of Heavy Metal Contaminant Complexation by the Carbohydrate Polymer Chitin. Journal of Chemical & Engineering Data, 2010, 55, 1117-1121.	1.9	30
40	Pathogen-Derived Oligosaccharides Improve Innate Immune Response to Intracellular Parasite Infection. American Journal of Pathology, 2011, 179, 1329-1337.	3.8	30
41	Protocol for the purification of protected carbohydrates: toward coupling automated synthesis to alternate-pump recycling high-performance liquid chromatography. Chemical Communications, 2016, 52, 13253-13256.	4.1	29
42	Identification and deconvolution of carbohydrates with gas chromatography-vacuum ultraviolet spectroscopy. Journal of Chromatography A, 2017, 1513, 210-221.	3.7	29
43	Automated Solution-Phase Synthesis of Insect Glycans to Probe the Binding Affinity of Pea Enation Mosaic Virus. Journal of Organic Chemistry, 2015, 80, 10482-10489.	3.2	28
44	Synthesis and Incorporation of anN-Acetylcysteamine Analogue of Methylmalonyl-CoA by a Modular Polyketide Synthase. Journal of the American Chemical Society, 1998, 120, 11206-11207.	13.7	27
45	Kinetic and substrate binding analysis of phosphorylase b via electrospray ionization mass spectrometry: a model for chemical proteomics of sugar phosphorylases. Analytical Biochemistry, 2004, 327, 107-113.	2.4	27
46	Challenges in the Conversion of Manual Processes to Machine-Assisted Syntheses: Activation of Thioglycoside Donors with Aryl(trifluoroethyl)iodonium Triflimide. Organic Letters, 2018, 20, 800-803.	4.6	27
47	Tolerance and Specificity of Recombinant 6-Methylsalicylic Acid Synthase. Metabolic Engineering, 1999, 1, 180-187.	7.0	26
48	Synthesis of Isobutyl-C-galactoside (IBCG) as an Isopropylthiogalactoside (IPTG) Substitute for Increased Induction of Protein Expression. Organic Letters, 2003, 5, 1781-1783.	4.6	26
49	One-Step Synthesis of Labeled Sugar Nucleotides for ProteinO-GlcNAc Modification Studies by Chemical Function Analysis of an Archaeal Protein. Journal of the American Chemical Society, 2005, 127, 836-837.	13.7	26
50	Automated fluorous-assisted solution-phase synthesis of Î²-1,2-, 1,3-, and 1,6-mannan oligomers. Carbohydrate Research, 2016, 430, 8-15.	2.3	26
51	Evaluating Sustainability: Soap versus Biodiesel Production from Plant Oils. Journal of Chemical Education, 2012, 89, 1053-1056.	2.3	25
52	Nanoparticle Chemistry and Functionalization Differentially Regulates Dendritic Cellâ€“Nanoparticle Interactions and Triggers Dendritic Cell Maturation. Particle and Particle Systems Characterization, 2014, 31, 1269-1280.	2.3	25
53	Fully automated fast-flow synthesis of antisense phosphorodiamidate morpholino oligomers. Nature Communications, 2021, 12, 4396.	12.8	24
54	Microwave-assisted cleavage of Weinreb amide for carboxylate protection in the synthesis of a (R) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.4	23

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55	New structures, chemical functions, and inhibitors for glycosyltransferases. Current Opinion in Chemical Biology, 2010, 14, 168-173.	6.1	23
56	Platinum(II) Complex as an Artificial Peptidase:Â Selective Cleavage of Peptides and a Protein bycis-[Pt(en)(H2O)2]2+Ion under Ultraviolet and Microwave Irradiation. Inorganic Chemistry, 2005, 44, 5141-5146.	4.0	22
57	Mono- vs. di-fluorous-tagged glucosamines for iterative oligosaccharide synthesis. Journal of Fluorine Chemistry, 2008, 129, 978-982.	1.7	22
58	Automated Solution-Phase Synthesis of S-Glycosides for the Production of Oligomannopyranoside Derivatives. Organic Letters, 2020, 22, 4156-4159.	4.6	22
59	Automated, Multistep Continuousâ€Flow Synthesis of 2,6â€Dideoxy and 3â€Aminoâ€2,3,6â€trideoxy Monosaccharide Building Blocks. Angewandte Chemie - International Edition, 2021, 60, 23171-23175.	13.8	22
60	Discovery of the Archaeal Chemical Link between Glycogen (Starch) Synthase Families Using a New Mass Spectrometry Assay. Journal of the American Chemical Society, 2003, 125, 13666-13667.	13.7	21
61	Fluorous-based peptide microarrays for protease screening. Journal of Fluorine Chemistry, 2009, 130, 1042-1048.	1.7	21
62	Probing the limitations of the fluorous content for tag-mediated microarray formation. Chemical Communications, 2012, 48, 510-512.	4.1	21
63	Cloning and characterization of a heat-stable CMP-N-acylneuraminic acid synthetase from Clostridium thermocellum. Applied Microbiology and Biotechnology, 2007, 76, 827-834.	3.6	19
64	Recombinant production and biochemical characterization of a hyperthermostable Î±-glucan/maltodextrin phosphorylase fromPyrococcus furiosus. Archaea, 2008, 2, 169-176.	2.3	19
65	Mechanistic Studies of Bismuth(V)-Mediated Thioglycoside Activation Reveal Differential Reactivity of Anomers. Journal of Organic Chemistry, 2016, 81, 5949-5962.	3.2	19
66	Automated Solution-Phase Oligosaccharide Synthesis and Carbohydrate Microarrays: Development of Fluorous-Based Tools for Glycomics. ACS Symposium Series, 2008, , 272-287.	0.5	18
67	Chiral Compounds and Green Chemistry in Undergraduate Organic Laboratories: Reduction of a Ketone by Sodium Borohydride and Baker's Yeast. Journal of Chemical Education, 2002, 79, 727.	2.3	16
68	Strategies for the Chemoenzymatic Synthesis of Deoxysugar Nucleotides:â€‰ Substrate Binding versus Catalysis. Journal of Organic Chemistry, 2005, 70, 1919-1921.	3.2	16
69	Student-Driven Design of Peptide Mimetics: Microwave-Assisted Synthesis of Peptoid Oligomers. Journal of Chemical Education, 2011, 88, 999-1001.	2.3	15
70	Multigram Synthesis of Isobutyl-Î²-C-galactoside as a Substitute of Isopropylthiogalactoside for Exogenous Gene Induction in Mammalian Cells. Journal of Organic Chemistry, 2012, 77, 1539-1546.	3.2	15
71	The development of N-aryl trifluoroacetimidate-based benzyl and allyl protecting group reagents. Tetrahedron Letters, 2013, 54, 6983-6985.	1.4	15
72	Synthesis of Fluorous Photolabile Aldehyde and Carbamate and Alkyl Carbamate Protecting Groups for Carbohydrate-Associated Amines. Organic Letters, 2014, 16, 1156-1159.	4.6	15

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73	Pentavalent Bismuth as a Universal Promoter for S-Containing Glycosyl Donors with a Thiol Additive. Organic Letters, 2017, 19, 4516-4519.	4.6	15
74	Structural insight into the binding of human galectins to corneal keratan sulfate, its desulfated form and related saccharides. Scientific Reports, 2020, 10, 15708.	3.3	15
75	Functional proteomics for the discovery of carbohydrate-related enzyme activities. Current Opinion in Chemical Biology, 2005, 9, 76-81.	6.1	14
76	Functionalization promotes pathogenâ€mimicking characteristics of polyanhydride nanoparticle adjuvants. Journal of Biomedical Materials Research - Part A, 2017, 105, 2762-2771.	4.0	14
77	Rapid Multistep Synthesis of a Bioactive Peptidomimetic Oligomer for the Undergraduate Laboratory. Journal of Chemical Education, 2010, 87, 637-639.	2.3	12
78	General Label-Free Mass Spectrometry-Based Assay To Identify Glycosidase Substrate Competence. Analytical Chemistry, 2016, 88, 7183-7190.	6.5	12
79	Regioselective Benzylation of 2â€Deoxyâ€2â€aminosugars using Crown Ethers: Application to a Shortened Synthesis of Hyaluronic Acid Oligomers. Advanced Synthesis and Catalysis, 2014, 356, 2247-2256.	4.3	11
80	Addition of Sialic Acid to Insulin Confers Superior Physical Properties and Bioequivalence. Journal of Medicinal Chemistry, 2020, 63, 6134-6143.	6.4	11
81	Synthesis of a series of maltotriose phosphates with an evaluation of the utility of a fluorous phosphate protecting group. Carbohydrate Research, 2013, 369, 14-24.	2.3	10
82	Designing sugar mimetics: non-natural pyranosides as innovative chemical tools. Current Opinion in Chemical Biology, 2016, 34, 127-134.	6.1	10
83	Introduction: Carbohydrate Chemistry. Chemical Reviews, 2018, 118, 7865-7866.	47.7	10
84	Synthesis of protected glucose derivatives from levoglucosan by development of common carbohydrate protecting group reactions under continuous flow conditions. Carbohydrate Research, 2018, 468, 23-29.	2.3	10
85	A thermostable promiscuous glucose-1-phosphate uridyltransferase from Helicobacter pylori for the synthesis of nucleotide sugars. Journal of Molecular Catalysis B: Enzymatic, 2008, 50, 13-19.	1.8	9
86	Development of a Post-Column Liquid Chromatographic Chiral Addition Method for the Separation and Resolution of Common Mammalian Monosaccharides. Journal of the American Society for Mass Spectrometry, 2019, 30, 419-425.	2.8	9
87	Parallel Glyco-SPOT Synthesis of Glycopeptide Libraries. Cell Chemical Biology, 2020, 27, 1207-1219.e9.	5.2	9
88	Synthesis of a 3-deoxy-d-manno-octulosonic acid (KDO) building block from d-glucose via fermentation. Organic and Biomolecular Chemistry, 2012, 10, 5856.	2.8	7
89	A Highâ€Throughput Massâ€Spectrometryâ€Based Assay for Identifying the Biochemical Functions of Putative Glycosidases. ChemBioChem, 2017, 18, 2306-2311.	2.6	7
90	Acid-mediated N-iodosuccinimide-based thioglycoside activation for the automated solution-phase synthesis of Î±-1,2-linked-rhamnopyranosides. Pure and Applied Chemistry, 2019, 91, 1243-1255.	1.9	7

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91	Acidâ€Triggered Degradable Reagents for Differentiation of Adaptive and Innate Immune Responses to Leishmaniaâ€Associated Sugars. Angewandte Chemie - International Edition, 2015, 54, 9610-9613.	13.8	6
92	Introducing Students to Protein Analysis Techniques: Separation and Comparative Analysis of Gluten Proteins in Various Wheat Strains. Journal of Chemical Education, 2016, 93, 330-334.	2.3	6
93	Automated solution-phase syntheses of alpha 1â€²â€²2, 1â€²â€²3 type rhamnans and rhamnan sulfate fragments. Carbohydrate Research, 2019, 486, 107829.	2.3	6
94	Developing New Antibiotics with Combinatorial Biosynthesis. Journal of Chemical Education, 2000, 77, 1421.	2.3	5
95	Nonnatural substrates for polyketide synthases and their associated modifying enzymes. Current Opinion in Chemical Biology, 2002, 6, 773-778.	6.1	5
96	Robots command enzymes. Nature Chemistry, 2019, 11, 201-203.	13.6	5
97	Cellular Addresses. Chemistry and Biology, 2004, 11, 891-892.	6.0	4
98	Glycosidase activity profiling for bacterial identification by a chemical proteomics approach. Biocatalysis and Biotransformation, 2008, 26, 25-31.	2.0	4
99	Scope and limitations of carbohydrate hydrolysis for de novo glycan sequencing using a hydrogen peroxide/metallopeptide-based glycosidase mimetic. Carbohydrate Research, 2018, 458-459, 85-88.	2.3	4
100	Design and synthesis of multivalent Î±-1,2-trimannose-linked bioerodible microparticles for applications in immune response studies of Leishmania major infection. Beilstein Journal of Organic Chemistry, 2019, 15, 623-632.	2.2	4
101	Probing deoxysugar conformational preference: A comprehensive computational study investigating the effects of deoxygenation. Carbohydrate Research, 2019, 475, 17-26.	2.3	4
102	Modular continuous flow synthesis of orthogonally protected 6-deoxy glucose glycals. Organic and Biomolecular Chemistry, 2020, 18, 3254-3257.	2.8	4
103	Carbohydrate Microarrays and Fluorous-Phase Synthesis: Interfacing Fluorous-Phase Tags with the Direct Formation of Glycoarrays. ACS Symposium Series, 2007, , 261-270.	0.5	3
104	Effects of varying the 6-position oxidation state of hexopyranoses: a systematic comparative computational analysis of 48 monosaccharide stereoisomers. Journal of Molecular Modeling, 2017, 23, 214.	1.8	3
105	Leishmania-Derived Trimannose Modulates the Inflammatory Response To Significantly Reduce Leishmania major-Induced Lesions. Infection and Immunity, 2018, 86, .	2.2	3
106	Building a Bridge to New Antibiotics. ACS Chemical Biology, 2006, 1, 14-16.	3.4	2
107	Protein N-Glycans: Incorporating Glycochemistry into the Undergraduate Laboratory Curriculum. Journal of Chemical Education, 2018, 95, 2249-2255.	2.3	2
108	Production of Fluorous-Based Microarrays with Uncharged Carbohydrates. Methods in Molecular Biology, 2012, 808, 149-153.	0.9	2

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109	Acyclic Peptide Inhibitors of Amylases. Chemistry and Biology, 2005, 12, 1257-1258.	6.0	1
110	Polymer-Supported Reagents and 1Hâ€“19F NMR Couplings: The Synthesis of 2-Fluoroacetophenone. Journal of Chemical Education, 2008, 85, 834.	2.3	1
111	A mass-differentiated library strategy for identification of sugar nucleotidyltransferase activities from cell lysates. Analytical Biochemistry, 2013, 441, 8-12.	2.4	1
112	A Very Short History of the Carbohydrate Division of the American Chemical Society. Journal of Organic Chemistry, 2020, 85, 15778-15779.	3.2	1
113	A New Era of Discovery in Carbohydrate Chemistry. Journal of Organic Chemistry, 2020, 85, 15770-15772.	3.2	1
114	Putting sugars under strain. Science, 2019, 364, 631-632.	12.6	0
115	Automated, Multistep Continuousâ€Flow Synthesis of 2,6â€Dideoxy and 3â€Aminoâ€2,3,6â€trideoxy Monosaccharide Building Blocks. Angewandte Chemie, 2021, 133, 23355.	2.0	0