Anthony S Serianni

List of Publications by Year
in descending order

103 papers	3,821 citations	101543 36 h-index	133252 59 g-index
104 all docs	104 docs citations	104 times ranked	2135 citing authors

#	Article	IF	Citations
1	Hydroxymethyl Group Conformation in Saccharides: Structural Dependencies of2JHH,3JHH, and1JCHSpinâ^'Spin Coupling Constants. Journal of Organic Chemistry, 2002, 67, 949-958.	3.2	185
2	Epimerization of aldoses by molybdate involving a novel rearrangement of the carbon skeleton. Journal of the American Chemical Society, 1982, 104, 6764-6769.	13.7	154
3	[13C]Enriched Methyl Aldopyranosides: Structural Interpretations of 13C-1H Spin-Coupling Constants and 1H Chemical Shifts. Journal of the American Chemical Society, 1995, 117, 8635-8644.	13.7	149
4	Acyclic Forms of [1-13C]Aldohexoses in Aqueous Solution:â€‰ Quantitation by 13C NMR and Deuterium Isotope Effects on Tautomeric Equilibria. Journal of Organic Chemistry, 2001, 66, 6244-6251.	3.2	143
5	Three-Bond Câ^'Oâ^'Câ^'C Spin-Coupling Constants in Carbohydrates:Â Development of a Karplus Relationship. Journal of the American Chemical Society, 1998, 120, 11158-11173.	13.7	132
6	Correlated Câ^'C and Câ^'O Bond Conformations in Saccharide Hydroxymethyl Groups:Â Parametrization and Application of Redundant1Hâ^'1H,13Câ^'1H, and13Câ^'13C NMRJ-Couplings. Journal of the American Chemical Society, 2004, 126, 15668-15685.	13.7	124
7	Carbon-13 NMR studies of [1-13C]aldoses: empirical rules correlating pyranose ring configuration and conformation with carbon-13 chemical shifts and carbon-13/carbon-13 spin couplings. Journal of the American Chemical Society, 1987, 109, 3501-3508.	13.7	115
8	A nonprotein thermal hysteresis-producing xylomannan antifreeze in the freeze-tolerant Alaskan beetle <i>Upis ceramboides</i>. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20210-20215.	7.1	96
9	D-Idose: a one- and two-dimensional NMR investigation of solution composition and conformation. Journal of Organic Chemistry, 1986, 51, 2694-2702.	3.2	93
10	Density Functional Calculations on Disaccharide Mimics:â€‰ Studies of Molecular Geometries and Trans-O-glycosidic 3JCOCH and 3JCOCC Spin-Couplings. Journal of the American Chemical Society, 1999, 121, 9843-9851.	13.7	90
11	Stereoselective deuterium exchange of methylene protons in methyl tetrofuranosides: hydroxymethyl group conformations in methyl pentofuranosides. Journal of Organic Chemistry, 1983, 48, 1750-1757.	3.2	87
12	Methyl Î²-lactoside: 600-MHz 1H- and 75-MHz 13C-n.m.r. studies of 2H- and 13C-enriched compounds. Carbohydrate Research, 1982, 100, 87-101.	2.3	84
13	13Câ^'1H and13Câ^'13C Spin-Coupling Constants in Methyl Î²-d-Ribofuranoside and Methyl 2-Deoxy-Î²-d-erythro- pentofuranoside:Â Correlations with Molecular Structure and Conformation. Journal of the American Chemical Society, 1997, 119, 8946-8964.	13.7	81
14	13Câ^'1H Spin-Coupling Constants in the Î²-d-Ribofuranosyl Ring:â€‰ Effect of Ring Conformation on Coupling Magnitudes. Journal of the American Chemical Society, 1996, 118, 1413-1425.	13.7	79
15	Carbon-13-enriched carbohydrates. Preparation of aldononitriles and their reduction with a palladium catalyst. Carbohydrate Research, 1979, 72, 71-78.	2.3	77
16	Carbon-13-enriched carbohydrates. Preparation of erythrose, threose, glyceraldehyde, and glycolaldehyde with 13C-enrichment in various carbon atoms. Carbohydrate Research, 1979, 72, 79-91.	2.3	77
17	One-bond 13C-1H spin-coupling constants in aldofuranosyl rings: effect of conformation on coupling magnitude. Journal of the American Chemical Society, 1995, 117, 8645-8650.	13.7	76
18	Torsional effects on the one-bond 13C-13C spin coupling constant in ethylene glycol: insights into the behavior of 1JCC in carbohydrates. Journal of the American Chemical Society, 1993, 115, 10863-10870.	13.7	71

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19	DFT and NMR Studies of2JCOH,3JHCOH, and3JCCOHSpin-Couplings in Saccharides:Â Câˆ'O Torsional Bias and H-Bonding in Aqueous Solution. Journal of Organic Chemistry, 2007, 72, 7071-7082.	3.2	68
20	13C-Enriched ribonucleosides: synthesis and application of 13C-1H and 13C-13C spin-coupling constants to assess furanose and N-glycoside bond conformations. Journal of the American Chemical Society, 1990, 112, 7373-7381.	13.7	67
21	Wood frog adaptations to overwintering in Alaska: New limits to freezing tolerance. Journal of Experimental Biology, 2014, 217, 2193-200.	1.7	67
22	Carbon-13-enriched carbohydrates: preparation of triose, tetrose, and pentose phosphates. Biochemistry, 1979, 18, 1192-1199.	2.5	66
23	13Câˆ'1H and13Câˆ'13C Spin Coupling Behavior in Aldofuranosyl Rings from Density Functional Theory. Journal of Physical Chemistry A, 1999, 103, 3783-3795.	2.5	63
24	dl -apiose substituted with stable isotopes: Synthesis, N.M.R.-spectral analysis, and furanose anomerization. Carbohydrate Research, 1987, 166, 85-99.	2.3	60
25	Cyanohydrin synthesis: studies with carbon-13-labeled cyanide. Journal of Organic Chemistry, 1980, 45, 3329-3341.	3.2	54
26	Two-bond 13C-13C spin-coupling constants in carbohydrates: effect of structure on coupling magnitude and sign. Carbohydrate Research, 1996, 280, 177-186.	2.3	54
27	D-Talose anomerization: NMR methods to evaluate the reaction kinetics. Journal of the American Chemical Society, 1989, 111, 2681-2687.	13.7	50
28	Synthesis and n.m.r.-spectral analysis of unenriched and [1-13C]-enriched 5-deoxypentoses and 5-O-methylpentoses. Carbohydrate Research, 1987, 163, 169-188.	2.3	49
29	13Câˆ'1H and 13Câˆ'13C Spin Couplings in [2â€˜-13C]2â€˜-Deoxyribonucleosides:â€‰ Correlations with Molecular Structure. Journal of the American Chemical Society, 1997, 119, 1737-1744.	13.7	44
30	2-Deoxy-Î²-d-ribofuranosylamine:Â Quantum Mechanical Calculations of Molecular Structure and NMR Spinâˆ'Spin Coupling Constants in Nitrogen-Containing Saccharides. Journal of the American Chemical Society, 2000, 122, 6435-6448.	13.7	44
31	Synthesis of d-erythro-2-pentulose and d-threo-2-pentulose and analysis of the 13C- and 1H-n.m.r. spectra of the 1-13C- and 2-13C-substituted sugars. Carbohydrate Research, 1991, 209, 13-31.	2.3	41
32	¹³C-Labeled <i>N</i>-Acetyl-neuraminic Acid in Aqueous Solution: Detection and Quantification of Acyclic Keto, Keto Hydrate, and Enol Forms by ¹³C NMR Spectroscopy. Journal of the American Chemical Society, 2008, 130, 11892-11900.	13.7	41
33	Carbon-13-carbon-13 spin coupling constants in aldoses enriched with 13C at the terminal hydroxymethyl carbon: effect of coupling pathway structure of JCC in carbohydrates.. Journal of the American Chemical Society, 1992, 114, 3499-3505.	13.7	40
34	13C-Substituted pentos-2-uloses: synthesis and analysis by 1H- and 13C-n.m.r. spectroscopy. Carbohydrate Research, 1990, 207, 185-210.	2.3	39
35	Stable Isotopically-Enriched D-Glucose: Strategies to Introduce Carbon, Hydrogen and Oxygen Isotopes at Various Sites. Journal of Carbohydrate Chemistry, 1990, 9, 513-541.	1.1	39
36	Conformational Populations of Î²-(1â†'4) <i>O</i>-Glycosidic Linkages Using Redundant NMR <i>J</i>-Couplings and Circular Statistics. Journal of Physical Chemistry B, 2017, 121, 3042-3058.	2.6	39

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37	Conformational Analysis of Î²-Glycosidic Linkages in ¹³C-Labeled Glucobiosides Using Inter-residue Scalar Coupling Constants. Journal of Physical Chemistry B, 2008, 112, 4447-4453.	2.6	38
38	Amide <i>Cisâˆ’Trans</i> Isomerization in Aqueous Solutions of Methyl <i>N</i>-Formyl-<scp>d</scp>-glucosaminides and Methyl <i>N</i>-Acetyl-<scp>d</scp>-glucosaminides: Chemical Equilibria and Exchange Kinetics. Journal of the American Chemical Society, 2010, 132, 4641-4652.	13.7	38
39	Geminal 2JCCH Spinâˆ'Spin Coupling Constants as Probes of the Ï† Glycosidic Torsion Angle in Oligosaccharides. Journal of the American Chemical Society, 2005, 127, 9781-9793.	13.7	36
40	Dependence of Pyranose Ring Puckering on Anomeric Configuration: Methyl Idopyranosides. Journal of Physical Chemistry B, 2012, 116, 6380-6386.	2.6	35
41	2JCOCSpinâˆ'Spin Coupling Constants Across Glycosidic Linkages Exhibit a Valence Bond-Angle Dependence. Journal of the American Chemical Society, 2000, 122, 396-397.	13.7	34
42	13Câˆ'13C NMR Spinâˆ'Spin Coupling Constants in Saccharides:Â Structural Correlations Involving All Carbons in Aldohexopyranosyl Rings. Journal of Organic Chemistry, 2007, 72, 7511-7522.	3.2	34
43	[1-13C]Aldono-1,4-lactones: conformational studies based on proton-proton, proton-carbon-13, and carbon-13-carbon-13 spin couplings and ab initio molecular orbital calculations. Journal of the American Chemical Society, 1987, 109, 4464-4472.	13.7	32
44	Verification of the Projection Resultant Method for Two-Bond13Câ€"13C Coupling Sign Determinations in Carbohydrates. Journal of Magnetic Resonance Series B, 1996, 112, 69-74.	1.6	31
45	d-Penturonic acids: solution studies of stable-isotopically enriched compounds by 1H- and 13C-n.m.r. spectroscopy. Carbohydrate Research, 1991, 210, 51-70.	2.3	30
46	13C-Labeled D-Ribose: Chemi-Enzymic Synthesis of Various Isotopomers. Journal of Biomolecular Structure and Dynamics, 1994, 11, 1133-1148.	3.5	30
47	Stereospecific molybdic acid-catalyzed isomerization of 2-hexuloses to branched-chain aldoses. Carbohydrate Research, 1999, 319, 38-46.	2.3	30
48	Use of Circular Statistics To Model Î±Man-(1â†'2)-Î±Man and Î±Man-(1â†'3)-Î±/Î²Man <i>O</i>-Glycosidic Linkage Conformation in ¹³C-Labeled Disaccharides and High-Mannose Oligosaccharides. Biochemistry, 2019, 58, 546-560.	2.5	29
49	Mycobacterium avium Glycopeptidolipids Require Specific Acetylation and Methylation Patterns for Signaling through Toll-like Receptor 2*. Journal of Biological Chemistry, 2008, 283, 33221-33231.	3.4	27
50	¹³Câˆ'¹H and ¹³Câˆ'¹³C NMR <i>J</i>-Couplings in ¹³C-Labeled <i>N</i>-Acetyl-neuraminic Acid: Correlations with Molecular Structure. Journal of Organic Chemistry, 2008, 73, 4376-4387.	3.2	26
51	Cryoprotectant Biosynthesis and the Selective Accumulation of Threitol in the Freeze-tolerant Alaskan Beetle, Upis ceramboides. Journal of Biological Chemistry, 2009, 284, 16822-16831.	3.4	25
52	An NMR investigation of putative interresidue H-bonding in methyl Î±-cellobioside in solution. Carbohydrate Research, 2009, 344, 1582-1587.	2.3	25
53	<i>O</i>-Acetyl Side-Chains in Monosaccharides: Redundant NMR Spin-Couplings and Statistical Models for Acetate Ester Conformational Analysis. Journal of Physical Chemistry B, 2017, 121, 66-77.	2.6	25
54	Informing Saccharide Structural NMR Studies with Density Functional Theory Calculations. Methods in Molecular Biology, 2015, 1273, 289-331.	0.9	24

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55	Two-bond 13Câ€“13C spin-coupling constants in carbohydrates: New measurements of coupling signs. Carbohydrate Research, 1998, 309, 145-152.	2.3	23
56	Oligosaccharide Trans-Glycoside ³<i>J</i>_{COCC} Karplus Curves Are Not Equivalent:â€‰ Effect of Internal Electronegative Substituents. Journal of Organic Chemistry, 2008, 73, 3255-3257.	3.2	23
57	[13C,15N]2-Acetamido-2-deoxy-d-aldohexoses and Their Methyl Glycosides:â€‰ Synthesis and NMR Investigations of J-Couplings Involving 1H, 13C, and 15N. Journal of Organic Chemistry, 2006, 71, 466-479.	3.2	22
58	(1'-13C)-2'-deoxyribonucleosides: structural and conformational insights derived from carbon-13-proton spin coupling constants involving C1'. Journal of Organic Chemistry, 1993, 58, 5513-5517.	3.2	21
59	1-Deoxy-d-xylulose:â€‰ Synthesis Based on Molybdate-Catalyzed Rearrangement of a Branched-Chain Aldotetrose. Organic Letters, 2001, 3, 3819-3822.	4.6	21
60	<i>N</i>-Acetyl Side-Chains in Saccharides: NMR <i>J</i>-Coupling Equations Sensitive to CHâˆ'NH and NHâˆ'CO Bond Conformations in 2-Acetamido-2-deoxy-aldohexopyranosyl Rings. Journal of Organic Chemistry, 2010, 75, 4899-4910.	3.2	21
61	Stable, isotopically substituted carbohydrates: An improved synthesis of (6-13C)aldohexoses. Carbohydrate Research, 1988, 175, 49-58.	2.3	20
62	NMR Spin-Couplings in Saccharides: Relationships Between Structure, Conformation and the Magnitudes of <i>J</i>HH, <i>J</i>CH and <i>J</i>CC Values. New Developments in NMR, 2017, , 20-100.	0.1	20
63	Chiral hydroxymethyl groups:1H NMR assignments of the prochiral C-5â€² protons of 2â€²-deoxyribonucleosides. Magnetic Resonance in Chemistry, 1990, 28, 324-330.	1.9	18
64	¹³C-Labeled Idohexopyranosyl Rings: Effects of Methyl Glycosidation and C6 Oxidation on Ring Conformational Equilibria. Journal of Organic Chemistry, 2017, 82, 1356-1370.	3.2	16
65	Synthesis and <i>O</i>-Glycosidic Linkage Conformational Analysis of ¹³C-Labeled Oligosaccharide Fragments of an Antifreeze Glycolipid. Journal of Organic Chemistry, 2019, 84, 1706-1724.	3.2	15
66	Methyl 4-O-Î²-D-galactopyranosyl Î±-D-glucopyranoside (methyl Î±-lactoside). Acta Crystallographica Section C: Crystal Structure Communications, 2005, 61, o674-o677.	0.4	14
67	Labeling Monosaccharides With Stable Isotopes. Methods in Enzymology, 2015, 565, 423-458.	1.0	14
68	Reconciling MAâ€²AT and molecular dynamics models of linkage conformation in oligosaccharides. Physical Chemistry Chemical Physics, 2020, 22, 14454-14457.	2.8	12
69	Methyl 4-<i>O</i>-Î²-<scp>D</scp>-galactopyranosyl Î±-<scp>D</scp>-mannopyranoside methanol 0.375-solvate. Acta Crystallographica Section C: Crystal Structure Communications, 2010, 66, o67-o70.	0.4	11
70	Phosphate-Catalyzed Degradation of <scp>d</scp>-Glucosone in Aqueous Solution Is Accompanied by C1â€“C2 Transposition. Journal of the American Chemical Society, 2012, 134, 11511-11524.	13.7	11
71	l-(1-13C)- and (2-13C)ascorbic acid: synthesis and NMR characterization. Carbohydrate Research, 1996, 284, 135-143.	2.3	9
72	Rearrangement of 3-Deoxy-<scp>d</scp>-<i>erythro</i>-hexos-2-ulose in Aqueous Solution: NMR Evidence of Intramolecular 1,2-Hydrogen Transfer. Journal of Organic Chemistry, 2011, 76, 8151-8158.	3.2	9

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73	Methyl [13C]Glucopyranosiduronic Acids: Effect of COOH Ionization and Exocyclic Structure on NMR Spin-Couplings. Journal of Organic Chemistry, 2012, 77, 9521-9534.	3.2	9
74	¹³Câ€“¹³C spin-coupling constants in crystalline ¹³C-labeled saccharides: conformational effects interrogated by solid-state ¹³C NMR spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 23576-23588.	2.8	9
75	<i>MAâ€™AT</i>: A Web-Based Application to Determine Rotamer Population Distributions in Solution from Nuclear Magnetic Resonance Spin-Coupling Constants. Journal of Chemical Information and Modeling, 2022, 62, 3135-3141.	5.4	9
76	On the use of model compounds to assess 2-deoxy-D-erythro-pentofuranose conformation at apyrimidinic sites in DNA. Journal of the American Chemical Society, 1990, 112, 5886-5887.	13.7	8
77	Ab Initio Molecular Orbital Calculations on Carbohydrates. ACS Symposium Series, 1990, , 91-119.	0.5	8
78	Disorder and conformational analysis of methyl Î²-<scp>D</scp>-galactopyranosyl-(1â†’4)-Î²-<scp>D</scp>-xylopyranoside. Acta Crystallographica Section C: Crystal Structure Communications, 2012, 68, o7-o11.	0.4	8
79	Multiply 13C-substituted monosaccharides: synthesis of d-(1,5,6-13C3)glucose and d-(2,5,6-13C3)glucose. Carbohydrate Research, 1992, 226, 261-269.	2.3	7
80	13C-labeled oligodeoxyribonucleotides: A solution study of a CCAAT-containing sequence at the nuclear factor I recognition site of human adenovirus. Biopolymers, 1994, 34, 1175-1186.	2.4	7
81	A Disaccharide Rearrangement Catalyzed by Molybdate Anion in Aqueous Solution. Journal of Organic Chemistry, 2007, 72, 3081-3084.	3.2	6
82	<i>MAâ€™AT</i> Analysis of Aldofuranosyl Rings: Unbiased Modeling of Conformational Equilibria and Dynamics in Solution. Biochemistry, 2022, 61, 239-251.	2.5	6
83	Methyl Î²-<scp>D</scp>-galactopyranosyl-(1â†’4)-Î²-<scp>D</scp>-allopyranoside tetrahydrate. Acta Crystallographica Section C: Crystal Structure Communications, 2010, 66, o484-o487.	0.4	5
84	Methyl 4-O-Î²-<scp>D</scp>-mannopyranosyl Î²-<scp>D</scp>-xylopyranoside. Acta Crystallographica Section C: Crystal Structure Communications, 2012, 68, o502-o506.	0.4	5
85	Methyl 4-<i>O</i>-Î²-<scp>D</scp>-xylopyranosyl Î²-<scp>D</scp>-mannopyranoside, a core disaccharide of an antifreeze glycolipid. Acta Crystallographica Section C: Crystal Structure Communications, 2013, 69, 1047-1050.	0.4	5
86	A chemical synthesis of a multiply 13 Câ€labeled hexasaccharide: a highâ€mannose N â€glycan fragment. Journal of Labelled Compounds and Radiopharmaceuticals, 2016, 59, 673-679.	1.0	5
87	<i>N</i>-Acetyl Side-Chain Conformation in Saccharides: Solution Models Obtained from <i>MAâ€™AT</i> Analysis. Journal of Organic Chemistry, 2022, 87, 8368-8379.	3.2	5
88	Rapid assembly of branched mannose oligosaccharides through consecutive regioselective glycosylation: A convergent and efficient strategy. Tetrahedron, 2017, 73, 3932-3938.	1.9	4
89	Enzymatic synthesis of ribo- and 2â€²-deoxyribonucleosides from glycofuranosyl phosphates: An approach to facilitate isotopic labeling. Carbohydrate Research, 2017, 449, 125-133.	2.3	4
90	A convenient synthesis of short-chain Î±-(1Ââ†’Â2) mannopyranosyl oligosaccharides. Carbohydrate Research, 2020, 489, 107897.	2.3	4

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91	Two-bond ¹³Câ€“¹³C spin-coupling constants in saccharides: dependencies on exocyclic hydroxyl group conformation. Physical Chemistry Chemical Physics, 2021, 23, 22912-22922.	2.8	4
92	Nonconventional NMR Spin-Coupling Constants in Oligosaccharide Conformational Modeling: Structural Dependencies Determined from Density Functional Theory Calculations. ACS Omega, 2022, 7, 23950-23966.	3.5	4
93	Microcomputer-automated reactor for synthesis of13C-labeled Monosaccharides. AICHE Journal, 1990, 36, 1822-1828.	3.6	3
94	Synthesis of high-mannose oligosaccharides containing mannose-6-phosphate residues using regioselective glycosylation. Carbohydrate Research, 2018, 467, 23-32.	2.3	3
95	<i>O</i>-Benzoyl side-chain conformations in 2,3,4,6-tetra-<i>O</i>-benzoyl-Î²-<scp>D</scp>-galactopyranosyl-(1â†'4)-1,2,6-tri-<i>O</i>-benzoyl-Î²-<scp>D</scp>-glucopyranose (ethyl acetate solvate) and 1,2,4,6-tetra-<i>O</i>-benzoyl-Î²-<scp>D</scp>-glucopyranose (acetone) Tj ETQq1 1 0.784314 rgBT /Overl	0.5	3
96	Structural properties of <scp>D</scp>-mannopyranosyl rings containing <i>O</i>-acetyl side-chains. Acta Crystallographica Section C, Structural Chemistry, 2019, 75, 1166-1174.	0.5	2
97	Conformational analysis of the disaccharide methyl Î±-<scp>D</scp>-mannopyranosyl-(1â†'3)-2-<i>O</i>-acetyl-Î²-<scp>D</scp>-mannopyranoside monohydrate. Acta Crystallographica Section C, Structural Chemistry, 2019, 75, 610-615.	0.5	1
98	Saccharide Structure and Reactivity Interrogated with Stable Isotopes. ACS Symposium Series, 2017, , 105-153.	0.5	0
99	Isopropyl 3-deoxy-Î±-<scp>D</scp>-<i>ribo</i>-hexopyranoside (isopropyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 427 Td (3-de Crystallographica Section C, Structural Chemistry, 2021, 77, 490-495.	0.5	0
100	Methyl Î²-lactoside [methyl Î²-<scp>D</scp>-galactopyranosyl-(1â†'4)-Î²-<scp>D</scp>-glucopyranoside] monohydrate: a solvomorphism study. Acta Crystallographica Section C, Structural Chemistry, 2021, 77, 668-674.	0.5	0
101	Pyridoxamine (PM) protects proteins from functional damage by 3â€deoxyglucosone (3DG). FASEB Journal, 2007, 21, A294.	0.5	0
102	Glycosidic linkage, <i>N</i>-acetyl side-chain, and other structural properties of methyl 2-acetamido-2-deoxy-Î²-<scp>D</scp>-glucopyranosyl-(1â†'4)-Î²-<scp>D</scp>-mannopyranoside monohydrate and related compounds. Acta Crystallographica Section C, Structural Chemistry, 2020, 76, 287-297.	0.5	0
103	<scp>D</scp>-Mannosamine hydrochloride (2-amino-2-deoxy-<scp>D</scp>-mannose hydrochloride): ionic hydrogen bonding in saccharides involving chloride and aminium ions. Acta Crystallographica Section C, Structural Chemistry, 2022, 78, 223-230.	0.5	0