SUBJECT INDEX

- A convenient preparation of 3-deoxy-1,2-O-isopropylidene-5-O-p-tolylsulfonyl-β-L-threo-pentofuranose, 168
- Acarbose, the solution conformation of, 142
- 3-Acetamido 2,3,5,6-tetradeoxy 5-fluoro D,Lribo-hexofuranose, synthesis from methyl 3acetamido - 2,3,6-trideoxy - D,L-arabino - hexopyranoside of, 221
- Acosaminide, methyl N-acetyl-, synthesis of 3-acetamido 2,3,5,6 tetradeoxy 5 fluoro D,L-arabino-hexopyranoside from, 221
- Acyclic-sugar pyrrole C-nucleoside-analogs derived from 2-(alkylamino)-2-deoxyaldoses, 153
- Aldohexopyranosyl bromides, per-O-acetyl-, reaction of, with mercuric cyanide in nitromethane, 61
- Aldohexopyranosyl cyanides, per-O-acetyl-, some anomeric pairs of, synthesis and characterization of, 61
- Aldol condensation of glycolaldehyde and 1,3-dihydroxy-2-propanone, analysis of the product mixtures obtained by, using g.l.c.-m.s. after isopropylidenation, 330
- Amylodextrins, a new method for preparing, 105 Amylose, examination by gel-permeation chromatography of the purity and structure of, 83
- Amylose, retrograded, studies of structure of, by action of alpha amylase, 105
- Amylose-V, studies of structure of complexes of, by action of alpha amylase, 105
- Analysis, by g.l.c.-m.s. after isopropylidenation, of the product mixtures obtained by aldol condensation of glycolaldehyde and 1,3-dihydroxy-2-propanone, 330
- Anomerisation of glycosyl fluorides, silver tetrafluoroborate as an effective catalyst for the, 339 Antisera specificities to β-D-galactopyranoside cluster ligands, 93
- D-Arabinose, 2,5-dideoxy-2-C-methyl, synthesis of derivatives of, from methyl 2,3-anhydro-5-deoxy-α-D-ribofuranoside, 287
- 1-Bromo-D-glycosyl cyanides, preparation of acetylated 2-heptulo- and 2-hexulopyranosononitriles from acetylated, 342
- Carbohydrate triflates: introduction of substituents by double inversion at C-4" of kanamycin A, 162

- Conformation of acarbose, the solution, 142
- Crystal and molecular structure of $O-\beta$ -D-mannopyranosyl- $(1\rightarrow 4)-\alpha$ -D-mannopyranose (mannobiose), 1
- Crystal structure of 2,3-di-O-acetyl-1,6-anhydro-4-O-(3,4,6-tri-O-acetyl-2-deoxy-2-fluoro- α -D-glucopyranosyl)- β -D-glucopyranose, 2'-fluoromaltose: synthesis and properties of 4-O-(2-deoxy-2-fluoro- α -D-glucopyranosyl)-D-glucopyranose, and the, 241
- Deoxy-D-arabino-heptulosonate 7-phosphate by ¹H- and natural-abundance ¹³C-n.m.r. spectroscopy, structural analysis of 3-, 317
- 1,2:4,6- and 1,2:3,6-Di-O-isopropylidene-D-mannitol, 178
- Disaccharide and a trisaccharide that constitute part of the outer-core oligosaccharide of Shigella sonnei, synthesis of a, 29
- Disaccharide component of the capsular polysaccharide antigen of *Streptococcus pneumoniae* type 1, synthesis of a, 39
- Electrokinetic studies of the testosteroneaqueous D-glucose interface, 209
- Elimination of reducing 4-O-substituted hexose derivatives, a new method for specific, 45
- Energetics of the interaction of D-fructose and D-glucose with sodium hydroxide in aqueous ethyl alcohol, acetone, and 1,4-dioxane media,
- Escherichia coli capsular polysaccharides, synthesis of repeating units of, 261
- Examination of the purity and structure of amylose by gel-permeation chromatography, 83
- 2'-Fluoromaltose: synthesis and properties of 4-O-(2-deoxy-2-fluoro-α-D-glucopyranosyl)-Dglucopyranose, and the crystal structure of 2,3di-O-acetyl-1,6-anhydro-4-O-(3,4,6-tri-O-acetyl-2-deoxy-2-fluoro-α-D-glucopyranosyl)-β-Dglucopyranose, 241
- D-Fructose, energetics of the interaction with sodium hydroxide in aqueous ethyl alcohol, acetone, and 1,4-dioxane media, 201
- 2-Furylidene acetals of methyl aldohexopyranosides, synthesis and configuration of some, 150

C16 SUBJECT INDEX

- α -D-Galactopyranoside, benzyl 2-acetamido-3-O-[3-O-(2-acetamido-2-deoxy- β -D-glucopyranosyl)- β -D-galactopyranosyl]-2-deoxy-, synthesis of, 137
- β-D-Galactopyranoside cluster ligands, antisera specificities to, 93
- β-D-Galactopyranoside, methyl 3-O-(2acetamido-2-deoxy-3-O-β-D-galactopyranosylβ-D-glucopyranosyl)-, 127
- β-D-Galactopyranoside, methyl 3-O-(2-acetamido-2-deoxy-β-D-glucopyranosyl)-, 127
- β-D-Galactopyranoside, p-nitrophenyl 3-O-(2-acetamido-2-deoxy-3-O-β-D-galactopyranosyl-β-D-glucopyranosyl)-, 345
- D-Galactopyranosides, methyl, interactions with Mn²⁺, use of electron-nuclear relaxation rates to determine, 335
- α -D-Galactopyranosyl bromide, 3-O-[2-acetamido-4,6-di-O-acetyl-2-deoxy-3-O-(2,3,4,6-tetra O-acetyl- β -D-galactopyranosyl)- β -D-glucopyranosyl]-2,4,6-tri-O-acetyl-, 345
- 2-O-α-D-Galactopyranosyl-D-galactopyranose and 2-O-(2-O-α-D-galactopyranosyl-α-D-galactopyranosyl)-D-glucopyranose undeca-acetate, synthesis of, 29
- Gel-permeation chromatography, examination of the purity and structure of amylose by, 83
- D-Glucopyranose, 2-acetamido-2-deoxy-4-*O*-β-D-galactopyranosyl-3-*O*-methyl-, and its benzyl α-glycoside, synthesis of, 119
- D-Glucose, aqueous interface with testosterone, electrokinetic studies of, 209
- D-Glucose, energetics of the interaction with sodium hydroxide in aqueous ethyl alcohol, acetone, and 1,4-dioxane media, 201
- Glucosinolates, n.m.r. spectra (¹H, ¹³C) of, 323
- Glycolaldehyde and 1,3-dihydroxy-2-propanone, analysis of the product mixtures obtained by aldol condensation of, using g.l.c.-m.s. after isopropylidenation, 330
- C-Glycosyl- and polyhydroxyalkyl-pyridazines, synthesis of some, 233
- Glycosyl fluorides, silver tetrafluoroborate as an effective catalyst for the anomerisation of, 339
- Glycosylfurans, photo-oxygenation of, and rearrangement of C-glycosyl into O-glycosyl derivatives, 19
- Gum, of *Pterospermum suberifolium*, structural and immunochemical studies on, 307
- Heparin pentasaccharide fragment having high affinity for antithrombin III, total synthesis of a, C5
- Heptononitriles, 2,6-anhydro-, peracetylated, some anomeric pairs of, synthesis and characterization of, 61

2-Heptulo- and 2-hexulo-pyranosononitriles preparation of acetylated, from acetylated 1-bromo-D-glycosyl cyanides, 342

- Heptulosonate 7-phosphate by ¹H- and naturalabundance ¹³C-n.m.r. spectroscopy, structural analysis of 3-deoxy-D-arabino-, 317
- D,L-ribo-Hexofuranoside, 3-acetamido-2,3,5,6tetradeoxy-5-fluoro-, synthesis from methyl 3acetamido-2,3,6-trideoxy-D,L-arabino-hexopyranoside, 221
- D,L-ribo-Hexofuranoside, 3-acetamido-2,3,5,6tetradeoxy-5-fluoro-, synthesis from methyl Nacetyl-D,L-acosaminide, 221
- Hexopyranoside, syntheses of methyl 2,6-diacetamido-2,3,6-trideoxy-α-D-ribo- and methyl 2-acetamido-2,3,6-trideoxy-β-L-lyxo-, 51
- D-Isoglutamine, N-acetylmuramoyl-L-alanyl-, synthesis and fast-atom-bombardment-mass spectrometry of, 275
- Kanamycin A, introduction of substituents by double inversion at C-4" of, 162
- KDO (3-deoxy-D-manno-2-octulosonic acid), synthesis of repeating units of E. coli capsular polysaccharides containing D-ribose and, 261
- Klebsiella type 66, structural studies of the capsular polysaccharide of, 297
- Lactosamine, N-acetyl-3-O-methyl, and its benzyl α -glycoside, synthesis of, 119
- Maltose, studies on the viscosity behavior of concentrated alkali halides in aqueous solutions of, 7
- D-Mannitol, 1,2:4,6- and 1,2:3,6-di-O-isopropylidene-, 178
- O-β-D-Mannopyranosyl-(1→4)-α-D-mannopyranose (mannobiose), the crystal and molecular structure of, 1
- Methyl aldohexopyranosides, synthesis and configuration of some 2-furylidene acetals of, 150
- Methyl 2,6-diacetamido-2,3,6-trideoxy-α-D-ribohexopyranoside and methyl 2-acetamido-2,3,6trideoxy-β-L-lyxo-hexopyranoside, syntheses of, 51
- Mucin, synthetic fragments of, 127, 137, 345
- N.m.r. spectra (¹H, ¹³C) of glucosinolates, 323 C-Nucleoside-analogs, acyclic-sugar pyrrole, derived from 2-(alkylamino)-2-deoxyaldoses, 153
- 2-Octulosonic acid, 3-deoxy-D-manno- (KDO), synthesis of repeating units of E. coli capsular polysaccharides containing D-ribose and, 261

SUBJECT INDEX C17

- (S)-Parasorbic acid and other (5S)-hydroxy sixcarbon synthons from L-rhamnose, in simple synthons of, C1
- β-L-threo-Pentofuranose, 3-deoxy-1,2-O-isopropylidene-5-O-p-tolylsulfonyl-, a convenient preparation of, 168
- Photo-oxygenation of glycosylfurans, and rearrangement of C-glycosyl with O-glycosyl derivatives, 19
- Polysaccharide of *Klebsiella* type 66, structural studies of the capsular, 297
- Preparation of acetylated 2-heptulo- and 2hexulo-pyranosononitriles from acetylated 1bromo D-glycosyl cyanides, 342
- Pyridazines, synthesis of some C-glycosyl- and polyhydroxyalkyl-, 233
- Reactivity of uronic and aldonic acid derivatives towards trifluoroacetolysis, 45
- Rearrangement of C-glycosyl into O-glycosyl derivatives, and photo-oxygenation of glycosylfurans, 19
- L-Rhamnose, simple synthesis of (S)- parasorbic acid and other (5S)-hydroxy six-carbon synthons from, C1
- α-D-Ribofuranoside, methyl 2,3-anhydro-5deoxy-, synthesis of 2,5-dideoxy-2-C-methyl-Darabinose derivatives from, 287
- D-Ribose, synthesis of repeating units of E. coli capsular polysaccharides containing KDO and, 261
- Silver tetrafluoroborate as an effective catalyst for the anomerisation of glycosyl fluorides, 339
- Solution conformation of acarbose, 142
- Streptococcus pneumoniae type 1, synthesis of a disaccharide component of the capsular polysaccharide antigen of, 39
- Structural analysis of 3-deoxy-D-arabino-heptulosonate 7-phosphate by ¹H- and naturalabundance ¹³C-n.m.r. spectroscopy, 317
- Structural and immunochemical studies of Pierospermum suberifolium gum, 307
- Structural studies of the capsular polysaccharide of *Klebsiella* type 66, 297
- Structure of $O-\beta$ -D-mannopyranosyl- $(1\rightarrow 4)$ - α -D-mannopyranose (mannobiose), the crystal and molecular, 1
- Structure studies of amylose-V complexes and retrograded amylose by action of alpha amylases, and a new method for preparing amylodextrins, 105
- Studies on the viscosity behavior of concentrated alkali halides in aqueous maltose solutions, 7 Sucrose, 6-deoxy-, an improved route to, 173 Sucrose, 6-thio-, synthesis of, 173

Syntheses of methyl 2,6-diacetamido-2,3,6-trideoxy-α-D-ribo-hexopyranoside and methyl 2acetamido-2,3,6-trideoxy-β-L-lyxo-hexopyranoside, 51

- Synthesis and characterization of some anomeric pairs of per-O-acetylated aldohexopyranosyl cyanides (per-O-acetylated 2,6-anhydroheptononitriles). On the reaction of per-O-acetylaldohexopyranosyl bromides with mercuric cyanide in nitromethane, 61
- Synthesis and configuration of some 2-furylidene acetals of methyl aldohexopyranosides, 150
- Synthesis and fast-atom-bombardment-mass spectrometry of *N*-acetylmuramoyl-L-alanyl-D-isoglutamine (MDP), 275
- Synthesis and properties of 4-O-(2-deoxy-2-fluoro- α -D-glucopyranosyl)-D-glucopyranose, and the crystal structure of 2,3-di-O-acetyl-1,6-anhydro-4-O-(3,4,6-tri-O-acetyl-2-deoxy-2-fluoro- α -D-glucopyranosyl)- β -D-glucopyranose, 2'-fluoromaltose, 241
- Synthesis of 2-acetamido-2-deoxy-4-O-β-D-galactopyranosyl-3-O-methyl-D-glucopyranose (Nacetyl-3-O-methyllactosamine) and of its benzyl α-glycoside, 119
- Synthesis of a disaccharide component of the capsular polysaccharide antigen of *Streptococcus* pneumoniae type 1, 39
- Synthesis of a heparin pentasaccharide fragment having high affinity for antithrombin III, total, C5
- Synthesis of 2,5-dideoxy-2-C-methyl-D-arabinose derivatives from methyl 2,3-anhydro-5-deoxy-α-D-ribofuranoside, 287
- Synthesis of 2-O-α-D-galactopyranosyl-D-galactopyranose and 2-O-(2-O-α-D-galactopyranosyl-α-D-galactopyranosyl)-D-glucopyranose undeca-acetate, 29
- Synthesis of (S)-parasorbic acid and other (5S)hydroxy six-carbon synthons from L-rhamnose, C1
- Synthesis of 6-thiosucrose, and an improved route to 6-deoxysucrose, 173
- Synthesis of some C-glycosyl- and polyhydroxyal-kyl-pyridazines, 233
- Synthetic mucin fragments: 3-O-[2-acetamido-4,6-di-O-acetyl-2-deoxy-3-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-β-D-glucopyranosyl]-2,4,6-tri-O-acetyl-α-D-galactopyranosyl bromide and p-nitrophenyl 3-O-(2-acetamido-2-deoxy-3-O-β-D-galactopyranosyl-β-D-glucopyranosyl)-β-D-galactopyranoside, 345
- Synthetic mucin fragments: benzyl 2-acetamido-3-O-[3-O-(2-acetamido-2-deoxy- β -D-glucopyranosyl)- β -D-galactopyranosyl]-2-deoxy- α -D-galactopyranoside, 137

C18 SUBJECT INDEX

Synthetic mucin fragments: methyl $3-O-(2-acetamido-2-deoxy-\beta-D-glucopyranosyl)-\beta-D-galactopyranoside and methyl <math>3-O-(2-acetamido-2-deoxy-3-O-\beta-D-galactopyranosyl-\beta-D-glucopyranosyl)-\beta-D-galactopyranoside, 127$

Total synthesis of a heparin pentasaccharide fragment having high affinity for antithrombin III, C5 Total synthesis of natural products: the chiron approach (book review), C12
Triflates, of carbohydrates, 162
Trifluoroacetolysis, the reactivity of uronic and aldonic acid derivatives towards, 45

Use of electron-nuclear relaxation-rates to determine Mn²⁺-methyl D-galactopyranoside interactions, 335