

## SUBJECT INDEX

- Acetylation–reduction, selective, of azido sugars, 318
- Alkoxy carbonyl group at C-2, glucosylation with compounds bearing, 75
- 2-Alkyl(aryl)amino-(3,4,6-tri-*O*-acetyl-1,2-di-deoxy- $\alpha$ -D-glucopyrano)[2,1-*d*]-2-oxazolines, synthesis from acetylated 2-[3-alkyl(aryl)ureido]-2-deoxy-D-glucopyranoses, 310
- 2-Amino-2-deoxy-D-mannose and some derivatives thereof, stability and structure of copper(II) complexes with, 109
- Amyloses, low-molecular-weight, preparation by phosphorolysis of, 187
- Anhydro derivative, silyl migration and formation of an, on attempted benzylation of 3-*O*-*tert*-butyldimethylsilyl-6-*O*-tosyl-D-glucal, 324
- 1,4-Anhydro derivatives of  $\beta$ -D-galactopyranose, a novel route to, 131
- Antigenic polysaccharide of *E. coli* K31, structure, 171
- 2-Azido-2-deoxyinosose oximes, a novel synthesis of, 302
- Azido sugars, selective reduction–acetylation by thioacetic acid–potassium thioacetate of, 318
- Bacterial lipid A, synthesis of 3-*O*-[(3*R*)-3-acyloxytetradecanoyl]-2-deoxy-2-[(3*R*)-3-hydroxytetradecanamido-4-*O*-phosphono-D-glucose derivatives related to, 281
- Benzylation of 3-*O*-*tert*-butyldimethylsilyl-6-tosyl-D-glucal, silyl migration and formation of an anhydro derivative on attempted, 324
- 4,6-*O*-Benzylidenehexopyranoside derivatives, n.m.r. ( $^1\text{H}$  and  $^{13}\text{C}$ ) studies of some *cis*- and *trans*-fused, 262
- Cajanus cajan* (red gram), husk, structural features of acidic xylans isolated from, 327
- Carbon-13 n.m.r. spectroscopy of *O*-(2-hydroxyethyl)derivatives of D-glucose, 251
- Celluloses, second-derivative F.t.-i.r. spectra of native, 53
- Chaetomium thermophile* var. coprophile, purification and functional characteristics of an endocellulase from, 245
- Chondroitin sulfate–dermatan sulfate copolymeric proteoglycan from scar, isolation and structure analysis of, 159
- Circular dichroism microanalysis of D-mannopyranose oligosaccharides, 15
- Copper(II) complexes with 2-amino-2-deoxy-D-mannose and some derivatives thereof, stability and structure of, 109
- Cyanospira capsulata*, structural characterisation of the exocellular polysaccharide from, 338
- Date (*Phoenix dactylifera*), the  $^{13}\text{C}$ -n.m.r. spectrum of (1 $\rightarrow$ 4)- $\beta$ -D-mannas in intact endosperm tissue of the, 276
- Dermatan sulfate–chondroitin sulfate copolymeric proteoglycan from post-burn, hypertrophic scar, 159
- E. coli* O7:K16:H $^-$ , structure of the Kdo-containing capsular polysaccharide (K16) from, 197
- Escherichia coli* K31 antigen, structure, 171
- Ethyl 2-[3-alkyl(aryl)ureido]-2-deoxy- $\beta$ -D-glucopyranosides, synthesis from acetylated 2-[3-alkyl(aryl)ureido]-2-deoxy-D-glucopyranoses, 310
- Fast-atom bombardment mass spectrometry of periodate-oxidized acetate ester derivatives, monomer sequence determination of carbohydrates using, 1
- Flax (*Linum usitatissimum* L.), isolation and an n.m.r. study of pectins from, 205
- Fructopyranose, the X-ray crystal structure of 2,3:4,5-di-*O*-isopropylidene-1-*O*-methyl- $\beta$ -D-, 33
- F.t.-i.r. spectra of native celluloses, second-derivative, 53
- $\alpha$ -L-Fucosidase, 217
- $\beta$ -D-Galactopyranose, a novel route to 1,4-anhydro derivatives of, 131
- 7- $\beta$ -D-Galactopyranosyloxycoumarin-4-acetic acid and its methyl ester as substrates for the  $\beta$ -D-galactosidase of *E. coli*, 295
- $\beta$ -D-Galactosidase of *E. coli*, 7- $\beta$ -D-galactopyranosyloxycoumarin-4-acetic acid and its methyl ester as substrates for the, 295
- $\beta$ -D-Glucopyranosiduronate, 4-*O*-methyl, methyl ester methyl glycoside, acetolysis of, 289
- D-Glucose, *O*-(2-hydroxyethyl)derivatives,  $^{13}\text{C}$  chemical shifts, 251
- D-Glucosyl units in (1 $\rightarrow$ 3)- $\beta$ -D-glucan, inversion of the 2-hydroxyl groups of, 181
- Glucosylation with compounds bearing on alkoxy carbonyl group at C-2, 75

- Glycogen, biosynthesis, 61  
 Glycogen, deoxy-, 61  
 Glycogen, deoxyfluoro-, 61  
 Glycogen, n.m.r. studies, 61  
 Glycosylation inhibitors, effect on processing of  $\alpha$ -L-fucosidase of, 217
- Hexopyranoside derivatives, n.m.r. ( $^1\text{H}$  and  $^{13}\text{C}$ ) studies of some *cis*- and *trans*-fused 4,6-*O*-benzylidene-, 262
- Hexoses, kinetics and mechanism of the oxidation of some, by sodium *N*-chlorobenzenesulphonamide in the presence of sodium hydroxide, 119
- O*-(2-Hydroxyethyl)derivatives of D-glucose,  $^{13}\text{C}$  chemical shifts, 251
- Inversion of the 2-hydroxyl groups of D-glycosyl units in (1 $\rightarrow$ 3)- $\beta$ -D-glucan, 181
- Isolation and an n.m.r. study of pectins from flax (*Linum usitatissimum* L.), 205
- Kinetics and mechanism of the oxidation of some hexoses by sodium *N*-chlorobenzenesulphonamide in the presence of sodium hydroxide, 119
- $\beta$ -Lymphoblastoid cells, processing of  $\alpha$ -L-fucosidase in, 217
- Mannans in intact endosperm tissue of the date (*Phoenix dactylifera*), the  $^{13}\text{C}$ -n.m.r. spectrum of (1 $\rightarrow$ 4)- $\beta$ -D-, 276
- Mannitol, D- (polymorphs) and DL-, in the solid state,  $^{13}\text{C}$ -n.m.r. spectra of, 41
- D-Mannopyranose oligosaccharides, microanalysis by c.d. of, 15
- 4-*O*-Methyl- $\beta$ -D-glucopyranosiduronate, methyl ester methyl glycoside, acetolysis of, 289
- Methyl (methyl 4-*O*-methyl- $\beta$ -D-glucopyranosid)uronate, acetolysis of, 289
- Monomer sequence determination of carbohydrates using fast-atom bombardment mass spectrometry of periodate-oxidized acetate ester derivatives, 1
- 4-Nitrophenyl  $\alpha$ -D-malto-oligoglycosides, preparation by phosphorolysis of, 187
- N.m.r. ( $^1\text{H}$  and  $^{13}\text{C}$ ) studies of some *cis*- and *trans*-fused 4,6-*O*-benzylidenehexopyranoside derivatives, 262
- $^{13}\text{C}$ -N.m.r. spectra of D-mannitol polymorphs and DL-mannitol in the solid state, 41
- $^{13}\text{C}$ -N.m.r. spectrum of (1 $\rightarrow$ 4)- $\beta$ -D-mannans in intact endosperm tissue of the date (*Phoenix dactylifera*), 276
- N.m.r. study of 1,2,3-tri-*O*-acetyl- $\beta$ -L-rhamnopyranose and 1,2,4-tri-*O*-acetyl- $\alpha$ -L-rhamnopyranose, and the X-ray structure of the former, 270
- Novel route to 1,4-anhydro derivatives of  $\beta$ -D-galactopyranose, 131
- Novel synthesis of 2-azido-2-deoxyinosose oximers, 302
- Oligo-1,6-D-glucosidase from an alkalophilic *Bacillus* species, purification and properties of an, 227
- Oligosaccharides containing D-mannopyranose, microanalysis by c.d. of, 15
- Orthocarbonates, stereoselective synthesis of, 75
- Oxidation of some hexoses by sodium *N*-chlorobenzenesulphonamide in the presence of sodium hydroxide, 119
- Pectins from flax (*Linum usitatissimum* L.), isolation and an n.m.r. study of, 205
- pH-induced change in state around active-site tryptophan residues of *Rhizopus niveus* glucoamylase, detected by stopped-flow studies of chemical modification with *N*-bromosuccinimide, 197
- Phosphorolysis, preparation of low-molecular-weight amyloses by, 187
- Polysaccharide from *Cyanospira capsulata*, structural characterisation of the exocellular, 338
- Polysaccharide from *E. coli* O7:K16:H $^-$ , structure of the Kdo-containing capsular, 197
- Polysaccharide from *Streptococcus pneumoniae* Type 23, synthesis of di- and tri-saccharides related to the, and their inhibition in the precipitin reaction, 93
- Purification and functional characteristics of an endocellulase from *Chaetomium thermophile* var. coprophile, 245
- Purification and properties of an oligo-1,6-D-glucosidase from an alkalophilic *Bacillus* species, 227
- Reduction-acetylation, selective, of azido sugars, 318
- L-Rhamnopyranose, n.m.r. and X-ray studies of 1,2,3-tri-*O*-acetyl- $\beta$ - and 1,2,4-tri-*O*-acetyl- $\alpha$ -, 270
- Rhizopus niveus* glucoamylase, detected by stopped-flow studies of chemical modification with *N*-bromosuccinimide, a pH-induced change in state around active site tryptophan residues of, 237

- Scar, post-burn, human, hypertrophic, isolation of a copolymeric proteoglycan from, 159
- Second-derivative F.t.-i.r. spectra of native celluloses, 53
- Sequence determination of carbohydrates using fast-atom bombardment mass spectrometry of periodate-oxidized acetate ester derivatives, monomer, 1
- Silyl migration and formation of an anhydro derivative on attempted benzylolation of 3-*O*-*tert*-butyldimethylsilyl-6-*O*-tosyl-D-glucal, 324
- Solid state,  $^{13}\text{C}$ -n.m.r. spectra of D-mannitol polymorphs and DL-mannitol in, 41
- Stability and structure of copper(II) complexes with 2-amino-2-deoxy-D-mannose and some derivatives thereof, 109
- Streptococcus pneumoniae* Type 23, synthesis of di- and tri-saccharides related to the polysaccharide from, and their inhibition in the precipitin reaction, 93
- Structural characterisation of the exocellular polysaccharide from *Cyanospira capsulata*, 338
- Structural features of acidic xylans isolated from red gram (*Cajanus cajan*) husk, 327
- Structure of the K16 antigen from *E. coli* O7:K16:H<sup>-</sup>, a Kdo-containing capsular polysaccharide, 197
- Substrates for the  $\beta$ -D-galactosidase of *E. coli*, 7- $\beta$ -D-galactopyranosyloxycoumarin-4-acetic acid and its methyl ester as, 295
- Sycamore, extracellular xyloglucan from, structural characterization of, 139
- Synthesis of 3-*O*-[(3*R*)-3-(acyloxytetradecanoyl)]-2-deoxy-2-[(3*R*)-3-hydroxytetradecanamido-4-*O*-phosphono-D-glucose derivatives related to bacterial lipid A, 281
- Synthesis of 2-alkyl(aryl)amino-(3,4,6-tri-*O*-acetyl-1,2-dideoxy- $\alpha$ -D-glucopyranosyl)[2,1-*d*]-2-oxazolines and ethyl 2-[3-alkyl(aryl)ureido]-2-deoxy- $\beta$ -D-glucopyranosides from acetylated 2-[3-alkyl(aryl)ureido]-2-deoxy-D-glucopyranoses, 310
- Synthesis of 2-azido-2-deoxyinosose oximes, a novel, 302
- Synthesis of di- and tri-saccharides related to the polysaccharide from *Streptococcus pneumoniae* Type 23, and their inhibition in the precipitin reaction, 93
- Synthesis of *p*-trifluoroacetamidophenyl 3,6-di-*O*-{2-*O*-[ $\alpha$ -D-mannopyranosyl 6-(disodium phosphate)]- $\alpha$ -D-mannopyranosyl}- $\alpha$ -D-mannopyranoside, 93
- p*-Trifluoroacetamidophenyl 3,6-di-*O*-{2-*O*-[ $\alpha$ -D-mannopyranosyl-6-(disodium phosphate)]- $\alpha$ -D-mannopyranosyl}- $\alpha$ -D-mannopyranoside, synthesis of, 101
- 1,2,3-Tri-*O*-acetyl- $\beta$ -L-rhamnopyranose and 1,2,4-tri-*O*-acetyl- $\alpha$ -L-rhamnopyranose, n.m.r. and X-ray studies of, 270
- X-Ray crystal structure of 2,3:4,5-di-*O*-isopropylidene-1-*O*-methyl- $\beta$ -D-fructopyranose, 33
- Xylans isolated from red gram (*Cajanus cajan*) husk, structural features of acidic, 327
- Xyloglucan, structural characterization of, 139