## **SUBJECT INDEX**

- O-(2-Acetamido-2-deoxy- $\beta$ -D-glucopyranosyl)-(1 $\rightarrow$ 2)-O-(4-O-methyl- $\alpha$ -D-mannopyranosyl)-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside, 4-nitrophenyl, synthesis of, 385
- N-Acetylglucosaminidase-V (ChT), synthesis of a potential specific acceptor-substrate for, 385
- Acyloxonium ions in the high-yielding synthesis of oxolanes from alditols, hexoses, and hexonolactones catalysed by carboxylic acids in anhydrous hydrogen fluoride, 191
- Amino acid-containing capsular polysaccharide from E. coli 08:K49:H21, structure of the, 347
- 2,7-Anhydro-L-glycero-β-D-manno-octulopyranose and its per-O-acetyl derivate, structural and conformational studies of, 377
- 1,5-Anhydro-2-deoxyhex-1-enitols (glycals), a study of the iodoalkoxylation of, 71
- 2,3'-Anhydrosucrose, synthesis of, 161
- Assay of glycosidases, new colorimetric substrates for the, c5
- Assignment of <sup>13</sup>C and <sup>1</sup>H resonances of the sucrose moiety and the <sup>13</sup>C resonances of the carbonyl carbons of sucrose octobenzoate, 53
- Asymmetric induction in the catalytic osmylation of some α,β-unsaturated octuronic acid derivatives, double, 422
- Benzyl glycosides, regioselective hydrogenolysis of, c10
- Binding sites in proteins, photolabile spacer-modified oligosaccharides for probing malto-oligosaccharide. 93
- Bonnet monkey (*Macacca radiata*), neutral oligosaccharides of glycoproteins of the cervical mucus of, 444
- Branched-chain, deoxynitro-1-thio-p-glucitol including a novel mode of 1-thioglycoside formation, synthetically useful transformations of a, 247
- Capsular antigen from Escherichia coli 08:K87:H19, the structure of the, 361
- Cervical mucus of the bonnet monkey, neutral oligosaccharides from the glycoproteins of, 444
  Chlorodeovy, I talofyranoid derivatives, synthesis
- Chlorodeoxy-L-talofuranoid derivatives, synthesis and reactions of, 203
- Colorimetric substrates for the assay of glycosidases, new, c5
- Comparison of the results of sequential hydrazinolysis-nitrosation and alkali-mediated cleav-

- age-nitrosation of the O-linked oligosaccharides of gastric mucus glycoproteins, 181
- Computer-assisted interpretation of <sup>1</sup>H-n.m.r. spectra in the analysis of the structure of oligo-saccharides, 19
- Conformational studies of 2,7-anhydro-L-glycero-β-D-manno-octulopyranose and its per-Oacetyl derivative, structural and, 377
- Kdo-containing pentasaccharide as part of the core-lipid A component of lipopolysaccharides, synthesis of, 31
- Core-lipid A component of lipopolysaccharides, synthesis of a Kdo-containing pentasaccharide as part of, 31
- Cytidine, synthesis of 2',3'-dideoxy-2',3'-α-methano-, 87
- Deacetylation of sucrose octa-acetate with primary amines to give 2,3,4,6,1',6'-hexa-O-acetylsucrose, selective, 406
- 6-O-Decanoyl-3,4-di-O-isobutyrylsucrose and other fatty acid esters of sucrose, synthesis of, 61
- Deoxyhexitols and derivates thereof, synthesis from p-glucono-1,5-lactone of some monoand di-, 261
- 7-Deoxy-7-nitroheptitols, crystal structures of, 1 2',3'-Dideoxy-2',3'-α-methanocytidine, synthesis of, 87
- 2,3-Diamino-1-cyclohexanols, synthesis and resolution of, 415
- Disaccharides related to heparin and heparan sulfate, formation by chemical modification of maltose, 305
- Dodecagalacturonic acid (a phytoalexin elicitor of soybean), stereoselective total synthesis of, 147
- Enantiomers of 6-epicastanospermine and 1,6diepicastanospermine, synthesis from D- and L-gulonolactone, 269
- Enantiospecific synthesis of (-)-talaromycins A and B from p-fructose, 293
- Enzyme assays, synthesis of luciferin glycosides as substrates for novel ultrasensitive, 225
- 6-Epicastanospermine and 1,6-diepicastanospermine, synthesis from D- and L-gulonolactone of the enantiomers of, 269
- Erythritol and ribitol, formation of isopropyli-

c22 SUBJECT INDEX

- dene acetals of, under conditions of kinetic control. 173
- Escherichia coli 08:K87:H19, the structure of the capsular antigen from, 361
- Escherichia hermannii (ATCC 33651) lipopolysaccharide O-chain, identification as a D-rhamnan, 371
- Exocyclic glycal, synthesis and reations of leucrose and its, 333
- Formation of disaccharides related to heparin and heparan sulfate by chemical modification of maltose, 305
- Formation of isopropylidene acetals of erythritol and ribitol under conditions of kinetic control, 173
- N-Formylkanosamine glycosyl donor, synthesis of phenyl 4-(N-benzylformamido)-4,6-dide-oxy-3-C-methyl-2-O-methyl-1-thio-α-L-mannopyranoside, 435
- D-Fructose, an enantiospecific synthesis of (-)-talaromycins A and B from, 293
- Fucofuranoside, a novel synthesis of methyl 2-Omethyl-α,β-L-, 398
- O-β-D-Galactopyranosyl-(1→2)-O-α-D-xylopyranosyl-(1→6)-O-β-D-glucopyranosyl-(1→4)-β-D-glucopyranoside, a chemical synthesis of propyl, 235
- Garegg-Samuelsson olefination reaction, new observation on the, 410
- 3-O-(α-D-glucopyranosyl)-7-O-(L-glycero-α-D-manno-heptopyranosyl)-L-glycero-D-manno-heptopyranoside, synthesis of methyl, 125
- D-Glucono-1,5-lactone, synthesis of some monodeoxy- and dideoxy-hexitols and derivatives thereof from, 261
- p-Glucose, halogenation reactions of derivatives of sucrose and, 211
- Glycals, a study of the iodoalkoxylation of, 71 Glycoproteins of the cervical mucus of the bonnet monkey, characterization of the neutral oligosaccharides of, 444
- Glycosidases, new colorimetric substrates for the assay of, C5
- Halogenation reactions of derivatives of p-glucose and sucrose, 211
- Heptitols, nitro-, crystal structures of, 1
- Hexa-O-benzyl-5-hydroxy-pseudo-α-D-glucopyranose and its C-5 epimer, synthesis of, 283
- Hydrazinolysis—nitrosation and alkali-mediated cleavage—nitrosation of the O-linked oligosac-charides of gastric mucus glycoproteins, a comparison of the results of sequential, 181
- Hydrogen fluoride, acyloxonium ions in the highyielding synthesis of oxolanes from alditols, hexoses, and hexonolactones catalysed by car-

boxylic acids in, 191

- Hydrogenolysis of benzyl glycosides, regioselective, C10
- Identification of sucrose acetates, n.m.r. method for the, 402
- myo-Inositol, synthesis and resolution of (+)-1,5,6-tri-O-benzyl-, 105
- Iodoalkoxylation of 1,5-anhydro-2-deoxyhex-1-enitols (glycals), a study of the, 71
- Isopropylidene acetals of erythritol and ribitol, formation of, under conditions of kinetic control, 173
- Leucrose and its exocyclic glycal, synthesis and reactions of, 333
- Lewis b tetrasaccharide by a lectin and a monoclonal antibody, the effect of substituting key hydroxyl groups by amino groups on the binding of a, c12
- Lipid A-core component of lipopolysaccharides, synthesis of a Kdo-containing pentasaccharide as part of, 31
- Lipopolysaccharide O-chain of Escherichia hermannii (ATCC 33651), identification as a Drhamnan, 371
- Lipopolysaccharides, synthesis of a Kdo-containing pentasaccharide as part of the core-lipid A component of, 31
- Luciferin glycosides as substrates for novel ultrasensitive enzyme assays, synthesis of, 225
- Malto-oligosaccharide binding sites in proteins, photolabile spacer-modified oligosaccharides for probing, 93
- Maltose, formation of disaccharides related to heparin and heparan sulfate by chemical modification of, 305
- Methyl 3-O-(α-D-glucopyranosyl)-7-O-(L-glycero-α-D-manno-heptopyranosyl)-L-glycero-α-Dmanno-heptopyranoside, synthesis of, 125
- Methyl 2-O-methyl- $\alpha,\beta$ -L-fucofuranoside, a novel synthesis of, 398
- Methylene transfer reactions on sugar esters, lactones, and uloses, titanium-mediated, 428
- Monoclonal antibody, the effect of substituting key hydroxyl groups by amino groups on the binding of the Lewis b tetrasaccharide by a lectin and a, c12
- Nitroheptitols, crystal structures of, 1
- 4-Nitrophenyl O-(2-acetamido-2-deoxy-β-D-glu-copyranosyl)-(1→2)-O-(4-O-methyl-α-D-man-nopyranosyl)-(1→6)-β-D-glucopyranoside, synthesis of, 385
- N.m.r. imaging to map the spatial distribution of structure in polysaccharide gels, use of, c1 N.m.r. method for the identification of sucrose

SUBJECT INDEX C23

- acetates, 402
- N.m.r. spectra in the analysis of the structure of oligosaccharides, computer-assisted interpretation of <sup>1</sup>H-, 19
- Novel synthesis of methyl 2-O-methyl-α,β-L-fucofuranoside, 398
- Observations on the Garegg-Samuelsson olefination reaction, new, 410
- Octuronic acid derivatives, double asymmetric induction in the catalytic osmylation of some α,β-unsaturated, 422
- Olefination reaction, new observations on the Garegg-Samuelsson, 410
- Oligosaccharides, computer-assisted interpretation of <sup>1</sup>H-n.m.r. spectra in the analysis of the structure of, 19
- Oligosaccharides of gastric mucus glycoproteins, a comparison of the results of sequential hydrazinolysis-nitrosation an alkali-mediated cleavage-nitrosation of the O-linked, 181
- Osmylation of some  $\alpha,\beta$ -unsaturated octuronic acid derivates, double asymmetric induction in the catalytic, 422
- Oxidation of sucrose with sodium metaperiodate, 223
- Periodate oxidation of sucrose, 323
- Phenyl 4-(N-benzylformamido)-4,6-dideoxy-3-C-methyl-2-O-methyl-1-thio-α-L-mannopyranoside, an N-formylkanosamine glycosyl donor, synthesis of, 435
- Polysaccharide from E. coli 08:K49:H21, structure of the amino acid-containing capsular, 347
- Polysaccharide gels, use of n.m.r. imaging to map the spatial distribution of structure in, Cl
- Polysaccharide of type III Group B Streptococcus, synthesis of a tri- and a tetra-saccharide fragment of the capsular, 133
- Polysaccharide of Vibrio fluvialis AA-18239, structural studies of the O-antigen, 440
- Propyl  $O-\beta$ -D-galactopyranosyl- $(1 \rightarrow 2)$ - $O-\alpha$ -D-xylopyranosyl- $(1 \rightarrow 6)$ - $O-\beta$ -D-glucopyranosyl- $(1 \rightarrow 4)$ - $\beta$ -D-glycopyranoside, a chemical synthesis of, 235
- Pseudo-α-p-glucopyranose, synthesis of hexa-Obenzyl-5-hydroxy-, and its C-5 epimer, 283
- Regioselective hydrogenolysis of benzyl glycosides, C10
- Resolution of 2,3-diamino-1-cyclohexanols, synthesis and, 415
- Resolution of (±)-1,5,6-tri-O-benzyl-myo-inositol, synthesis and, 105
- D-Rhamnan, identification of the lipopolysaccharide O-chain of Escherichia hermannii (ATCC 33651) as a, 371

Selective deacetylation of sucrose octa-acetate with primary amines to give 2,3,4,6,1',6'-hexa-O-acetylsucrose, 406

- Selective deacylation of sucrose octabenzoate, use of <sup>13</sup>C-n.m.r. spectroscopy for the study of the, 53
- Spacer-modified oligosaccharides for probing malto-oligosaccharide binding sites in proteins, photolabile, 93
- Stereoselective total synthesis of dodecagalacturonic acid, a phytoalexin elicitor of soybean, 147
- Structural and conformational studies of 2,7-anhydro-L-glycero-β-D-manno-octulopyranose and its per-O-acetyl derivative. 377
- Structural studies of the O-antigen polysaccharide of Vibrio fluvialis AA-18239, 440
- Structure in polysaccharide gels, use of n.m.r. imaging to map the spatial distribution of, cl
- Structure of the amino-containing capsular polysaccharide from E. coli 08:K49:H21, 347
- Structure of the capsular antigen from Escherichia coli 08:K87:H19, 361
- Substituting key hydroxyl groups by amino groups on the binding of Lewis b tetrasaccharide by a lectin and a monoclonal antibody, the effect of, c12
- Sucrose acetates, n.m.r. method for the identification of, 402
- Sucrose and D-fructose, synthesis of sweet-tasting methylthio derivatives of, 45
- Sucrose, halogenation reactions of derivatives of D-glucose and, 211
- Sucrose octa-acetate, selective deacetylation with primary amines, to give 2,3,4,6,1',6'-hexa-O-acetylsucrose, 406
- Sucrose actabenzoate: assignment of <sup>13</sup>C and <sup>1</sup>H resonances of the sucrose moiety and the <sup>13</sup>C resonances of the carbonyl carbons, 53
- Sucrose, periodate oxidation of, 323
- Sucrose, syntheses of four fatty acid esters of, found in a wild potato, 61
- Sucrose, synthesis of 2,3'-anhydro-, 161
- Sugar esters, lactones, and uloses, titanium-mediated methylene transfer reactions on, 428
- Sweet-tasting methylthio derivatives of D-fructose and sucrose, synthesis of, 45
- Synthesis of a tri- and a tetra-saccharide fragment of the capsular polysacchride of type III Group B Streptococcus, 133
- Synthesis and reactions of chlorodeoxy-L-talofuranoid derivatives, 203
- Synthesis and reactions of leucrose and its exocyclic glycal, 333
- Synthesis and resolution of 2,3-diamino-1-cyclohexanols, 415
- Synthesis of 2,3'-anhydrosucrose, 161

C24 SUBJECT INDEX

Synthesis of 2',3'-dideoxy-2',3'-α-methanocytidine, 87

- Synthesis of dodecagalacturonic acid (a phytoalexin elicitor of soybean), stereoselective total, 147
- Syntheses of four fatty acid esters of sucrose found in a wild potato, including the major component 6-O-decanoyl-3,4-di-O-isobutyrylsucrose, 61
- Synthesis of luciferin glycosides as substrates for novel ultrasensitive enzyme asays, 225
- Synthesis of methyl 3-O-(α-D-glucopyranosyl)-7-O-(L-glycero-α-D-manno-heptopyranosyl)-Lglycero-α-D-manno-heptopyranoside, 125
- Synthesis of propyl  $O-\beta$ -D-galactopyranosyl- $(1\rightarrow 2)$ - $O-\alpha$ -D-xylopryanosyl- $(1\rightarrow 6)$ - $O-\beta$ -D-glucopyranosyl- $(1\rightarrow 4)$ - $\beta$ -D-glucopyranoside, a chemical, 235
- Synthesis of resolution of (±)-1,5,6-tri-O-benzylmyo-inositol, 105
- Synthesis of some monodeoxy- and dideoxy-hexitols, and derivatives thereof, from D-glucono-1.5-lactone, 261
- Synthesis of oxolanes from alditols, hexoses, and hexonolactones catalysed by carboxylic acids in anhydrous hydrogen fluoride, acyloxonium ions in the high-yielding, 191
- Synthesis of sweet-tasting methylthio derivatives of D-fructose and sucrose, 45

- Synthesis of the enantiomers of 6-epicastanospermine and 1,6-diepicastanospermine from Dand L-gulonalactone, 269
- Synthesis on phenyl 4-(N-benzylformamido)-4,6dideoxy-3-C-methyl-2-O-methyl-1-thio-α-Lmannopyranoside, an N-formylkanosamine glycosyl donor, 435
- Synthetically useful tranformations of a branched-chain, deoxynitro-1-thio-p-glucitol including a novel mode of 1-thioglycoside formation, 247
- (-)-Talaromycins A and B, enantiospecific synthesis from p-fructose, 293
- L-Talofuranoid derivatives, synthesis and reactions of chlorodeoxy-, 203
- Thioglycoside formation, synthetically useful transformations of a branched-chain, deoxynitro-1-thio-D-glucitol including a novel mode of 1-, 247
- Titanium-mediated methylene transfer reactions on sugar esters, lactones und uloses, 428
- Tri- and tetra-saccharide fragments of the capsular polysaccharide of type III Group B Streptococcus, synthesis of, 133
- Vibrio fluvialis AA-18239, structural studies of the O-antigen polysaccharide of, 440