

Subject index

Acetals

- Preparation of mono-*O*-isopropylidene derivatives of methyl α -D-glucoseptanoside 241
- Preparation of methyl β -L-idoseptanoside and its derivatives 249

Alginate

- Rheological studies of the interaction of mucins with alginate and polyacrylate 85

1-Alkylamino-1-deoxy-D-alditols

- Coordination of Cd(II) by *N*-alkylamino sugars in aqueous solution as studied by potentiometry and NMR spectroscopy 159

Allyl galactoside

- Synthesis of allyl β -D-galactopyranoside from lactose using *Streptococcus thermophilus* β -D-galactosidase 279

L-Ascorbic acid, ¹³C-labeled, Synthesis

- L-(1-¹³C)- and (2-¹³C)ascorbic acid: synthesis and NMR characterization 135

Boron

- Isolation and characterization of a boron-rhamnogalacturonan-II complex from cell walls of sugar beet pulp 1

Bridgehead amino group

- Calystegin N₁, a novel nortropane alkaloid with a bridgehead amino group from *Hyoscyamus niger*: structure determination and glycosidase inhibitory activities 169

Calystegin

- Calystegin N₁, a novel nortropane alkaloid with a bridgehead amino group from *Hyoscyamus niger*: structure determination and glycosidase inhibitory activities 169

Carbocyclic sugar

- Caryose: a carbocyclic monosaccharide from *Pseudomonas caryophylli* 111

Carbohydrates

- Synthesis of 6-*O*-acetyl-2,3,4-tri-*O*-[(*S*)-2-methylbutyryl]sucrose and the three regioisomers of 6-*O*-acetyl-2,3,4-*O*-[(*S*)-2-methylbutyryl]-di-*O*-[(*S*)-3-methylpentanoyl]sucrose, naturally occurring fatty acid esters of sucrose found in tobacco 271

Caryophyllose

- Analysis of the polysaccharide components of the lipopolysaccharide fraction of *Pseudomonas caryophylli* 119

Caryose

- Caryose: a carbocyclic monosaccharide from *Pseudomonas caryophylli* 111

- Analysis of the polysaccharide components of the lipopolysaccharide fraction of *Pseudomonas caryophylli* 119

¹¹³Cd NMR

- Coordination of Cd(II) by *N*-alkylamino sugars in aqueous solution as studied by potentiometry and NMR spectroscopy 159

Cell walls

- Isolation and characterization of a boron-rhamnogalacturonan-II complex from cell walls of sugar beet pulp 1

Ceramide

- Systematic synthesis of α -sialyl-(2 \rightarrow 3)- and -(2 \rightarrow 6)-isoglobopentaosylceramides (V³Neu5-AciGb₅Cer and V⁶Neu5AciGb₅Cer) 179

Cereal

- Structural studies of linear and branched fractions of chickpea and finger millet starches 101

¹³C NMR spectroscopy

- Coordination of Cd(II) by *N*-alkylamino sugars in aqueous solution as studied by potentiometry and NMR spectroscopy 159

Complex, metal-saccharide

- Metal-saccharide chemistry and biology: saccharide complexes of zinc and their effect on metallothionein synthesis in mice 73

Conformations

- Preparation of mono-*O*-isopropylidene derivatives of methyl α -D-glucoseptanoside 241

- Preparation of methyl β -L-idoseptanoside and its derivatives 249
- The crystal structure of methyl 5-O-acetyl-2-O-benzoyl-3,4-O-isopropylidene- β -L-idoseptanoside 265
- Conformation search
- Conformational analysis of two glycoproteins: a Monte Carlo simulated annealing approach using a soft-sphere potential 25
- 4,8-Cyclo-3,9-dideoxy-L-erythro-D-ido-nonose
- Caryose: a carbocyclic monosaccharide from *Pseudomonas caryophylli* 111
- N-(2-Deoxy-D-aldohehexos-2-yl)-glycines
- Molecular and crystal structure of N-(2-deoxy-D-aldohehexos-2-yl)-glycines (Heyns compounds) 11
- Deoxy sugar
- Caryose: a carbocyclic monosaccharide from *Pseudomonas caryophylli* 111
- Detarium seed
- A new polysaccharide from a traditional Nigerian plant food: *Detarium senegalense* Gmelin 229
- Digestibility
- Structural studies of linear and branched fractions of chickpea and finger millet starches 101
- Enzymic synthesis
- Synthesis of allyl β -D-galactopyranoside from lactose using *Streptococcus thermophilus* β -D-galactosidase 279
- Fluorosugars
- Assignment of the ^1H , ^{19}F , and ^{13}C NMR spectra of 2-deoxy-2-fluoro-D-ribose and characterisation of the isomeric equilibrium 51
- FTIR-ATR
- FTIR and laser-Raman spectra of oligosaccharides in water: characterization of the glycosidic bond 145
- β -D-Galactosidase
- Synthesis of allyl β -D-galactopyranoside from lactose using *Streptococcus thermophilus* β -D-galactosidase 279
- Ganglioside
- Systematic synthesis of α -sialyl-(2 \rightarrow 3)- and -(2 \rightarrow 6)-isoglobopentaosylceramides (V 3 Neu5-AciGb $_3$ Cer and V 6 Neu5AciGb $_3$ Cer) 179
- An efficient short-step total synthesis of ganglioside GM $_3$: effective usage of the neighbouring group participation strategy 207
- Glucanase
- A new polysaccharide from a traditional Nigerian plant food: *Detarium senegalense* Gmelin 229
- α -Glucosyltransferase
- Synthesis of 1',6'-disubstituted sucroses and their behavior as glucosyl donors for a microbial α -glucosyltransferase 61
- Glycolipid
- An efficient short-step total synthesis of ganglioside GM $_3$: effective usage of the neighbouring group participation strategy 207
- Glycoprotein
- Conformational analysis of two glycoproteins: a Monte Carlo simulated annealing approach using a soft-sphere potential 25
- Glycosaminoglycan
- Molecular structure of [4-(4-cyanobenzoyl)phenyl] 1,5-dithio- β -D-xylopyranoside (narpacil) in the solid state and in solution: an investigation by X-ray crystallography, molecular mechanics calculations, and NMR spectroscopy 35
- Glycosidase inhibitor
- Calystegin N $_1$, a novel nortropane alkaloid with a bridgehead amino group from *Hyoscyamus niger*: structure determination and glycosidase inhibitory activities 169
- Glycosides, methyl
- Synthesis of the methyl α -glycosides of some isomalto-oligosaccharides specifically deoxygenated at position C-3 191
- Glycosides, synthesis
- Synthesis of the methyl α -glycosides of some isomalto-oligosaccharides specifically deoxygenated at position C-3 191
- Glycosidic bond
- FTIR and laser-Raman spectra of oligosaccharides in water: characterization of the glycosidic bond 145
- Heyns compound
- Molecular and crystal structure of N-(2-deoxy-D-aldohehexos-2-yl)-glycines (Heyns compounds) 11
- High resolution NMR spectroscopy
- Molecular structure of [4-(4-cyanobenzoyl)phenyl] 1,5-dithio- β -D-xylopyranoside (narpacil) in the solid state and in solution: an investigation by X-ray crystallography, molecular mechanics calculations, and NMR spectroscopy 35
- Homopolysaccharide
- Analysis of the polysaccharide components of the lipopolysaccharide fraction of *Pseudomonas caryophylli* 119
- Hyoscyamus niger*
- Calystegin N $_1$, a novel nortropane alkaloid with a bridgehead amino group from *Hyoscyamus niger*: structure determination and glycosidase inhibitory activities 169

L-Idoseptanosides

Preparation of methyl β -L-idoseptanoside and its derivatives 249

Isoglobopentaosylceramide

Systematic synthesis of α -sialyl-(2 \rightarrow 3)- and -(2 \rightarrow 6)-isoglobopentaosylceramides (V³Neu5-AciGb₅Cer and V⁶Neu5AciGb₅Cer) 179

Lactose

Synthesis of allyl β -D-galactopyranoside from lactose using *Streptococcus thermophilus* β -D-galactosidase 279

Laser-Raman

FTIR and laser-Raman spectra of oligosaccharides in water: characterization of the glycosidic bond 145

Legume

Structural studies of linear and branched fractions of chickpea and finger millet starches 101

Metal ion sequestration

Coordination of Cd(II) by *N*-alkylamino sugars in aqueous solution as studied by potentiometry and NMR spectroscopy 159

Metallothionein

Metal-saccharide chemistry and biology: saccharide complexes of zinc and their effect on metallothionein synthesis in mice 73

Molecular mechanics

Molecular structure of [4-(4-cyanobenzoyl)phenyl] 1,5-dithio- β -D-xylopyranoside (narpacil) in the solid state and in solution: an investigation by X-ray crystallography, molecular mechanics calculations, and NMR spectroscopy 35

Monte Carlo

Conformational analysis of two glycoproteins: a Monte Carlo simulated annealing approach using a soft-sphere potential 25

Mucins

Rheological studies of the interaction of mucins with alginate and polyacrylate 85

Ni(II) complexes

Coordination of Cd(II) by *N*-alkylamino sugars in aqueous solution as studied by potentiometry and NMR spectroscopy 159

NMR

Assignment of the ¹H, ¹⁹F, and ¹³C NMR spectra of 2-deoxy-2-fluoro-D-ribose and characterisation of the isomeric equilibrium 51

Preparation of mono-*O*-isopropylidene derivatives of methyl α -D-glucoseptanoside 241

NMR characterization

L-(1-¹³C)- and (2-¹³C)ascorbic acid: synthesis and NMR characterization 135

Oligosaccharide

Systematic synthesis of α -sialyl-(2 \rightarrow 3)- and -(2 \rightarrow 6)-isoglobopentaosylceramides (V³Neu5-AciGb₅Cer and V⁶Neu5AciGb₅Cer) 179

Oligosaccharides, α -isomalto-

Synthesis of the methyl α -glycosides of some isomalto-oligosaccharides specifically deoxygenated at position C-3 191

Participation, neighbouring group

An efficient short-step total synthesis of ganglioside GM₃: effective usage of the neighbouring group participation strategy 207

Pectic polysaccharide

Isolation and characterization of a boron-rhamnogalacturonan-II complex from cell walls of sugar beet pulp 1

Polyacrylate

Rheological studies of the interaction of mucins with alginate and polyacrylate 85

Polysaccharide

A new polysaccharide from a traditional Nigerian plant food: *Detarium senegalense* Gmelin 229

Protaminobacter rubrum

Synthesis of 1',6'-disubstituted sucroses and their behavior as glucosyl donors for a microbial α -glucosyltransferase 61

Proteoglycan, iduronic acid-containing

Inseparable iduronic acid-containing proteoglycan PG_(IdoA) preparations of human skin and post-burn scar tissues: evidence for elevated levels of PG_(IdoA)-I in hypertrophic scar by *N*-terminal sequencing 223

Pseudomonas caryophylli

Caryose: a carbocyclic monosaccharide from *Pseudomonas caryophylli* 111

Analysis of the polysaccharide components of the lipopolysaccharide fraction of *Pseudomonas caryophylli* 119

Regioselective protection

Synthesis of 6-*O*-acetyl-2,3,4-tri-*O*-[(*S*)-2-methylbutyryl]sucrose and the three regioisomers of 6-*O*-acetyl-2,3,4-*O*-[(*S*)-2-methylbutyryl]-di-*O*-[(*S*)-3-methylpentanoyl]sucrose, naturally occurring fatty acid esters of sucrose found in tobacco 271

Rhamnogalacturonan-II

Isolation and characterization of a boron-rhamnogalacturonan-II complex from cell walls of sugar beet pulp 1

Rheological studies

Rheological studies of the interaction of mucins with alginate and polyacrylate 85

Ribose

Assignment of the ^1H , ^{19}F , and ^{13}C NMR spectra of 2-deoxy-2-fluoro-D-ribose and characterisation of the isomeric equilibrium 51

Scar, hypertrophic

Inseparable iduronic acid-containing proteoglycan $\text{PG}_{(\text{IdoA})}$ preparations of human skin and post-burn scar tissues: evidence for elevated levels of $\text{PG}_{(\text{IdoA})}$ -I in hypertrophic scar by *N*-terminal sequencing 223

Septanosides

Preparation of mono-*O*-isopropylidene derivatives of methyl α -D-glucoseptanoside 241
The crystal structure of methyl 5-*O*-acetyl-2-*O*-benzoyl-3,4-*O*-isopropylidene- β -L-idoseptanoside 265

Simulated annealing

Conformational analysis of two glycoproteins: a Monte Carlo simulated annealing approach using a soft-sphere potential 25

Skin

Inseparable iduronic acid-containing proteoglycan $\text{PG}_{(\text{IdoA})}$ preparations of human skin and post-burn scar tissues: evidence for elevated levels of $\text{PG}_{(\text{IdoA})}$ -I in hypertrophic scar by *N*-terminal sequencing 223

Starches

Structural studies of linear and branched fractions of chickpea and finger millet starches 101

Structural studies

Structural studies of linear and branched fractions of chickpea and finger millet starches 101

Structure determination

Calystegin N_1 , a novel nortropane alkaloid with a bridgehead amino group from *Hyoscyamus niger*: structure determination and glycosidase inhibitory activities 169

Sucrose, 1',6'-disubstituted

Synthesis of 1',6'-disubstituted sucroses and their behavior as glucosyl donors for a microbial α -glucosyltransferase 61

Sucrose esters

Synthesis of 6-*O*-acetyl-2,3,4-tri-*O*-[(*S*)-2-methylbutyryl]sucrose and the three regioisomers of 6-*O*-acetyl-2,3,4-*O*-[(*S*)-2-methylbutyryl]-di-*O*-[(*S*)-3-methylpentanoyl]sucrose, naturally occurring fatty acid esters of sucrose found in tobacco 271

Sugar beet

Isolation and characterization of a boron-

rhamnogalacturonan-II complex from cell walls of sugar beet pulp 1

Sugars

FTIR and laser-Raman spectra of oligosaccharides in water: characterization of the glycosidic bond 145

Sugars, deoxygenated

Synthesis of the methyl α -glycosides of some isomalto-oligosaccharides specifically deoxygenated at position C-3 191

Synthesis

An efficient short-step total synthesis of ganglioside GM_3 : effective usage of the neighbouring group participation strategy 207

Thio-sugars

Molecular structure of [4-(4-cyanobenzoyl)phenyl] 1,5-dithio- β -D-xylopyranoside (naro-parcil) in the solid state and in solution: an investigation by X-ray crystallography, molecular mechanics calculations, and NMR spectroscopy 35

Transglycosylation

Synthesis of allyl β -D-galactopyranoside from lactose using *Streptococcus thermophilus* β -D-galactosidase 279

X-ray crystallography

Molecular structure of [4-(4-cyanobenzoyl)phenyl] 1,5-dithio- β -D-xylopyranoside (naro-parcil) in the solid state and in solution: an investigation by X-ray crystallography, molecular mechanics calculations, and NMR spectroscopy 35

X-ray structure

Preparation of methyl β -L-idoseptanoside and its derivatives 249

The crystal structure of methyl 5-*O*-acetyl-2-*O*-benzoyl-3,4-*O*-isopropylidene- β -L-idoseptanoside 265

Xyloglucan

A new polysaccharide from a traditional Nigerian plant food: *Detarium senegalense* Gmelin 229

Zinc-saccharide complex

Metal-saccharide chemistry and biology: saccharide complexes of zinc and their effect on metallothionein synthesis in mice 73