

Subject index

Absolute configuration

Determination of the absolute configuration of monosaccharides by ¹H NMR spectroscopy of their per-*O*-(*S*)-2-methylbutyrate derivatives 199

Acetolysis

Porcine liver (2 → 3)- α -sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences 161

N-Acetyl-D-galactosamine

Chemical and chemo-enzymatic synthesis of the α -Neu p5Ac-(2 → 6)- β -D-GalpNAc-(1 → 4)- β -D-GlcpNAc-(1 → 2)- α -D-Manp element that is part of N-linked carbohydrate chains of human lutropin 127

Aldouronic acids

Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95

Alginates from brown algae

Biosynthetic implications of NMR analyses of alginate homo- and heteropolymers from New Zealand brown seaweeds 229

2-Alkylamido-2-deoxy-D-glucose

Novel sugar bola-amphiphiles with a pseudo macrocyclic structure 341

Allyl glycosides

Thiol addition to protected allyl glycosides: an improved method for the preparation of spacer-arm glycosides 369

Allyl 2-(*N*-benzyl-*N*-ethyl)amino-2-deoxy- α -D-glucopyranoside

Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure 109

α -Amino-acid amides

Formation of α -amino-acid amides and α -hydroxy-acid amides by degradation of sugars with primary amines 265

(*N*-Benzyl-*N*-ethyl)-aminodeoxyglucose derivatives

Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure 109

Arabinans

Process for the isolation of preparative quantities of [2-*O*-(*trans*-feruloyl)- α -L-arabinofuranosyl]-(1 → 5)-L-arabinofuranose from sugarbeet 351

α -L-Arabinofuranosidase

Process for the isolation of preparative quantities of [2-*O*-(*trans*-feruloyl)- α -L-arabinofuranosyl]-(1 → 5)-L-arabinofuranose from sugarbeet 351

Araliaceae

Rhamnogalacturonan II from the leaves of *Panax ginseng* C.A. Meyer as a macrophage Fc receptor expression-enhancing polysaccharide 239

3-(2-Azidoethylthio)propyl glycosides

Thiol addition to protected allyl glycosides: an improved method for the preparation of spacer-arm glycosides 369

Beijeran

X-ray study of beijeran sodium salts, a new galacturonic acid-containing exo-polysaccharide 41

2,4-*O*-Benzylidene-3-deoxy-L-glycero-tetronic acid

Synthesis of methyl α -glycosides of some higher oligosaccharide fragments of the O-antigen of *Vibrio cholerae* O1, serotype Inaba and Ogawa 329

Benzoyloxycarbonyl

The benzoyloxycarbonyl group: An alternative protective group in the mannose series 175

Biosynthesis

Biosynthetic implications of NMR analyses of alginate homo- and heteropolymers from New Zealand brown seaweeds 229

Birch

Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95

Block structures

Biosynthetic implications of NMR analyses of alginate homo- and heteropolymers from New Zealand brown seaweeds 229

Bola-amphiphiles

Novel sugar bola-amphiphiles with a pseudo macrocyclic structure 341

Branch-structure of amylopectin

Branch-structure difference in starches of A- and B-type X-ray patterns revealed by their Naegeli dextrins 219

Breast fed infants

¹H NMR analysis of novel sialylated and fucosylated lactose-based oligosaccharides having linear GlcNAc (β 1–6)Gal and Neu5Ac (α 2–6)GlcNAc sequences 289

5-Bromo-5-deoxy-pentono-1,4-lactone

Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139

Burkholderia (*Pseudomonas*) *plantarii*

Structure of a new 6-deoxy- α -D-talan from *Burkholderia* (*Pseudomonas*) *plantarii* strain DSM 6535, which is different from the O-chain of the lipopolysaccharide 143

Capillary zone electrophoresis

Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95

Capsular polysaccharide

Motional properties of *E. Coli* polysaccharide K5 in aqueous solution analyzed by NMR relaxation measurements 69

Catalysis by Ca²⁺ ions

A short note on the epimerization of aldoses 279

Chain conformation

X-ray study of beijeran sodium salts, a new galacturonic acid-containing exo-polysaccharide 41

Chemical sialylation

Chemical and chemo-enzymatic synthesis of the α -Neu p5Ac-(2 → 6)- β -D-GalpNAc-(1 → 4)- β -D-GlcpNAc-(1 → 2)- α -D-Manp element that is part of N-linked carbohydrate chains of human lutropin 127

Chemoenzymatic synthesis

Chemoenzymatic synthesis of glucose fatty esters 103

- Chitosan
¹H NMR relaxation study of a chitosan–cyclodextrin network 77
- 5-Chloro-5-deoxy-pentono-1,4-lactone
 Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139
- ¹³C NMR relaxation
 An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Conformation
 An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Conformational search
 Conformational analysis of 4-demethoxy-7-*O*-[2,6-dideoxy-4-*O*-(2,3,6-trideoxy-3-amino- α -L-lyxo-hexopyranosyl)- α -L-lyxo-hexopyranosyl]adriamicinone, the first doxorubicin disaccharide analogue to be reported 11
- Cross-linking
 Formation of ferulic acid dehydromers through oxidative cross-linking of sugar beet pectin 179
- Cross-links
 Formation of α -amino-acid amides and α -hydroxy-acid amides by degradation of sugars with primary amines 265
- C-series gangliosides, synthesis
 A synthetic approach to the c-series gangliosides containing sialyl- α (2 \rightarrow 8)sialyl- α (2 \rightarrow 8)sialic acid: Synthesis of ganglioside GT4, α (2 \rightarrow 6)GT4 and GT3 207
- Cyclitols
 Synthesis of new anhydro and branched-chain cyclitols 183
- Cyclodextrin
 Specificity of amylases and cyclodextrin-glucoamylase in reactions with 2-deoxy-maltooligosaccharides 153
- β -Cyclodextrin
¹H NMR relaxation study of a chitosan–cyclodextrin network 77
- Cyclodextrins
 Synthesis of 2¹,3¹-*O*-(propane-1,2-diyl)- and 2¹,3¹-*O*-(3-hydroxypropane-1,2-diyl)-cyclomaltoheptaose 361
- 6-Deoxy-D-talose
 Structure of a new 6-deoxy- α -D-talose from *Burkholderia (Pseudomonas) plantarii* strain DSM 6535, which is different from the O-chain of the lipopolysaccharide 143
- 4-Deoxy-L-threo-hex-4-enopyranosyluronic acid
 Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95
- Dermatan sulfate
 Chondroitin ABC lyase digestion of an ascidian dermatan sulfate. Occurrence of unusual 6-*O*-sulfo-2-acetamido-2-deoxy-3-*O*-(2-*O*-sulfo- α -L-idopyranosyluronic acid)- β -D-galactose units 315
- Diastereomers
 Determination of the absolute configuration of monosaccharides by ¹H NMR spectroscopy of their per-*O*-(*S*)-2-methylbutyrate derivatives 199
- Dimethylformamide
 Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139
- 2,6-Di-(*N*-benzyl-*N*-ethyl)amino-2,6-dideoxy-D-glucose
 Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure 109
- 2,6-Dioxabicyclo[3.1.0]hexanes
 Synthesis and glycosidic coupling reaction of substituted 2,6-dioxabicyclo[3.1.0]hexanes: 1,2-anhydro-3,5-di-*O*-benzyl- α -D-ribofuranose 355
- 1,4-Dioxane rings fused to sugar residues
 Synthesis of 2¹,3¹-*O*-(propane-1,2-diyl)- and 2¹,3¹-*O*-(3-hydroxypropane-1,2-diyl)-cyclomaltoheptaose 361
- 4,6-*O*-Di-(*tert*-butyl)silanediy-D-glucal
 Synthesis and chemistry of 4,6-*O*-di-(*tert*-butyl)silanediy-D-glucal 365
- Di-*tert*-butylsilyl ditriflate
 Synthesis and chemistry of 4,6-*O*-di-(*tert*-butyl)silanediy-D-glucal 365
- Doxorubicin disaccharide
 Conformational analysis of 4-demethoxy-7-*O*-[2,6-dideoxy-4-*O*-(2,3,6-trideoxy-3-amino- α -L-lyxo-hexopyranosyl)- α -L-lyxo-hexopyranosyl]adriamicinone, the first doxorubicin disaccharide analogue to be reported 11
- Drug carrier
 Structural characterization of organized systems of polysaccharides and phospholipids by light scattering spectroscopy and electron microscopy 31
- Dynamics
 Solution conformation and dynamics of a tetrasaccharide related to the Lewis^x antigen deduced by ¹H NMR NOESY, ROESY, and T-ROESY measurements 3
- E2-Elimination
 Synthesis of methyl 4-thio- β -cellobioside. A reinvestigation 271
- Enzymatic sialylation
 Chemical and chemo-enzymatic synthesis of the α -Neu5Ac-(2 \rightarrow 6)- β -D-GalpNAc-(1 \rightarrow 4)- β -D-GlcNAc-(1 \rightarrow 2)- α -D-Manp element that is part of N-linked carbohydrate chains of human lutropin 127
- Enzyme inhibitors
 Synthesis of new anhydro and branched-chain cyclitols 183
- Enzyme specificity
 Porcine liver (2 \rightarrow 3)- α -sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences 161
- Epimerization
 A short note on the epimerization of aldoses 279
- Esterases
 Process for the isolation of preparative quantities of [2-*O*-(*trans*-feruloyl)- α -L-arabinofuranosyl]-(1 \rightarrow 5)-L-arabinofuranose from sugarbeet 351
- Exo- and endo-amylases
 Specificity of amylases and cyclodextrin-glucoamylase in reactions with 2-deoxy-maltooligosaccharides 153
- Exopolysaccharide
 The structure of the exopolysaccharide of *Pseudomonas fluorescens* strain H13 323
- Ferulic acid
 Process for the isolation of preparative quantities of [2-*O*-(*trans*-feruloyl)- α -L-arabinofuranosyl]-(1 \rightarrow 5)-L-arabinofuranose from sugarbeet 351
- Ferulic acid dehydromers
 Formation of ferulic acid dehydromers through oxidative cross-linking of sugar beet pectin 179
- Feruloylated oligosaccharides
 Process for the isolation of preparative quantities of [2-*O*-(*trans*-feruloyl)- α -L-arabinofuranosyl]-(1 \rightarrow 5)-L-arabinofuranose from sugarbeet 351
- Fiber diffraction pattern
 X-ray study of bejieran sodium salts, a new galacturonic acid-containing exo-polysaccharide 41
- C-Formyl furanosides
 Chemistry of glucal halohydrins (II): An unusual protecting group effect in the competitive formation of formyl furanosides and methyl glycosides 301
- Furanoid glycols, synthesis
 Synthesis of furanose glycols from furanose 1,2-diols and their cyclic thiocarbonate esters 375

- Galacto-validamine
Preparation and biological activity of manno- and galacto-validamines, new 5a-carba-glycosylamines as α -glycosidase inhibitors 259
- Gastrointestinal tract
¹H NMR analysis of novel sialylated and fucosylated lactose-based oligosaccharides having linear GlcNAc(β 1–6)Gal and Neu5Ac(α 2–6)GlcNAc sequences 289
- Glass transitions in carbohydrates
Glass transition in aqueous solutions of glucose. Molecular dynamics simulation 51
- D-Glucal
Synthesis and chemistry of 4,6-O-di-(*tert*-butyl)silanediy-D-glucal 365
- Glucanotransferase
Specificity of amylases and cyclodextrin-glucanotransferase in reactions with 2-deoxy-maltooligosaccharides 153
- D-Glucose fatty esters
Chemoenzymatic synthesis of glucose fatty esters 103
- Glucose head groups
Novel sugar bola-amphiphiles with a pseudo macrocyclic structure 341
- Glucose state diagram
Glass transition in aqueous solutions of glucose. Molecular dynamics simulation 51
- D-Glycofuranuronamide
Novel sugar bola-amphiphiles with a pseudo macrocyclic structure 341
- Glycosaminoglycan
Motional properties of *E. Coli* polysaccharide K5 in aqueous solution analyzed by NMR relaxation measurements 69
Chondroitin ABC lyase digestion of an ascidian dermatan sulfate. Occurrence of unusual 6-O-sulfo-2-acetamido-2-deoxy-3-O-(2-O-sulfo- α -L-idopyranosyluronic acid)- β -D-galactose units 315
- α -Glycosidase inhibitor
Preparation and biological activity of manno- and galacto-validamines, new 5a-carba-glycosylamines as α -glycosidase inhibitors 259
- Glycosides
Chemistry of glucal halohydrins (II): An unusual protecting group effect in the competitive formation of formyl furanosides and methyl glycosides 301
- Glycosidic linkage
Study of the phase space structure for a two-degrees of freedom model of a symmetric glycosidic linkage 59
- Glycosyl enaminone
Synthesis of 3- β -D-ribofuranosyl-1*H*-pyrazole-4-carboxamide 283
- Glycosyl iodides
Mechanistic studies on the stereoselective formation of glycosyl iodides: first characterization of β -D-glycosyl iodides 119
- β -D-Glycosyl iodides
Mechanistic studies on the stereoselective formation of glycosyl iodides: first characterization of β -D-glycosyl iodides 119
- Hafnia alvei*
Structure of the O-polysaccharide from the LPS of a *Hafnia alvei* strain isolated from a patient with suspect yersinosis 191
- Halohydrins
Chemistry of glucal halohydrins (II): An unusual protecting group effect in the competitive formation of formyl furanosides and methyl glycosides 301
- Heparin
Motional properties of *E. Coli* polysaccharide K5 in aqueous solution analyzed by NMR relaxation measurements 69
- Human lutropin
Chemical and chemo-enzymatic synthesis of the α -Neu5Ac-(2 \rightarrow 6)- β -D-GalpNAc-(1 \rightarrow 4)- β -D-GlcNAc-(1 \rightarrow 2)- α -D-Manp element that is part of N-linked carbohydrate chains of human lutropin 127
- Hydrodynamic radius
An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Hydrogels
¹H NMR relaxation study of a chitosan–cyclodextrin network 77
- α -Hydroxy-acid amides
Formation of α -amino-acid amides and α -hydroxy-acid amides by degradation of sugars with primary amines 265
- 1,2-Hydroxyfuranoses
Synthesis of furanose glycols from furanose 1,2-diols and their cyclic thiocarbonate esters 375
- Internal motions
Solution conformation and dynamics of a tetrasaccharide related to the Lewis^x antigen deduced by ¹H NMR NOESY, ROESY, and T-ROESY measurements 3
- Iodolactone
Chemistry of glucal halohydrins (II): An unusual protecting group effect in the competitive formation of formyl furanosides and methyl glycosides 301
- N*-Iodosuccinimide/silver triflate-promoted glycosylation
Synthesis of methyl α -glycosides of some higher oligosaccharide fragments of the O-antigen of *Vibrio cholerae* O1, serotype Inaba and Ogawa 329
- Kraft pulp
Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95
- Ligand-antibody affinity
The measurement of affinity between ligand and antibody using ligand-induced antibody fluorescence change 169
- Light scattering
Structural characterization of organized systems of polysaccharides and phospholipids by light scattering spectroscopy and electron microscopy 31
- Lipase
Chemoenzymatic synthesis of glucose fatty esters 103
- Lipopolysaccharide
Structure of a new 6-deoxy- α -D-talan from *Burkholderia (Pseudomonas) plantarii* strain DSM 6535, which is different from the O-chain of the lipopolysaccharide 143
- Lipopolysaccharide, structure
Structure of the O-polysaccharide from the LPS of a *Hafnia alvei* strain isolated from a patient with suspect yersinosis 191
- Macrophage Fc receptor expression-enhancing activity
Rhamnogalacturonan II from the leaves of *Panax ginseng* C.A. Meyer as a macrophage Fc receptor expression-enhancing polysaccharide 239
- Maillard reaction
Formation of α -amino-acid amides and α -hydroxy-acid amides by degradation of sugars with primary amines 265
- Maltodextrin
Structural characterization of organized systems of polysaccharides and phospholipids by light scattering spectroscopy and electron microscopy 31
- Mannopyranoside
The benzyloxycarbonyl group: An alternative protective group in the mannose series 175
- Mannose receptor
Lectin-deficient ricin toxin intoxicates cells bearing the D-mannose receptor 251
- Manno-validamine
Preparation and biological activity of manno- and galacto-validamines, new 5a-carba-glycosylamines as α -glycosidase inhibitors 259

- Mass spectrometry
Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95
- 4-O-Methyl-D-glucopyranosyluronic acid
Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95
- Methyl 4-thio- β -cellobioside
Synthesis of methyl 4-thio- β -cellobioside. A reinvestigation 271
- Microgel
Structural characterization of organized systems of polysaccharides and phospholipids by light scattering spectroscopy and electron microscopy 31
- Migration
The benzyloxycarbonyl group: An alternative protective group in the mannose series 175
- Milk oligosaccharides
 ^1H NMR analysis of novel sialylated and fucosylated lactose-based oligosaccharides having linear GlcNAc (β 1-6)Gal and Neu5Ac (α 2-6)GlcNAc sequences 289
- Molecular Dynamics
Study of the phase space structure for a two-degrees of freedom model of a symmetric glycosidic linkage 59
- Molecular dynamics
Motional properties of *E. Coli* polysaccharide K5 in aqueous solution analyzed by NMR relaxation measurements 69
Molecular dynamics study of polygalacturonic acid chains in aqueous solution 85
- Monosaccharides
Determination of the absolute configuration of monosaccharides by ^1H NMR spectroscopy of their per-*O*-(*S*)-2-methylbutyrate derivatives 199
- Mycobacterial 3-*O*-methylmannose polysaccharide (MMP)
Convergent synthesis of an octasaccharide acceptor corresponding to the reducing terminus of mycobacterial 3-*O*-methylmannose polysaccharide (MMP) 347
- Naegeli dextrans
Branch-structure difference in starches of A- and B-type X-ray patterns revealed by their Naegeli dextrans 219
- NAMFIS
Conformational analysis of 4-demethoxy-7-*O*-[2,6-dideoxy-4-*O*-(2,3,6-trideoxy-3-amino- α -L-lyxo-hexopyranosyl)- α -L-lyxo-hexopyranosyl]adriamicinone, the first doxorubicin disaccharide analogue to be reported 11
- Nanoparticle
Structural characterization of organized systems of polysaccharides and phospholipids by light scattering spectroscopy and electron microscopy 31
- Neoglycoconjugates
Thiol addition to protected allyl glycosides: an improved method for the preparation of spacer-arm glycosides 369
- NMR
Conformational analysis of 4-demethoxy-7-*O*-[2,6-dideoxy-4-*O*-(2,3,6-trideoxy-3-amino- α -L-lyxo-hexopyranosyl)- α -L-lyxo-hexopyranosyl]adriamicinone, the first doxorubicin disaccharide analogue to be reported 11
Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95
Chemoenzymatic synthesis of glucose fatty esters 103
- NMR analyses
Biosynthetic implications of NMR analyses of alginate homo- and heteropolymers from New Zealand brown seaweeds 229
- NMR characterization
Mechanistic studies on the stereoselective formation of glycosyl iodides: first characterization of β -D-glycosyl iodides 119
- NMR relaxation
Motional properties of *E. Coli* polysaccharide K5 in aqueous solution analyzed by NMR relaxation measurements 69
- NMR spectroscopy
Structure of the O-polysaccharide from the LPS of a *Hafnia alvei* strain isolated from a patient with suspect yersinosis 191
- NMR Spectroscopy
Determination of the absolute configuration of monosaccharides by ^1H NMR spectroscopy of their per-*O*-(*S*)-2-methylbutyrate derivatives 199
- NMR spectroscopy
 ^1H NMR analysis of novel sialylated and fucosylated lactose-based oligosaccharides having linear GlcNAc (β 1-6)Gal and Neu5Ac (α 2-6)GlcNAc sequences 289
The structure of the exopolysaccharide of *Pseudomonas fluorescens* strain H13 323
- N*,6-*O*-Dibenzyl-*N*-ethyl-D-glucosamine
Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure 109
- Nucleoside
Synthesis and glycosidic coupling reaction of substituted 2,6-dioxabicyclo[3.1.0]hexanes: 1,2-anhydro-3,5-di-*O*-benzyl- α -D-ribofuranose 355
- C-Nucleoside
Synthesis of 3- β -D-ribofuranosyl-1*H*-pyrazole-4-carboxamide 283
- Octasaccharide
Convergent synthesis of an octasaccharide acceptor corresponding to the reducing terminus of mycobacterial 3-*O*-methylmannose polysaccharide (MMP) 347
- Oligosaccharides
Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95
- Oligosaccharide synthesis
Chemical and chemo-enzymatic synthesis of the α -Neu5Ac-(2 \rightarrow 6)- β -D-GalpNAc-(1 \rightarrow 4)- β -D-GlcpNAc-(1 \rightarrow 2)- α -D-Manp element that is part of N-linked carbohydrate chains of human lutropin 127
- Panax ginseng*
Rhamnogalacturonan II from the leaves of *Panax ginseng* C.A. Meyer as a macrophage Fc receptor expression-enhancing polysaccharide 239
- Pectin
Formation of ferulic acid dehydromers through oxidative cross-linking of sugar beet pectin 179
- Pentono-1,4-lactones
Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139
- Poincaré Surfaces of Sections
Study of the phase space structure for a two-degrees of freedom model of a symmetric glycosidic linkage 59
- Polyelectrolyte
An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Polygalacturonic acid
Molecular dynamics study of polygalacturonic acid chains in aqueous solution 85
- Polysaccharide
An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Polysaccharide, structure
Structure of a new 6-deoxy- α -D-talan from *Burkholderia* (*Pseudomonas*) *plantarii* strain DSM 6535, which is different from the O-chain of the lipopolysaccharide 143

- Polysialo gangliosides
A synthetic approach to the c-series gangliosides containing sialyl- $\alpha(2 \rightarrow 8)$ sialyl- $\alpha(2 \rightarrow 8)$ sialic acid: Synthesis of ganglioside GT4, $\alpha(2 \rightarrow 6)$ GT4 and GT3 207
- Protection
Synthesis and chemistry of 4,6-*O*-di-(*tert*-butyl)silanediy-D-glucal 365
- Protective group
The benzyloxycarbonyl group: An alternative protective group in the mannose series 175
- Protein fluorescence
The measurement of affinity between ligand and antibody using ligand-induced antibody fluorescence change 169
- Proton exchange
 ^1H NMR relaxation study of a chitosan-cyclodextrin network 77
- Pseudomonas fluorescens*
The structure of the exopolysaccharide of *Pseudomonas fluorescens* strain H13 323
- Pseudo-sugar
Preparation and biological activity of manno- and galacto-validamines, new 5a-carba-glycosylamines as α -glycosidase inhibitors 259
- Pulsed low-resolution ^1H NMR spectroscopy
 ^1H NMR relaxation study of a chitosan-cyclodextrin network 77
- Pyrazole-4-carboxamide
Synthesis of 3- β -D-ribofuranosyl-1*H*-pyrazole-4-carboxamide 283
- Reductive alkylation
Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure 109
- Regioselective halogenation
Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139
- Relaxation
Solution conformation and dynamics of a tetrasaccharide related to the Lewis^X antigen deduced by ^1H NMR NOESY, ROESY, and T-ROESY measurements 3
- Rhamnogalacturonan II
Rhamnogalacturonan II from the leaves of *Panax ginseng* C.A. Meyer as a macrophage Fc receptor expression-enhancing polysaccharide 239
- Ribose
Synthesis and glycosidic coupling reaction of substituted 2,6-dioxabicyclo[3.1.0]hexanes: 1,2-anhydro-3,5-di-*O*-benzyl- α -D-ribofuranose 355
- Ricin
Lectin-deficient ricin toxin intoxicates cells bearing the D-mannose receptor 251
- Ring contraction
Chemistry of glucal halohydrins (II): An unusual protecting group effect in the competitive formation of formyl furanosides and methyl glycosides 301
- T-ROESY
Solution conformation and dynamics of a tetrasaccharide related to the Lewis^X antigen deduced by ^1H NMR NOESY, ROESY, and T-ROESY measurements 3
- Secondary structure
An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Sialylation
Porcine liver (2 \rightarrow 3)- α -sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences 161
- Sialyltransferase
Porcine liver (2 \rightarrow 3)- α -sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences 161
- Simulation of phase transitions
Glass transition in aqueous solutions of glucose. Molecular dynamics simulation 51
- Sodium pectate
An NMR study of the dynamic single-stranded conformation of sodium pectate 19
- Soil-root interface
Molecular dynamics study of polygalacturonic acid chains in aqueous solution 85
- S_N2 substitution
Synthesis of methyl 4-thio- β -cellobioside. A reinvestigation 271
- Starch
Branch-structure difference in starches of A- and B-type X-ray patterns revealed by their Naegeli dextrans 219
- Structure
The structure of the exopolysaccharide of *Pseudomonas fluorescens* strain H13 323
- Sugar beet
Formation of ferulic acid dehydromers through oxidative cross-linking of sugar beet pectin 179
- Sugarbeet
Process for the isolation of preparative quantities of [2-*O*-(*trans*-feruloyl)- α -L-arabinofuranosyl]-(1 \rightarrow 5)-L-arabinofuranose from sugarbeet 351
- Sulfide spacer-arm
Thiol addition to protected allyl glycosides: an improved method for the preparation of spacer-arm glycosides 369
- Sulphonate displacement
Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure 109
- Synthesis
Synthesis of 3- β -D-ribofuranosyl-1*H*-pyrazole-4-carboxamide 283
Convergent synthesis of an octasaccharide acceptor corresponding to the reducing terminus of mycobacterial 3-*O*-methylmannose polysaccharide (MMP) 347
- Synthetic oligosaccharides
Synthesis of methyl α -glycosides of some higher oligosaccharide fragments of the O-antigen of *Vibrio cholerae* O1, serotype Inaba and Ogawa 329
- Tetrasaccharide
Solution conformation and dynamics of a tetrasaccharide related to the Lewis^X antigen deduced by ^1H NMR NOESY, ROESY, and T-ROESY measurements 3
- 1,2-Thiocarbonates
Synthesis of furanose glycals from furanose 1,2-diols and their cyclic thiocarbonate esters 375
- Thioglycosides
Synthesis of methyl 4-thio- β -cellobioside. A reinvestigation 271
- Thionyl bromide
Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139
- Thionyl chloride
Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives 139
- Trans*-sialidase
Porcine liver (2 \rightarrow 3)- α -sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences 161
- β , β -Trehalose
Study of the phase space structure for a two-degrees of freedom model of a symmetric glycosidic linkage 59
- Trichoderma reesei* enzymes
Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95

Trimeric sialic acid

A synthetic approach to the c-series gangliosides containing sialyl- $\alpha(2 \rightarrow 8)$ sialyl- $\alpha(2 \rightarrow 8)$ sialic acid: Synthesis of ganglioside GT4, $\alpha(2 \rightarrow 6)$ GT4 and GT3 207

Tunicate

Chondroitin ABC lyase digestion of an ascidian dermatan sulfate. Occurrence of unusual 6-*O*-sulfo-2-acetamido-2-deoxy-3-*O*-(2-*O*-sulfo- α -L-idopyranosyluronic acid)- β -D-galactose units 315

Unit cell parameters

X-ray study of bejjeran sodium salts, a new galacturonic acid-containing exo-polysaccharide 41

Vaccine

Structural characterization of organized systems of polysaccharides and phospholipids by light scattering spectroscopy and electron microscopy 31

Vibrio cholerae O1

Synthesis of methyl α -glycosides of some higher oligosaccharide fragments of the O-antigen of *Vibrio cholerae* O1, serotype Inaba and Ogawa 329

X-ray pattern

Branch-structure difference in starches of A- and B-type X-ray patterns revealed by their Naegeli dextrans 219

Xylan

Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95

D-Xylose

Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry 95