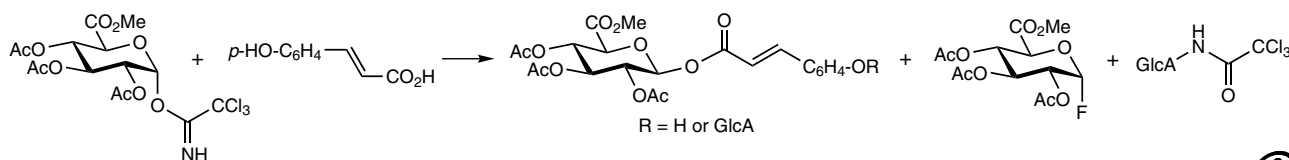


Contents

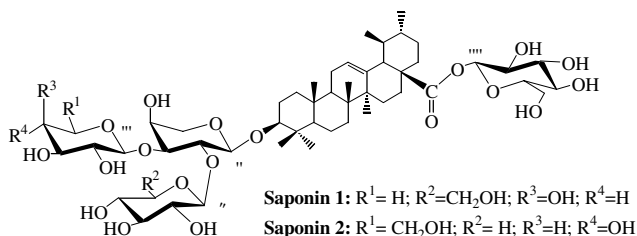
FULL PAPERS

- Towards the synthesis of aryl glucuronides as potential heparanase probes. An interesting outcome in the glycosidation of glucuronic acid with 4-hydroxycinnamic acid** pp 2077–2085

Andrew G. Pearson, Milton J. Kiefel, Vito Ferro and Mark von Itzstein*

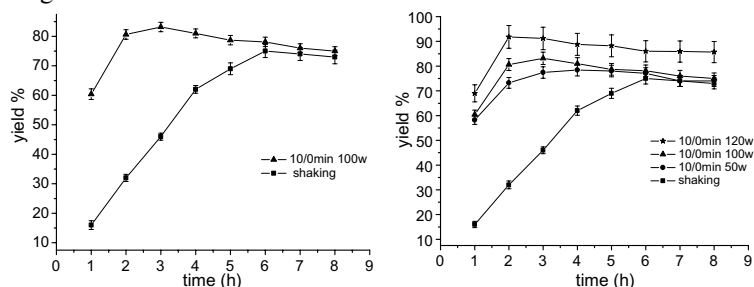


- Synthesis of two bidesmosidic ursolic acid saponins bearing a 2,3-branched trisaccharide residue** pp 2086–2096
- Peng Wang, Chunxia Li, Jing Zang, Ni Song, Xiuli Zhang and Yingxia Li*



Two bidesmosidic ursolic acid saponins bearing a 2,3-branched trisaccharide residue were concisely synthesized.

- Ultrasound-accelerated enzymatic synthesis of sugar esters in nonaqueous solvents** pp 2097–2103
- Yong-mei Xiao, Qi Wu, Ying Cai and Xian-fu Lin*

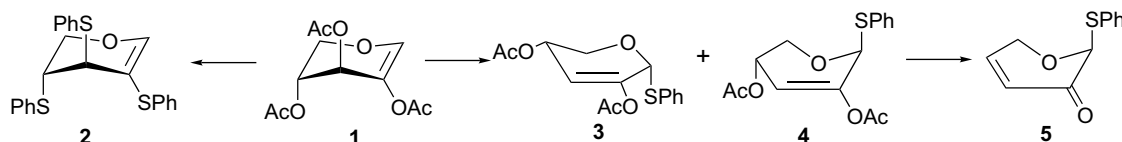


The acceleration effect of ultrasound on the enzymatic acylation of glucose is influenced by solvents, enzymes, the chain length of acyl donors, the power, and operational procedure of ultrasound.

Sugar-derived 2-*S*-substituted-2*H*-pyran-3(6*H*)-ones: synthesis and reactivity

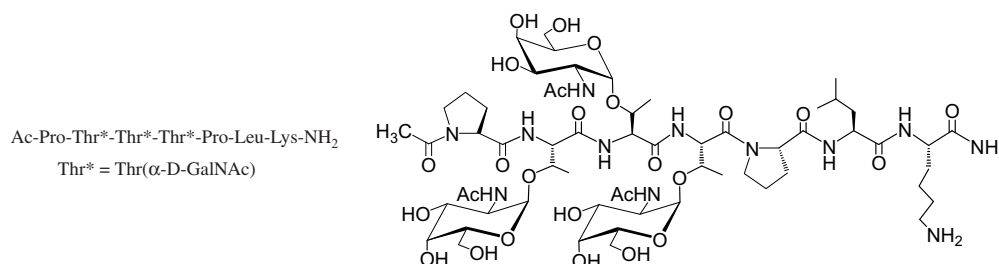
pp 2104–2110

Christian A. Iriarte Capaccio and Oscar Varela*

**Parallel solid-phase synthesis of mucin-like glycopeptides**

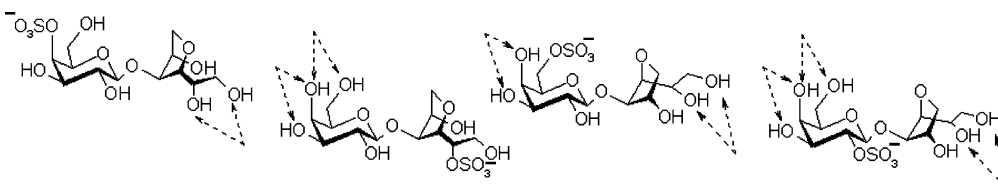
pp 2111–2122

Mian Liu, George Barany* and David Live*

**Positional isomers of sulfated oligosaccharides obtained from agarans and carrageenans: preparation and capillary electrophoresis separation**

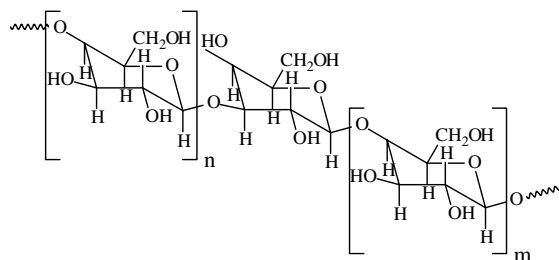
pp 2123–2134

Alan G. Gonçalves, Diogo R. B. Ducatti, Reinaldo G. Paranha, M. Eugênia, R. Duarte and Miguel D. Nosedá*

**Type I arabinogalactan contains β-D-Galp-(1→3)-β-D-Galp structural elements**

pp 2135–2143

Sandra W. A. Hinz, René Verhoef, Henk A. Schols, Jean-Paul Vincken and Alphons G. J. Voragen*



arabinogalactan containing β-(1→3)-linkage

Pectin–chitosan multilayer formation

pp 2144–2149

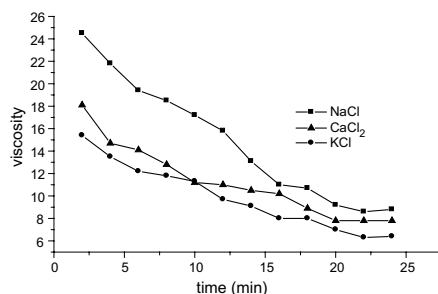
Mariya Marudova, Simone Lang, Geoffrey J. Brownsey and Stephen G. Ring*

The deposition of alternating layers of pectin and chitosan at a solid surface was studied using surface plasmon resonance. The binding of biopolymer to the surface was irreversible over the time scales examined. The thickness of an individual layer showed dependence on the biopolymer concentration and this dependence was particularly marked for pectin.

Salt-assisted acid hydrolysis of chitosan to oligomers under microwave irradiation

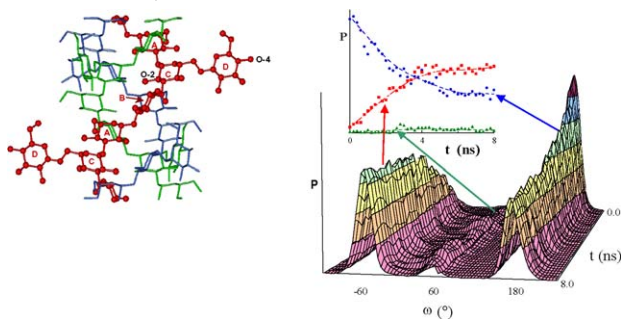
pp 2150–2153

Rong Xing, Song Liu, Huahua Yu, Zhanyong Guo, Pibo Wang, Cuiping Li, Zhien Li and Pengcheng Li*

**Molecular dynamics investigations of the polysaccharide scleroglucan: first study on the triple helix structure**

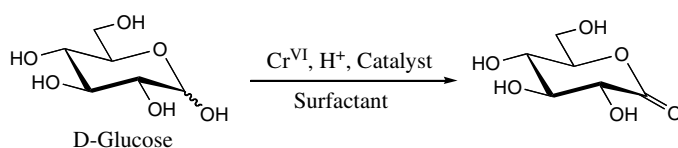
pp 2154–2162

Antonio Palleschi,* Gianfranco Bocchinfuso, Tommasina Coviello and Franco Alhaique

**Oxidation of D-glucose in the presence of 2,2'-bipyridine by Cr^{VI} in aqueous micellar media: a kinetic study**

pp 2163–2170

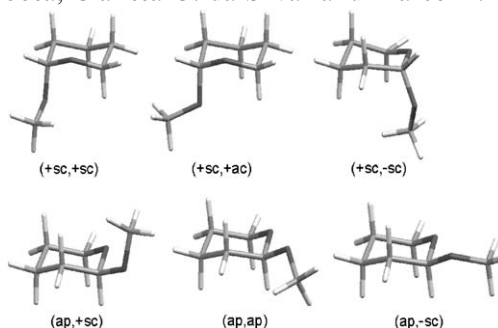
Ruhidas Bayen, Monirul Islam, Bidyut Saha and Asim K. Das*



**On the generalized valence bond description of the anomeric and exo-anomeric effects:
an ab initio conformational study of 2-methoxytetrahydropyran**

pp 2171–2184

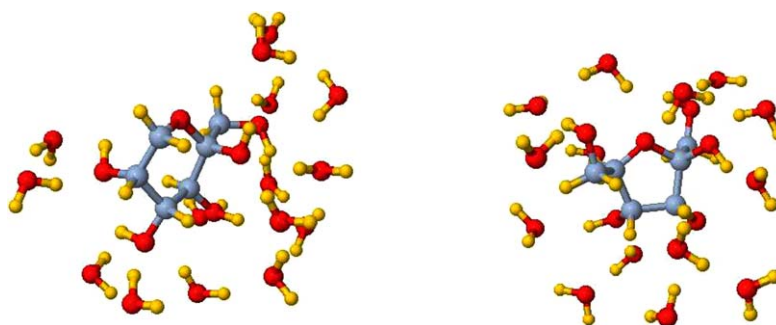
Rodrigo S. Bitzer, André G. H. Barbosa, Clarissa O. da Silva* and Marco A. C. Nascimento



QM/MM study of D-fructose in aqueous solution

pp 2185–2194

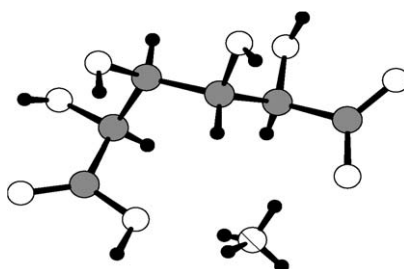
Marília T. C. Martins Costa



Crystal structure and aqueous solubility of ammonium D-glucarate

pp 2195–2200

Ranko P. Bontchev* and Robert C. Moore

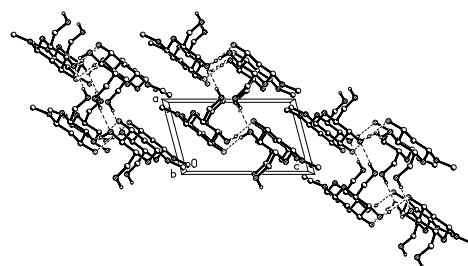


Crystal structure of methyl 3-amino-2,3-dideoxy-β-D-arabino-hexopyranoside. Stabilization of the crystal lattice by a double network of N–H···O, O–H···N and O–H···O interactions

pp 2201–2205

Aleksandra Dąbrowska, Dagmara Jacewicz, Artur Sikorski and Lech Chmurzyński*

The title compound belongs to the monoclinic system, space group of $P2_1$ with cell dimensions $a = 6.050(1) \text{ \AA}$, $b = 7.284(1) \text{ \AA}$, $c = 10.289(2) \text{ \AA}$, $\beta = 104.69(3)^\circ$, $D_c = 1.342 \text{ Mg cm}^{-3}$ and $V = 438.60(13) \text{ \AA}^3$ for $Z = 2$. Molecule studied has a typical 4C_1 chair conformation. The hydrogen bonding linkages between sugar molecules form the rings through the crystal.



NOTES

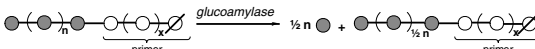
Starch biosynthesis: further evidence against the primer nonreducing-end mechanism and evidence for the reducing-end two-site insertion mechanism

pp 2206–2211

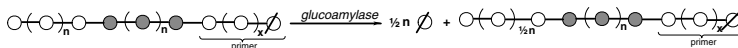
Rupendra Mukerjea and John F. Robyt*

Two reactions were conducted with maize, wheat, and rice starch granules in which (1) the granules were reacted with ADP-[¹⁴C]Glc and (2) half of (1) was reacted with nonlabeled ADP-Glc. The predicted products for starch chain elongation for two mechanisms and their reaction with glucoamylase follows:

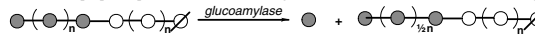
Reaction-I proposed product from nonreducing-end primer mechanism reacting with glucoamylase



Reaction-II proposed product from nonreducing-end primer mechanism reacting with glucoamylase

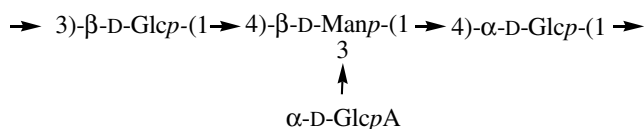


Reaction-III proposed product from the reducing-end two-site insertion mechanism reacting with glucoamylase

**¹H and ¹³C NMR characterization and secondary structure of the K2 polysaccharide of *Klebsiella pneumoniae* strain 52145**

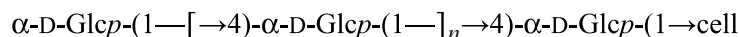
pp 2212–2217

Maria Michela Corsaro,* Cristina De Castro, Teresa Naldi, Michelangelo Parrilli, Juan M. Tomás and Miguel Regué


**Cell-surface α -glucan in *Campylobacter jejuni* 81-176**

pp 2218–2221

Erzsébet Papp-Szabó, Margaret I. Kanipes, Patricia Guerry and Mario A. Monteiro*



*Corresponding author

* Supplementary data available via ScienceDirect

COVER

Model of blood group A trisaccharide in the binding site of the *Dolichos biflorus* lectin as established by a combination of theoretical and experimental approaches. Molecular modeling of the oligosaccharide demonstrated that two different conformations could be adopted by the trisaccharide in the binding site. NMR experiments using transferred nuclear Overhauser effects (TRNOE) displayed intermolecular contacts (blue arrows) corresponding to only one of the two theoretical conformations. This work is a collaboration between Anne Imberty (CERMAV, Grenoble) and Thomas Peters (University of Lübeck) and was presented during the XXIInd International Carbohydrate Symposium (Glasgow, 2004) on the occasion of the Whistler award.

© 2005 A. Imberty and T. Peters. Published by Elsevier Ltd.



Full text of this journal is available, on-line from **ScienceDirect**. Visit www.sciencedirect.com for more information.



This journal is part of **ContentsDirect**, the *free* alerting service which sends tables of contents by e-mail for Elsevier books and journals. You can register for **ContentsDirect** online at: <http://contentsdirect.elsevier.com>

Indexed/Abstracted in: Chem. Abstr.: Curr. Contents: Phys., Chem. & Earth Sci. Life Sci. Current Awareness in Bio. Sci (CABS). Full texts are incorporated in CJELSEVIER, a file in the Chemical Journals Online database which is available on STN® International.



ISSN 0008-6215