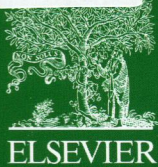


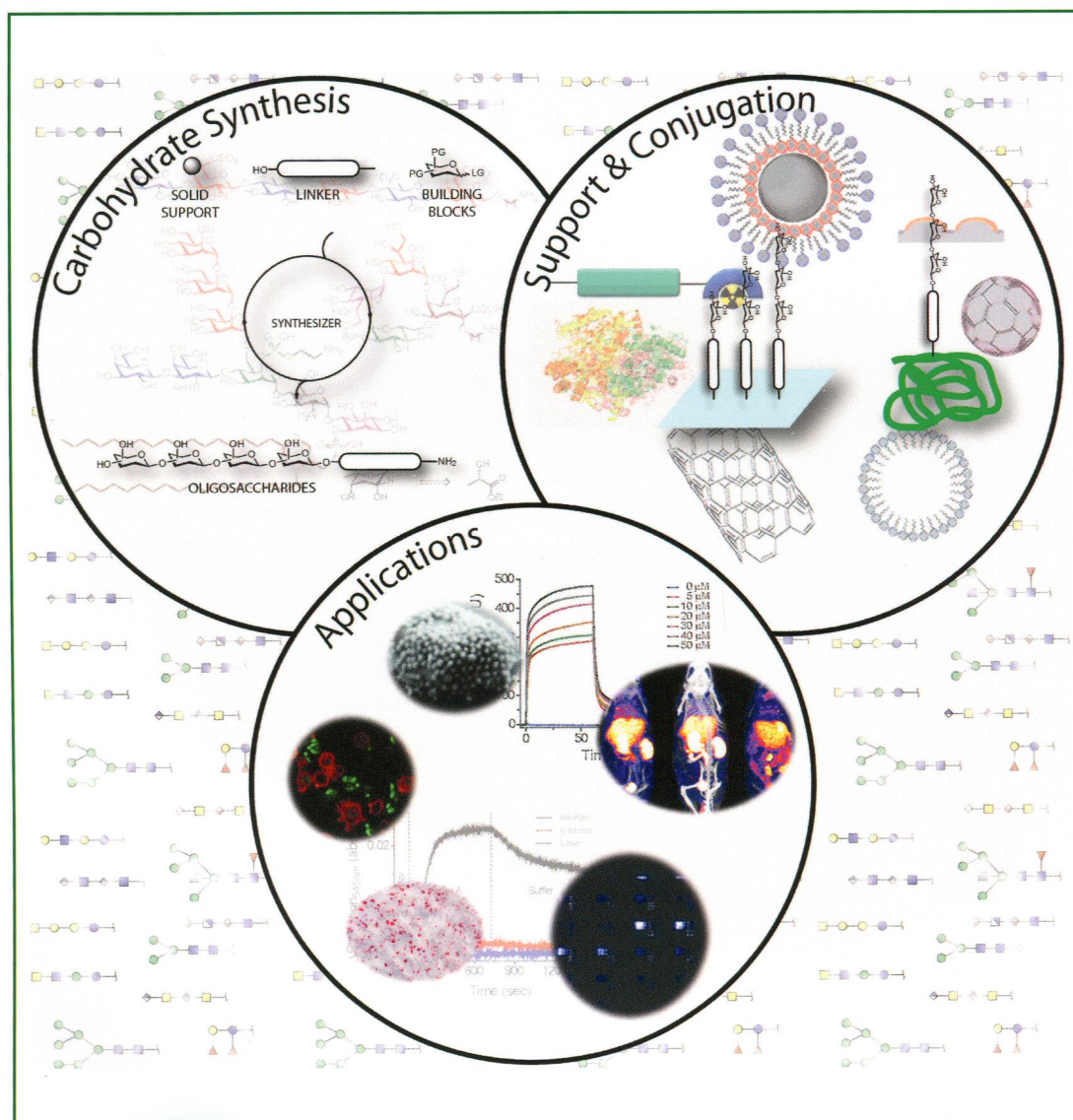
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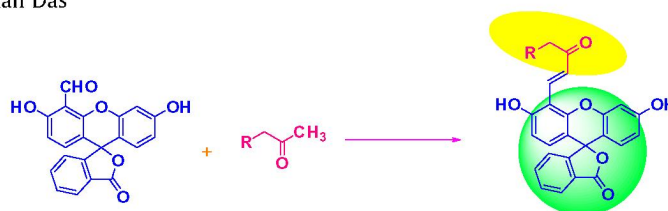
FULL PAPERS

Synthesis

 Synthesis and antioxidant activity of a novel class of fluorescein-based β -C-glycosides

pp 38–42

Mani Rajasekar, Thangamuthu Mohan Das*



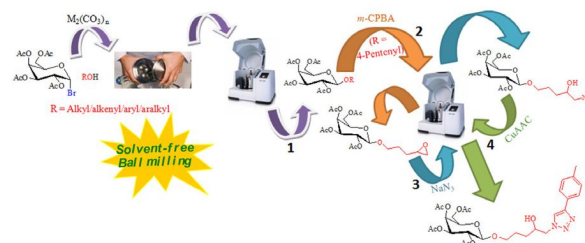
A series of fluorescein-based β -C-glycosyl ketones were synthesized through aldol condensation of β -C-glycosyl ketones with fluorescein monoaldehyde under ambient reaction conditions in good yields. Formation of the expected product has been confirmed through different spectral techniques. Fluorescein-based β -C-glycosides show moderate anti-oxidant activities with maximum inhibitory activity of 60%.



Solvent-free mechanochemical glycosylation in ball mill

pp 55–59

Mohit Tyagi, Darpan Khurana, K.P. Ravindranathan Kartha*



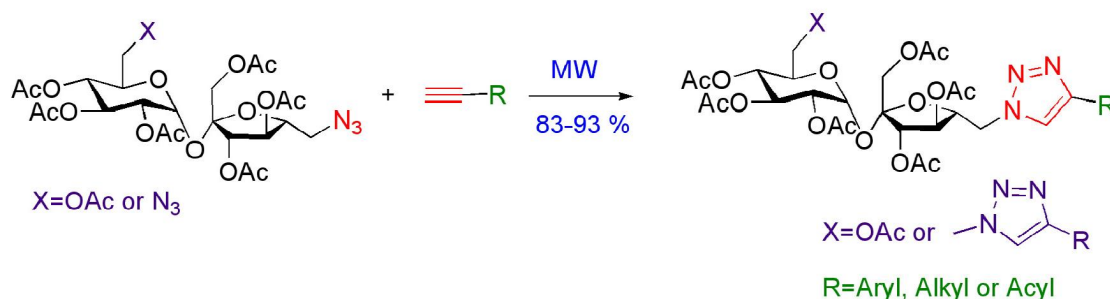
Solvent-free mechanochemical glycosylation in the presence of metal carbonates as promoters has been optimized for application to reactions of poorly nucleophilic alcohol acceptors with glycosyl halides and is reported for the first time and on preparative scale. CdCO_3 and ZnCO_3 have been found to be the best promoters. A pentenyl glycoside thus prepared was converted into the corresponding β -hydroxy triazole derivative in three successive additional steps in the same pot.



Efficient microwave assisted synthesis of novel 1,2,3-triazole–sucrose derivatives by cycloaddition reaction of sucrose azides and terminal alkynes

pp 60–67

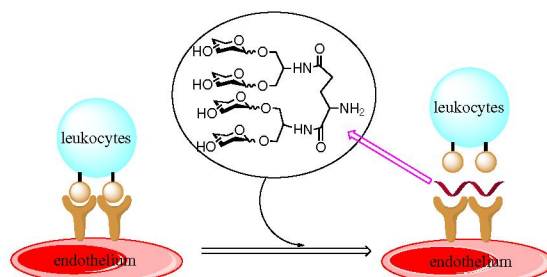
Taterao M. Potewar, Krasimira T. Petrova, M. Teresa Barros*



Synthesis of a series of multivalent homo-, and heteroglycosides and their anti-adhesion activities

pp 78–94

Qing Li, Ting-Ting Yan, Shan Niu, Yue-Tao Zhao, Xiang-Bao Meng, Zhi-Hui Zhao*, Zhong-Jun Li*



20 Multivalent homo-, and heteroglycosides have been synthesized and their inhibition of leukocyte-endothelial cell adhesion has been assessed.

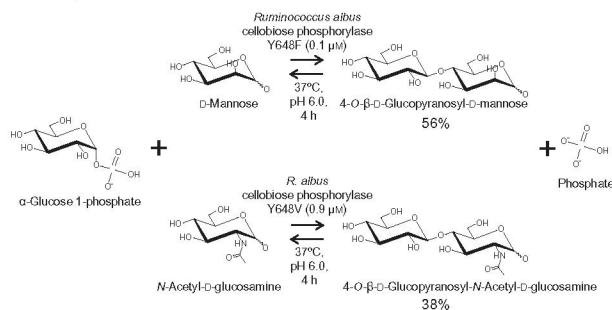


Biochemistry and Enzymes

Modulation of acceptor specificity of *Ruminococcus albus* cellobiose phosphorylase through site-directed mutagenesis

pp 21–25

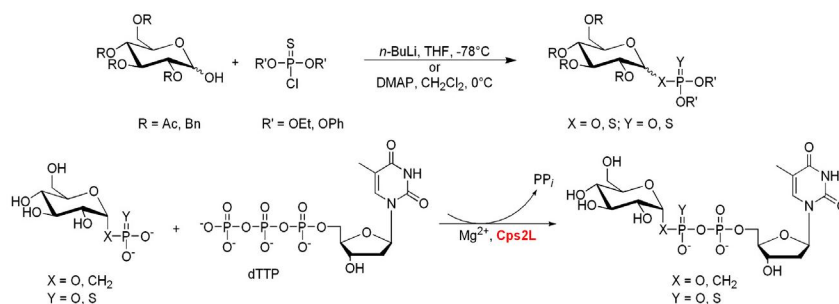
Ken Hamura, Wataru Saburi, Hirokazu Matsui, Haruhide Mori*



Thiophosphate and thiophosphonate analogues of glucose-1-phosphate: synthesis and enzymatic activity with a thymidyltransferase

pp 43–50

Matthew W. Loranger, Stephen A. Beaton, Katie L. Lines, David L. Jakeman*



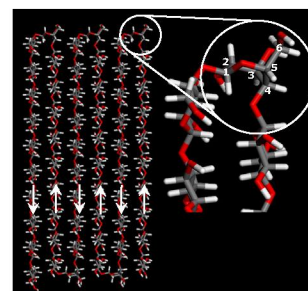
Characterization, Naturalproducts

Folded-chain structure of cellulose II suggested by molecular dynamics simulation

pp 30–37

Chihiro Yamane*, Hitomi Miyamoto, Daichi Hayakawa, Kazuyoshi Ueda

The folded chain structure was successfully modeled when one glucose residue with a $B_{1,4}$ conformer was attached to the ends of up and down cellulose molecules without any changes in their molecular distance. We also confirmed that other conformers such as 1A_B , 1S_3 , 1S_5 , and 3S_1 , 5S_1 could also form folded chain structures. Here, B and S were known to be boat and skew boat ring conformers. These ring conformers must be rearranged during molecular dynamics simulation into the most suitable conformation; therefore, $B_{1,4}$ and 1A_B were used as the starting conformers and finally rearranged to 5S_1 and 1S_5 , respectively.

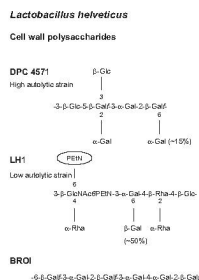


Polysaccharides

Structural studies of the cell wall polysaccharides from three strains of *Lactobacillus helveticus* with different autolytic properties: DPC4571, BRO1, and LH1

pp 7–12

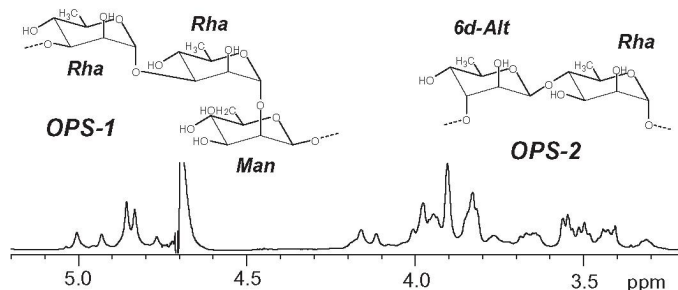
Evgeny Vinogradov, Florence Valence, Emmanuel Maes, Iva Jebava, Victoria Chuat, Sylvie Lortal, Thierry Grard, Yann Guerardel, Irina Sadovskaya*



Structural identification of the O-antigen fraction from the lipopolysaccharide of the *Burkholderia ambifaria* strain 19182

pp 95–99

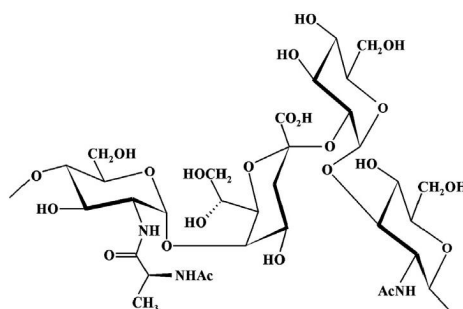
Cristina De Castro*, Natalia Dinischiotu, Bart Feys, Rosa Lanzetta, Michelangelo Parrilli, Antonio Molinaro



Structure of a Kdo-containing O polysaccharide representing *Proteus* O79, a newly described serogroup for some clinical *Proteus* genomospecies isolates from Poland

pp 100–105

Nikolay P. Arbatsky, Dominika Drzewiecka, Agata Palusiak, Alexander S. Shashkov, Agnieszka Zabłotni, Małgorzata Siwińska, Yuriy A. Knirel*

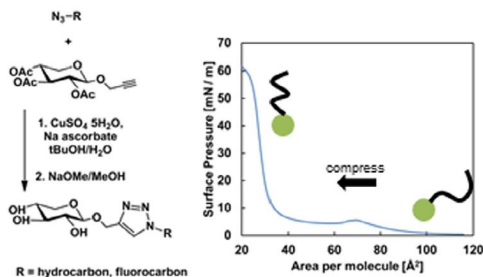


Physical, X-Ray, Chromatography

Synthesis, surface properties, and biocompatibility of 1,2,3-triazole-containing alkyl β-D-xylopyranoside surfactants

pp 68–77

E. Davis Oldham, Srivenu Seelam, Carolina Lema, Renato J. Aguilera, Jennifer Fiegel, Stephen E. Rankin, Barbara L. Knutson, Hans-Joachim Lehmler*

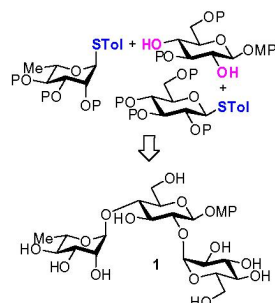


NOTES

Synthesis**Concise synthesis of the trisaccharide repeating unit of the O-polysaccharide from *Aeromonas hydrophila* A19 (O:14)**

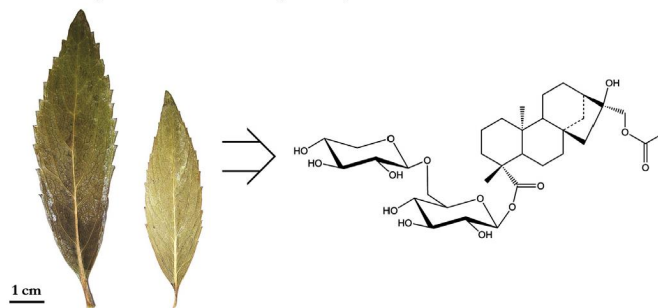
pp 26–29

Kumar Bhaskar Pal, Balaram Mukhopadhyay*

**Characterization, Natural products****Diterpene glycosides from *Stevia phlebophylla* A. Gray**

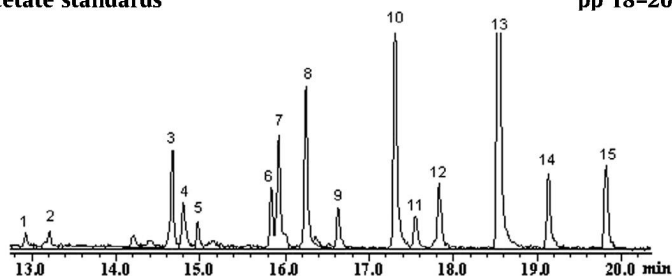
pp 1–6

Stijn Ceunen, De Borggraeve Wim, Frans Compennolle, Anh Hung Mai, Jan M.C. Geuns*

**Polysaccharides****A facile method for the synthesis of partially O-methylated alditol acetate standards for GC–MS analysis of galactofuranose-containing structures**

pp 18–20

Jian-yu He, Yu-na Guo, Ling-ling Zhang, Lin-hong Huang*

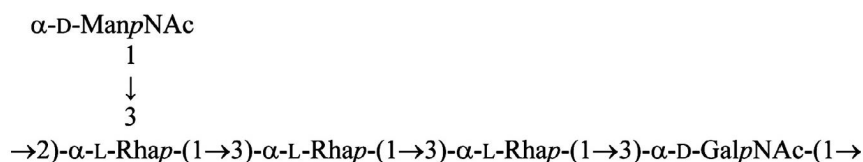


EIMS of partially O-methylated alditol acetate derivatives obtained mainly from methyl galactofuranoside.

**Structure and gene cluster of the O-antigen of *Escherichia coli* O154**

pp 51–54

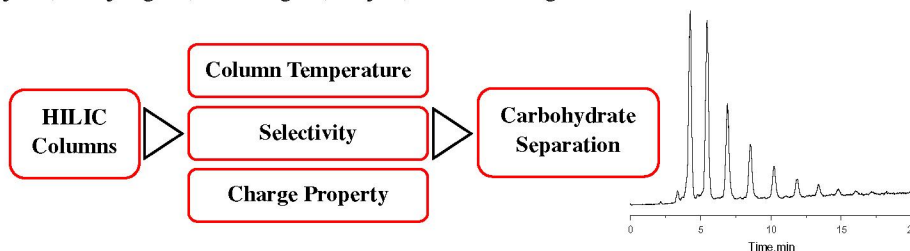
Andrei V. Perepelov*, Quan Wang, Sofya N. Senchenkova, Lu Feng, Alexander S. Shashkov, Lei Wang, Yuriy A. Knirel



Physical, X-Ray, Chromatography**Separation of carbohydrates using hydrophilic interaction liquid chromatography**

pp 13–17

Qing Fu, Tu Liang, Zhenyu Li, Xiaoyong Xu, Yanxiong Ke, Yu Jin*, Xinmiao Liang*



A strategy was developed to rapidly evaluate chromatographic properties of hydrophilic interaction chromatography (HILIC) columns for separation of carbohydrates by using three monosaccharide and seven disaccharides as probes.

*Corresponding author

i+ Supplementary data available via ScienceDirect

COVER

Multi-functionalisation of cyclodextrins (CD) has entered a new era thanks to the regioselective chemistry developed by M. Sollogoub's group. As illustrated on the cover, many applications can now be reached using CDs with various functions on specific positions. An example of functionalisation of CDs is given in the first issue of this journal. Image realised by Mickaël Ménand.

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