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Special Issue

Synthetic Chemistry

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Edmonton, AB, T6G 2G2, Canada

Contents

Foreword

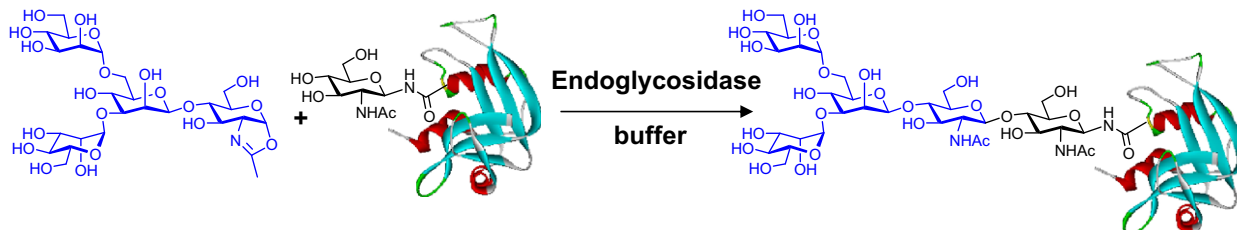
p 1507

PERSPECTIVE

Chemoenzymatic synthesis of glycopeptides and glycoproteins through endoglycosidase-catalyzed transglycosylation

pp 1509–1522

Lai-Xi Wang

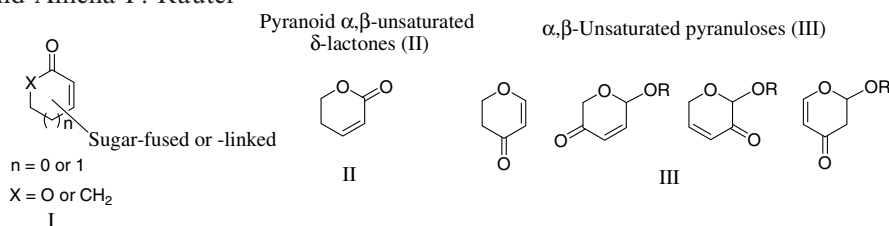


REVIEWS

Sugars containing α,β -unsaturated carbonyl systems: synthesis and their usefulness as scaffolds in carbohydrate chemistry

pp 1523–1539

Nuno M. Xavier and Amélia P. Rauter*

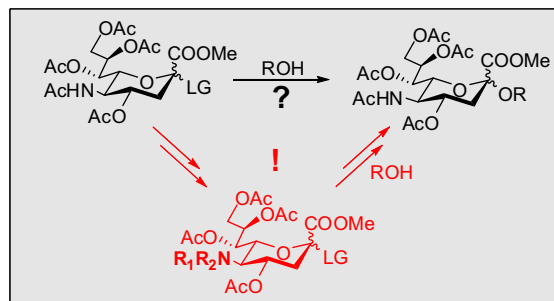


Synthesis and key transformations of sugars containing α,β -unsaturated carbonyl systems (compounds' skeleton types I–III) are revised.

C-5 Modifications in *N*-acetyl-neuraminic acid: scope and limitations

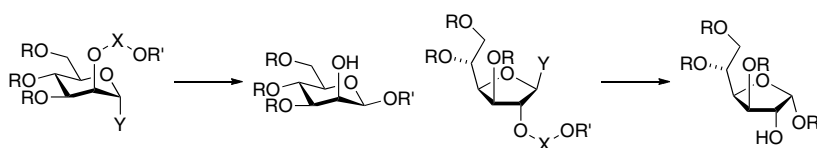
pp 1540–1552

Cristina De Meo* and Uvege Priyadarshani

**MINIREVIEW****Intramolecular aglycon delivery**

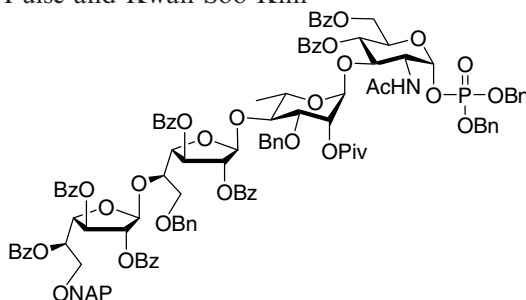
pp 1553–1573

Ian Cumpstey

Tethering and intramolecular aglycon delivery for 1,2-*cis* glycoside synthesis.**FULL PAPERS****Synthesis of a tetrasaccharide phosphate from the linkage region of the arabinogalactan–peptidoglycan complex in the mycobacterial cell wall**

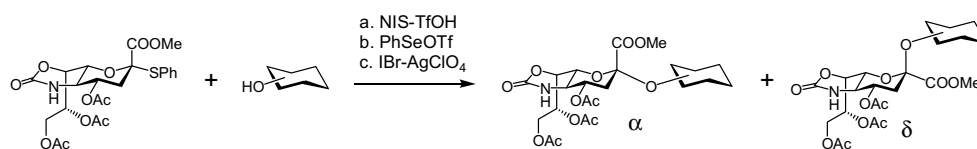
pp 1574–1584

Yong Joo Lee, Dinanath Baburao Fulse and Kwan Soo Kim*

**Sialylation reactions with 5-*N*,7-*O*-carbonyl-protected sialyl donors: unusual stereoselectivity with nitrile solvent assistance**

pp 1585–1593

Hidenori Tanaka, Hiromune Ando,* Hideharu Ishihara and Mamoru Koketsu*

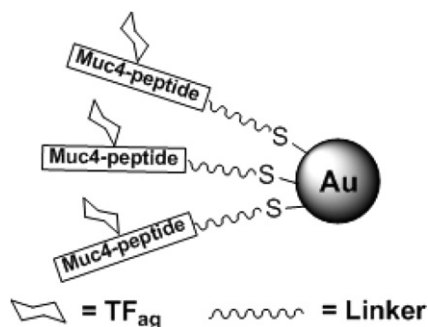


in CH_3CN : $\alpha/\delta = 1/2.4 \sim 1/20$
 in CH_2Cl_2 : $\alpha/\delta = 1/1 \sim 1.8/1$



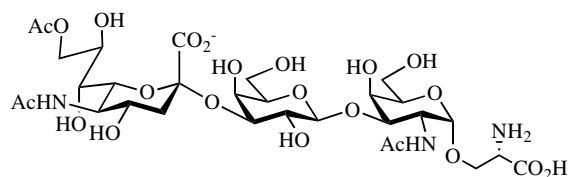
Varied presentation of the Thomsen–Friedenreich disaccharide tumor-associated carbohydrate antigen pp 1594–1604

Andreas Sundgren and Joseph J. Barchi Jr.*



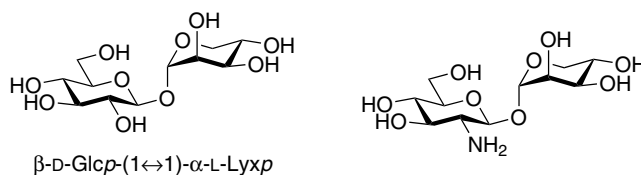
Chemo-enzymatic synthesis of C-9 acetylated sialosides pp 1605–1611

Jana Rauvolfova, Andre Venot and Geert-Jan Boons*



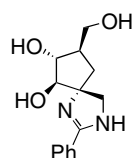
Stereoselective synthesis of 1,1'-linked α -L-lyxopyranosyl β -D-glucopyranoside, the proposed biosynthetic precursor of the FG ring system of avilamycins pp 1612–1623

Magnus S. Schmidt and Valentin Wittmann*

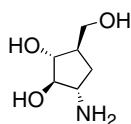


Synthetic studies towards a new scaffold, spirobicycloimidazoline pp 1624–1635

Tatsuto Nakahara, Naoki Okamoto, Katsuhiko Suzuki and Osamu Kanie*



Spirobicyclo-
imidazoline (**1**)

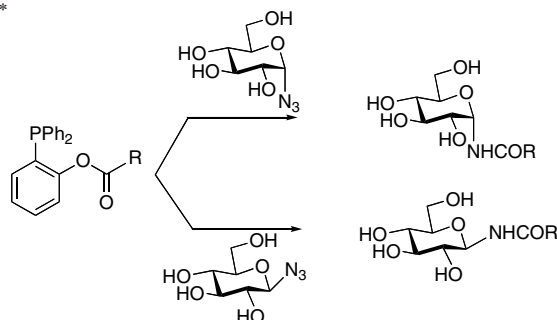


(1*R*,2*R*,3*R*,5*R*)-5-amino-3-hydroxymethyl-
cyclopentane-1,2-diol (**19**)

Stereoselective synthesis of glycosyl amides by traceless Staudinger ligation of unprotected glycosyl azides

pp 1636–1643

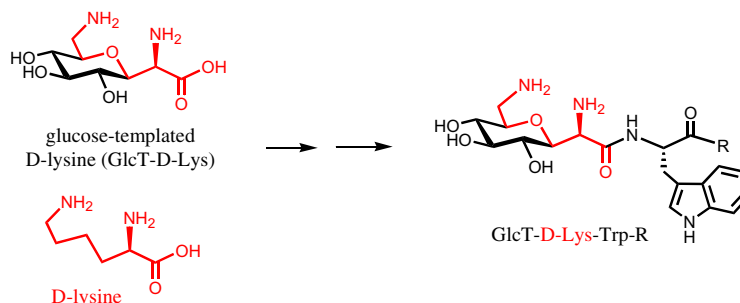
Filippo Nisic and Anna Bernardi*



Synthesis of glucose-templated lysine analogs and incorporation into the antimicrobial dipeptide sequence kW-OBn

pp 1644–1652

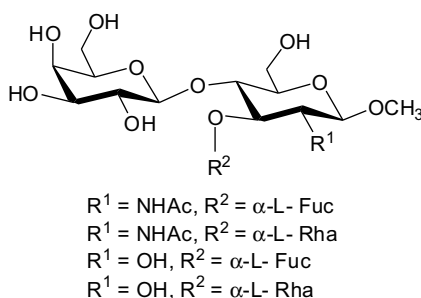
Kaidong Zhang, Dhananjay Mondal, George G. Zhanel and Frank Schweizer*



Synthesis of Lewis X and three Lewis X trisaccharide analogues in which glucose and rhamnose replace N-acetylglucosamine and fucose, respectively

pp 1653–1664

Ari Asnani and France-Isabelle Auzanneau*

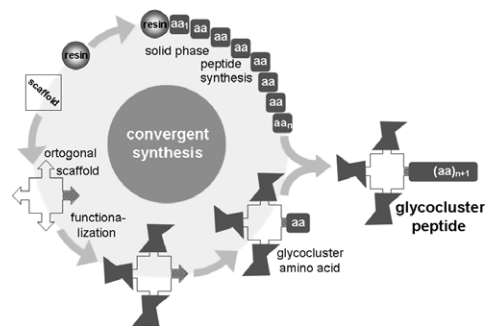


Synthesis of glycocluster peptides

pp 1665–1674

Harun A. Shaikh, Frank D. Sönnichsen and Thisbe K. Lindhorst*

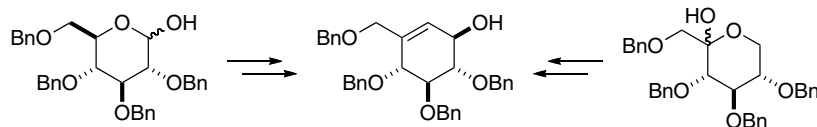
A new type of glycoconjugate mimetics, so-called 'glycocluster peptides' were introduced. The convergent synthesis allows for a broad variation of molecular diversity to facilitate glycobiological studies.



Studies on the synthesis of valienamine and 1-*epi*-valienamine starting from D-glucose or L-sorbose

pp 1675–1692

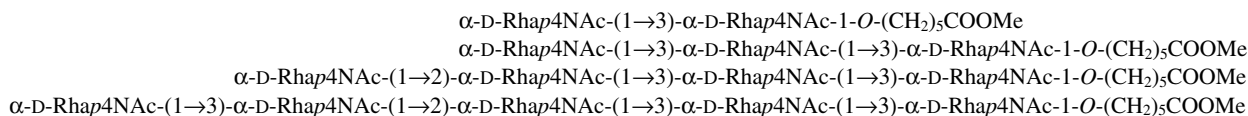
Ian Cumpstey,* Sebastian Gehrke, Sayeh Erfan and Riccardo Cribiu

**Synthesis of spacer-equipped di-, tri-, and the tetrasaccharide fragments of the deacetylated O-PS1 of *Citrobacter gillenii* O9a,9b, and a related pentasaccharide**

pp 1693–1706

Rina Saksena, Anatoli Chernyak and Pavol Kováč*

The sequences:

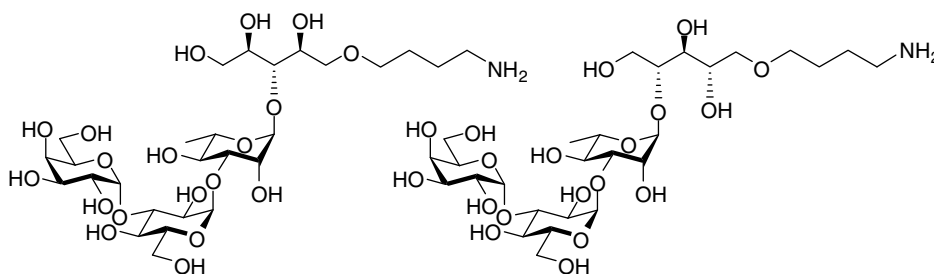


were synthesized in a stepwise manner from 5-methoxycarbonylpentyl 4-azido-4,6-dideoxy-2-*O*-benzyl- α -D-mannopyranoside and orthogonally protected 1-thioglycoside glycosyl donors.

Synthesis of spacer-containing analogs of serogroup 6 pneumococcal oligosaccharides

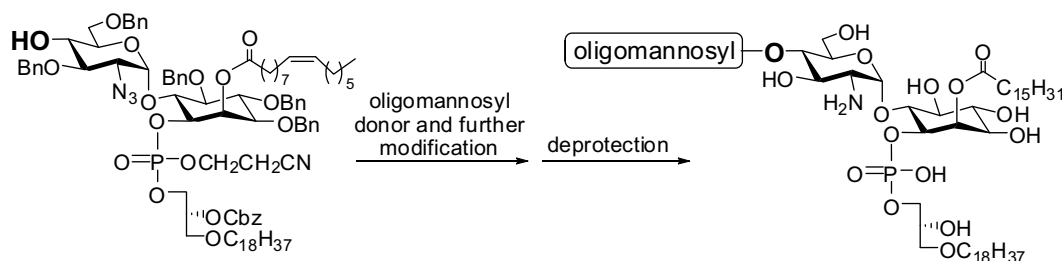
pp 1707–1717

Archana R. Parameswar, Scott J. Hasty and Alexei V. Demchenko*

**Synthesis and biological evaluation of sperm CD52 GPI anchor and related derivatives as binding receptors of pore-forming CAMP factor**

pp 1718–1729

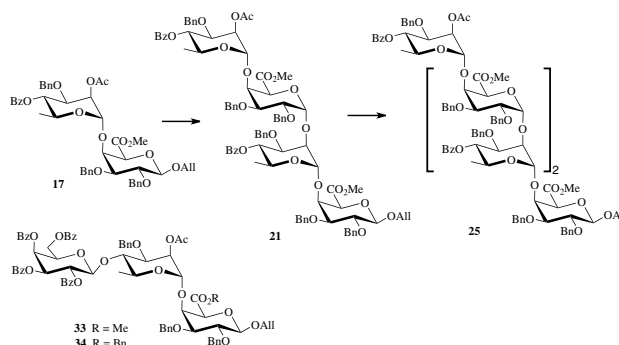
Xiaoming Wu, Zhihong Shen, Xiangqun Zeng, Shenhui Lang, Michael Palmer and Zhongwu Guo*



Synthesis of rhamnogalacturonan I fragments by a modular design principle

pp 1730–1742

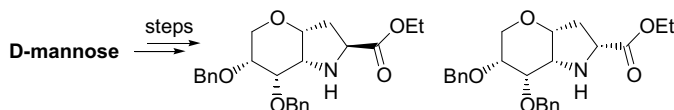
Navid Nemati, Gnuni Karapetyan, Birte Nolting, Hans-Ulrich Endress and Christian Vogel*



Synthesis of octahydropyrano[3,2-*b*]pyrrole-2-carboxylic acid derivatives from D-mannose

pp 1743–1753

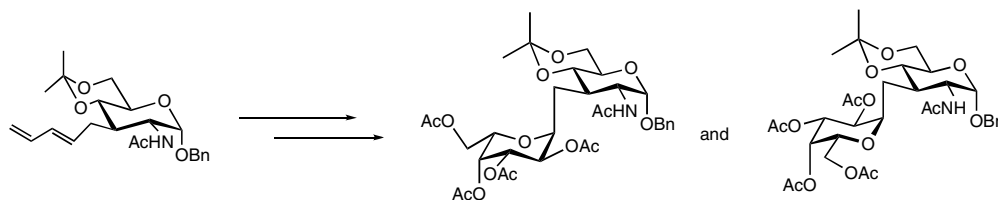
Jean-Rene Ella-Menye, Xiaoping Nie and Guijun Wang*



Synthesis of C-disaccharides via a hetero-Diels–Alder reaction and further stereocontrolled transformations

pp 1754–1765

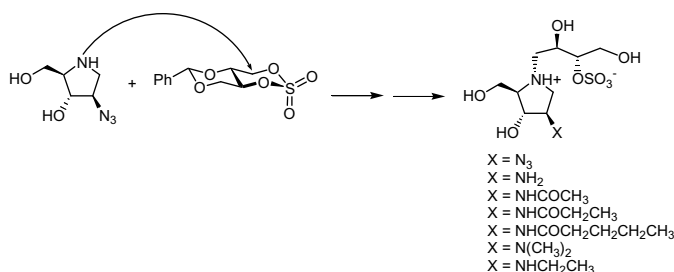
Qian Wan, André Lubineau, Régis Guillot and Marie-Christine Scherrmann*



Synthesis of 2-amido, 2-amino, and 2-azido derivatives of the nitrogen analogue of the naturally occurring glycosidase inhibitor salacinol and their inhibitory activities against O-GlcNAcase and NagZ enzymes

pp 1766–1777

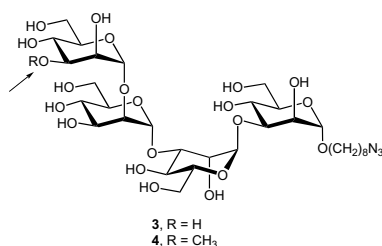
Niloufar Choubdar, Ramakrishna G. Bhat, Keith A. Stubbs, Scott Yuzwa and B. Mario Pinto*



Synthesis of 8-azido-octyl glycoside derivatives of the O-chain repeating unit of *Escherichia coli* O9a lipopolysaccharide and a methylated analog

pp 1778–1789

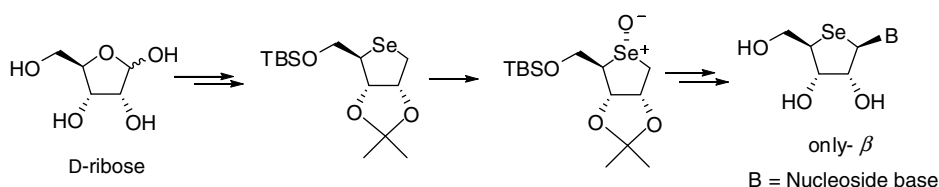
Dianjie Hou, Fredrik Skogman and Todd L. Lowary*



Stereoselective synthesis of 4'-selenonucleosides using the Pummerer glycosylation reaction

pp 1790–1800

Kumarasamy Jayakanthan, Blair D. Johnston and B. Mario Pinto*

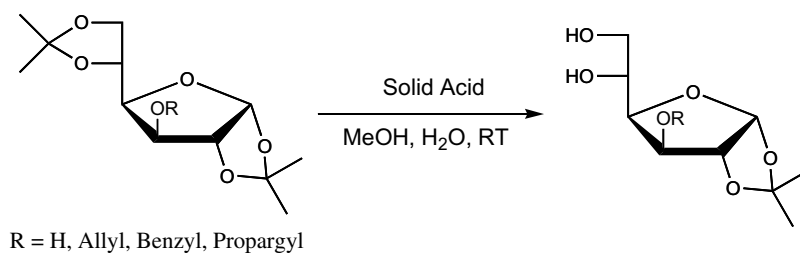


NOTES

Zeolite catalyzed selective deprotection of di- and tri-*O*-isopropylidene sugar acetals

pp 1801–1807

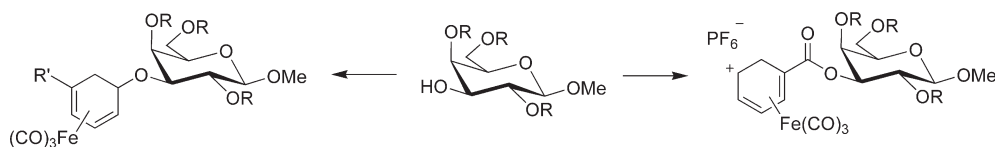
Pallooru Muni Bhaskar, Manoharan Mathiselvam and Duraikkannu Loganathan*



Carbohydrate functionalization using cationic iron carbonyl complexes

pp 1808–1813

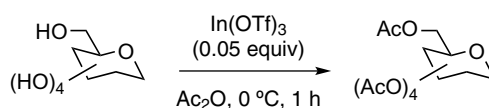
Anders Bergh, Henrik Gradén, Núria Parera Pera, Thomas Olsson, Ulf J. Nilsson* and Nina Kann*



Indium triflate catalyzed peracetylation of carbohydrates

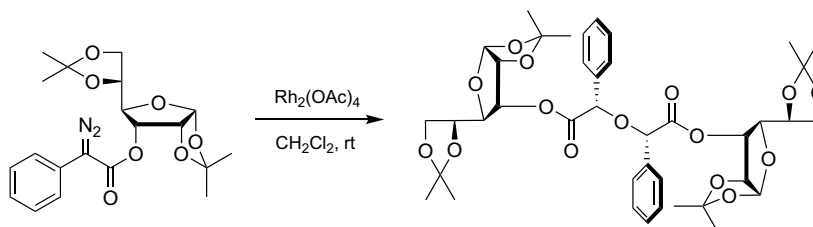
pp 1814–1818

Nicholas P. Bizier, Shannon R. Atkins, Luke C. Helland, Shane F. Colvin, Joseph R. Twitchell and Mary J. Cloninger*

**Rhodium(II)-catalyzed decomposition of 3-*O*-(2-diazo-2-phenylacetyl)-1,2;5,6-di-*O*-isopropylidene- α -D-allofuranose: diastereoselective ether formation**

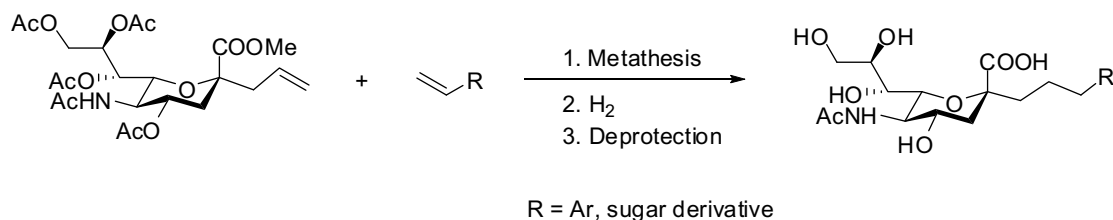
pp 1819–1823

Iulia A. Sacui, Matthias Zeller and Peter Norris*

**Cross metathesis for the synthesis of novel C-sialosides**

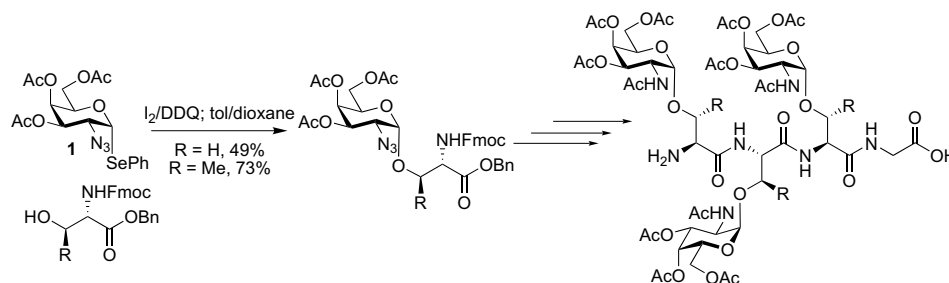
pp 1824–1829

Sebastian Meinke and Joachim Thiem*

**Iodine-mediated glycosylation *en route* to mucin-related glyco-aminoacids and glycopeptides**

pp 1830–1834

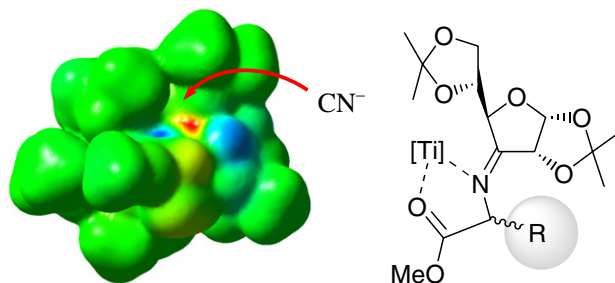
Tiina S. Kärkkäinen, K. P. Ravindranathan Kartha, Derek MacMillan and Robert A. Field*



A theoretical analysis of the Ti(IV)-catalyzed glycoaminocyanation reaction

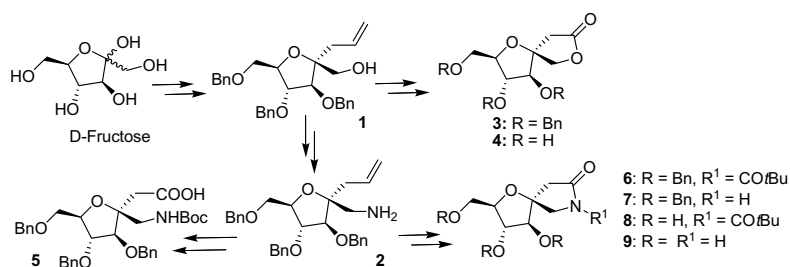
pp 1835–1839

Elena Soriano,* José Marco-Contelles, Hélène Ducatel, Albert Nguyen Van Nhien and Denis Postel

**Fructose-fused γ -butyrolactones and lactams, synthesis and biological evaluation as GABA receptor ligands**

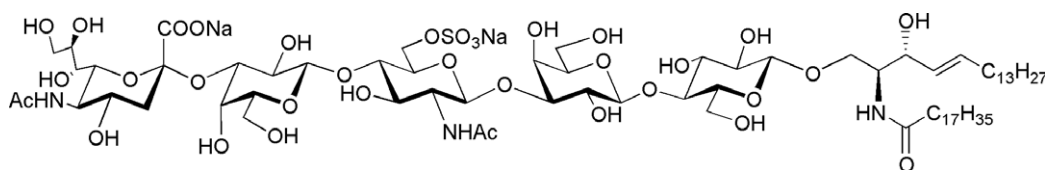
pp 1840–1848

Ana C. Araújo, Francesco Nicotra, Barbara Costa, Gabriella Giagnoni and Laura Cipolla*

**Total synthesis of 6-*O*-sulfo-sialylparagloboside: a widely useful glycoprobe for biochemical research**

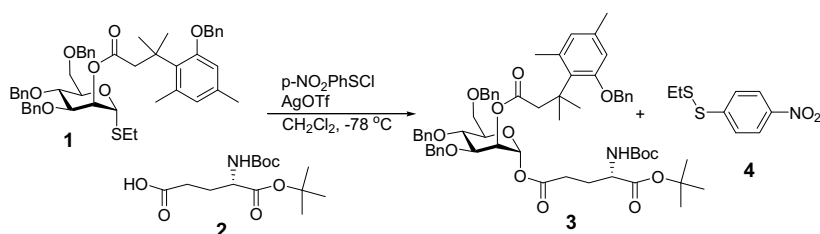
pp 1849–1857

Masanori Yamaguchi,* Hideharu Ishida and Makoto Kiso*

**A stable, commercially available sulfenyl chloride for the activation of thioglycosides in conjunction with silver trifluoromethanesulfonate**

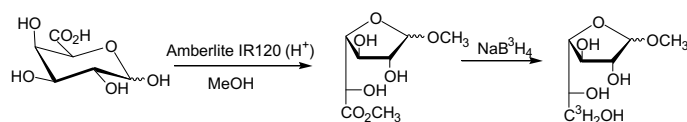
pp 1858–1862

David Crich,* Feng Cai and Fan Yang



Facile synthesis of methyl α - and β -D-[6- 3 H]galactofuranosides from D-galacturonic acid. Substrates for the detection of galactofuranosidases

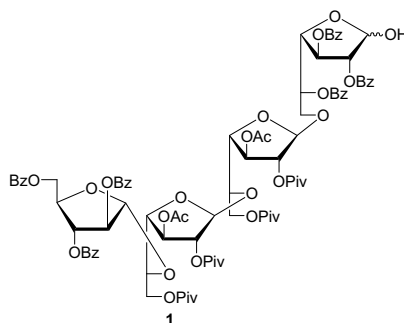
Andrea Bordonì, Carlos Lima, Karina Mariño, Rosa M. de Lederkremer and Carla Marino*



Synthesis of a tetrasaccharide fragment of mycobacterial arabinogalactan

pp 1870–1875

Lucía Gandolfi-Donadío, Carola Gallo-Rodriguez and Rosa M. de Lederkremer*



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

The graphic represents a molecular dynamics simulation of water density around the disaccharide α -D-Araf-(1 $\rightarrow$ 5)- α -D-Araf-OCH₃, highlighting the interglycosidic linkage. The red clouds represent regions where the probability of finding an oxygen atom is high while the gray clouds are for hydrogen atoms. This work is the result of a collaboration in the Alberta Ingenuity Centre for Carbohydrate Science and Department of Chemistry at the University of Alberta between the groups of Pierre-Nicolas Roy and Todd L. Lowary (Castillo, N.; Roy, P. N.; Lowary, T. L. Manuscript in Preparation).

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