

# Glycochemistry Today

## CHIMIA NEWS

- 4 Editorial Board
- 4 Contents 2011
- 4 Columns
- 4 Indexing
- 4 On-Line Availability
- 4 Open Access Publishing
- 4 Advertising
- 5 Instructions to Authors 2011

## EDITORIAL

- 7 *P. Vogel*
- 10 Glycoinformatics: Data Mining-based Approaches  
*H. Mamitsuka*
- 14 Rational Design of Anticoagulant Drugs Using Oligosaccharide Chemistry  
*A. El Hadri, M. Petitou\**
- 18 Inhibition of Galectins with Small Molecules  
*C. T. Öberg, H. Leffler, U. J. Nilsson\**
- 24 Organic Chemistry and Immunochemical Strategies in the Design of Potent Carbohydrate-based Vaccines  
*R. Roy\*, T. C. Shiao*
- 30 Synthetic Vaccines from Tumor-Associated Glycopeptide Antigens  
*U. Westerlind\*, H. Kunz*
- 35 Therapeutic Targets for Inhibitors of Glycosylation  
*D. S. Alonzi, T. D. Butters\**
- 40 Syntheses and Biological Activities of 1,4-Iminoalditol Derivatives as  $\alpha$ -L-Fucosidase Inhibitors  
*E. Moreno-Clavijo, A. T. Carmona\*, A. J. Moreno-Vargas, L. Molina, I. Robina\**
- 45 Lipo-Chitooligosaccharidic Nodulation Factors: Synthesis and Agricultural Perspectives  
*J.-M. Beau*
- 49 Chitin Synthase, a Fungal Glycosyltransferase that Is a Valuable Antifungal Target  
*J.-B. Behr*
- 54 Regioselective One-pot Protection and Protection-glycosylation of Carbohydrates  
*C.-C. Wang\*, M. M. L. Zulueta, S.-C. Hung\**
- 59 Synthesis of the  $\beta$ -Rhamnopyranosides and the 6-Deoxy- $\beta$ -mannoheptopyranosides  
*S. Picard, D. Crich\**
- 65 Glycosidases in Carbohydrate Synthesis: When Organic Chemistry Falls Short  
*P. Bojarová, V. Krěň\**
- 71 Oxetanes from the Ring Contraction of  $\alpha$ -Triflates of  $\gamma$ -Lactones: Oxetane Nucleosides and Oxetane Amino Acids  
*S. F. Jenkinson, G. W. J. Fleet\**
- 76 Sugar-Derived Ionic Liquids  
*A. Marra\*, C. Chiappe, A. Mele*
- 81 Marine Polysaccharides and their Conversion into Functional Materials  
*M. Robitzer, F. Quignard\**
- 85 Total Asymmetric Synthesis of Monosaccharides and Analogues  
*I. Robina\*, A. T. Carmona, A. J. Moreno-Vargas, E. Moreno-Clavijo*
- 91 Monosaccharides and Analogues from Simple Achiral Unsaturated Compounds  
*A. J. Moreno-Vargas\*, A. T. Carmona, E. Moreno-Clavijo, I. Robina*

## COLUMNS

---

- 97 CONFERENCE REPORT  
41th CUSO Summer School in Organic Chemistry  
'Unconventional Methods in Organic Synthesis'  
*T. Jack, J. Simonin, S. Singhanat, C. G. Bochet\**
- 100 Biotech in Medicine – The Topic of the Olten Meeting 2010  
*E. Heinzelmann*
- 104 SWISS SCIENCE CONCENTRATES  
Prepared by  
*N. Bruns, V. Köhler, R. Kramer, P. Mauleón, F. Monnard, T. R. Ward*
- 105 HIGHLIGHTS OF ANALYTICAL CHEMISTRY IN SWITZERLAND  
Non-invasive Medical Diagnostic by Breath Analysis: Acetone Detection  
*M. Righettoni, A. Tricoli, S. E. Pratsinis\**
- 106 POLYMER AND COLLOID HIGHLIGHTS  
Chemo- and Stereoselective ROMP  
*S. Torker, P. Chen\**
- 107 INTERNATIONAL YEAR OF CHEMISTRY 2011  
Die Chemie gewinnt ihre Reputation zurück – Das Internationale Jahr der Chemie 2011  
*B. Urwyler*
- 109 Carotenoids  
*W. Jucker*
- 111 SCNAT  
2011 SCNAT/SCS Chemistry Travel Award

## SWISS CHEMICAL SOCIETY

---

- 112 Jahresbericht 2010
- 121 A warm welcome to our new members!
- 121 Society News: Internationales Jahr der Chemie lanciert
- 121 Sondermarke der Schweizerischen Post zum Internationalen Jahr der Chemie 2011
- 122 Congratulations to Our Most Faithful Members
- 123 Division of Analytical Chemistry
- 124 Division of Medicinal Chemistry: Proteinase 2011

## INFORMATION

---

- 125 News
- 125 Honors
- 125 Conferences/Workshops/Symposia
- 125 Lectures

## EUChEMS

---

- 127 EuChEMS Newsletter

## CHIMIA REPORT/COMPANY NEWS

---

- 131 Markt, Apparate, Chemikalien und Dienstleistungen