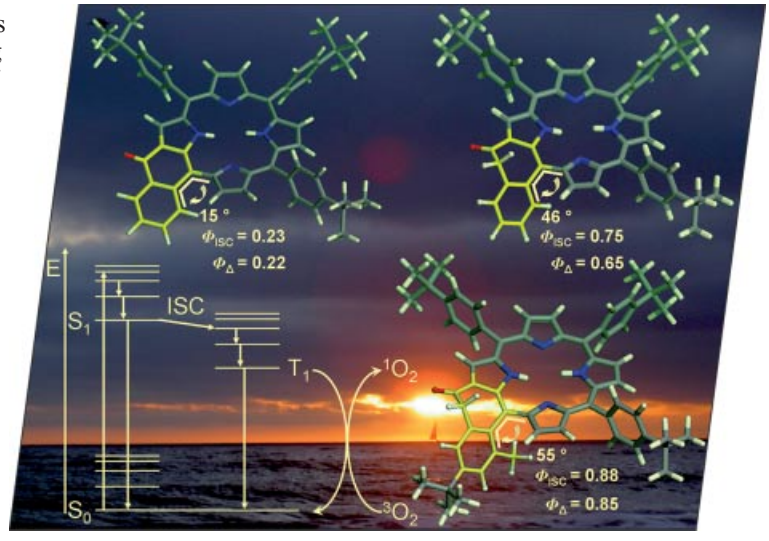
The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry.* Three further EUChemSoc Societies (Austria, Czech Republic and Sweden) are Associates of the two journals.

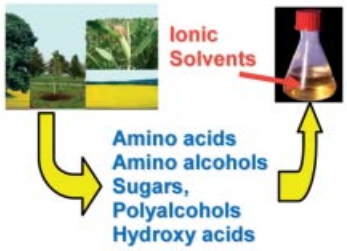
COVER PICTURE

The cover picture shows three tetraphenylporphyrins that possess an exocyclic keto-group-bearing ring connecting the central chromophore with one of the phenyl rings. Depending on the size of the exocyclic ring and on the additional steric strain induced by a methyl group on the substituted phenyl ring, the dihedral angle between the central chromophore and the phenyl ring varies between 15 and 55°. These topological changes have a dramatic influence on, for example, the singlet-oxygen quantum yield. As the generation of $^1O_2$ is induced by red light, the setting sun (taken at San Diego beach in 2003 by Michael Köhl) seemed to be an appropriate background for the porphyrins. Details of the syntheses and characterization are reported in the article by N. Jux, B. Röder et al. on p. 1075 ff.



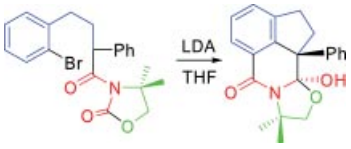
CONTENTS

MICROREVIEW

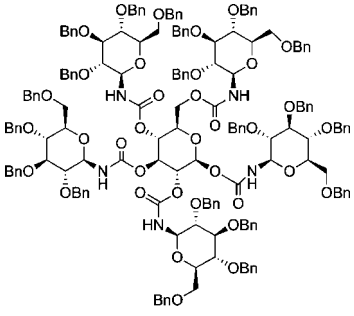


Non-toxic, biodegradable materials arising from biorenewable resources may be used to prepare room-temperature ionic liquids. The development of ionic solvents from natural products is an emerging area of intensive research. This Microreview presents recent advances in this area.

SHORT COMMUNICATIONS



Treatment of a [(bromophenyl)butyryl]-oxazolidinone with LDA in THF launched an intricate cascade rearrangement ending in the assembly of a tetracyclic cyclopenta-oxazolo-isoquinolin-6-one derivative.

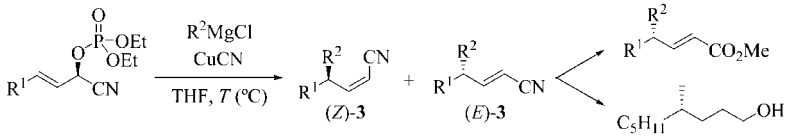


We describe a novel stereospecific synthesis of various carbamate-linked disaccharides using sugar carboxylic acids and sugar alcohols by a modified Curtius rearrangement. Furthermore, we applied this method to the synthesis of carbamate-linked oligosaccharides including a dendritic molecule.

FULL PAPERS

CONTENTS

Chiral Building Blocks

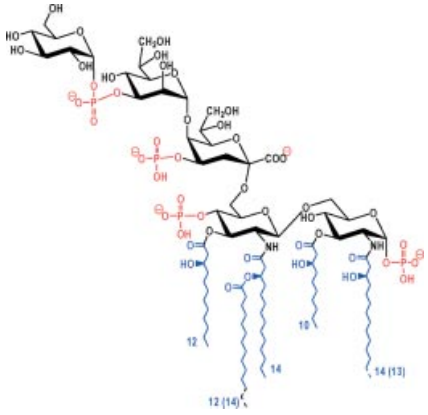


S_N2' Alkylation of Chiral Allylic Cyanohydrin *O*-Phosphates with Organocuprates

Keywords: Copper / Allylic substitution / Asymmetric synthesis / Unsaturated nitriles / Cyanophosphates

Enantiomerically enriched cyanohydrin *O*-phosphates react regioselectively with organocuprates derived from alkyl Grignard reagents and CuCN to give γ-alkyl-substituted α,β-unsaturated nitriles in a S_N2' process. This new evidence of the versatility of these cyanophosphates as chiral building blocks is demonstrated by the synthesis of the sex pheromone of the yellow mealworm *Tenebrio molitor* L.

Glycolipid from Marine Bacteria

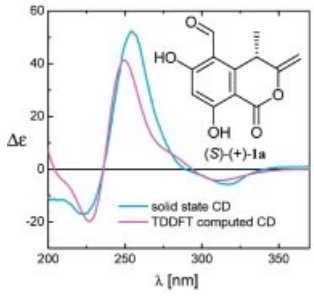


The Outer Membrane of the Marine Gram-Negative Bacterium *Alteromonas addita* is Composed of a Very Short-Chain Lipopolysaccharide with a High Negative Charge Density

Keywords: *Alteromonas addita* / Marine bacteria / Lipooligosaccharide

The complete structure of the lipopolysaccharide isolated from the Gram-negative marine bacterium *Alteromonas addita*, type strain KMM 3600*T* = R10SW13*T*, has been elucidated by means of state-of-the-art NMR and MS analyses. The structure is made up of a novel, highly negatively charged, deep-rough lipopolysaccharide in which a phosphodiester bridge connects two monosaccharides.

Absolute Configuration of Ascochin

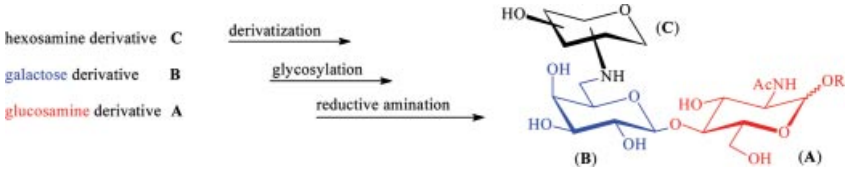


Bioactive Natural Products from the Endophytic Fungus *Ascochyta* sp. from *Meliotus dentatus* – Configurational Assignment by Solid-State CD and TDDFT Calculations

Keywords: Biological activity / Natural products / Isocoumarins / Quantum-mechanical calculation of CD spectra

Two new metabolites, (4*S*)-(+)-ascochin (**1a**) and (*S*,*S*)-(+)-ascodiketone (**3**) were isolated from the endophytic fungus *Ascochyta* sp. The structure of the antifungal isocoumarin **1a** was confirmed by X-ray diffraction and its absolute configuration determined by solid-state TDDFT CD methodology. The measured and TDDFT-calculated CD spectra enabled studies on the correlation between absolute configuration and n-π* transition CD.

Novel Glycomimetics

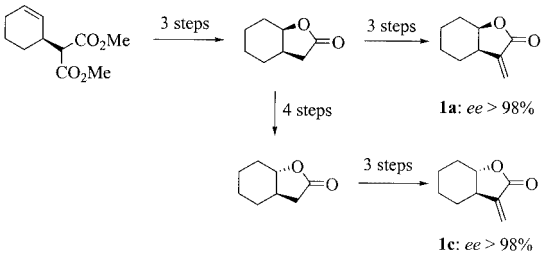


Synthesis of Novel Di- and Trisaccharide Mimetics with Non-Glycosidic Amino Bridges

Keywords: Carbohydrates / Saccharide mimetics / Enzymatic glycosylation / Reductive amination / Dess–Martin oxidation / Non-glycosidically amino-bridged saccharides

Synthesis of novel di- and trisaccharides using enzymatic glycosylation, Dess–Martin oxidation and reductive amination allows rapid access to the target structures. Thus, a novel class of glycomimetics was obtained having nitrogen inserted as bridging atom between two non-anomeric positions.

Sesquiterpene Lactone Models



In order to study the reactivity of sesquiterpene lactones in biological systems, an efficient stereoselective synthesis of a simple model was developed.

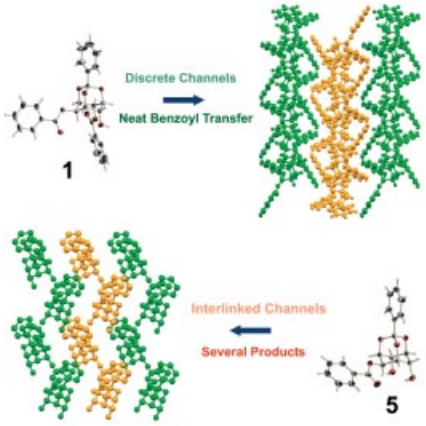
S. Fuchs, V. Berl,*
J.-P. Lepoittevin **1145–1152**

A Highly Stereoselective Divergent Synthesis of Bicyclic Models of Photoreactive Sesquiterpene Lactones

Keywords: α-Methylene-γ-butyrolactones / Asymmetric synthesis / Palladium / Allylic substitution / Enantioselectivity / Diastereoselectivity

Right Organization Matters!

Neat transesterification reaction takes place in crystals of **1**, while a similar reaction in crystals of **5** and **6** is not clean. These reactivities are correlated with crystal structures. Illustrated are compounds **1** and **5**; crystals of **1** contain discretely packed helices with favourable electrophile···nucleophile short contacts and other weak interactions which favour the reaction, whereas **5** have interlinked helices that lack these favourable interactions.



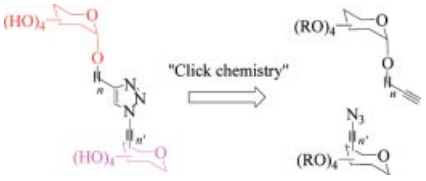
C. Murali, M. S. Shashidhar,*
R. G. Gonnade,
M. M. Bhadbhade* **1153–1159**

Investigating Organization of Molecules that Facilitates Intermolecular Acyl Transfer in Crystals: Reactivity and X-ray Structures of *O*-Benzoyl-*myo*-inositol 1,3,5-Orthoesters

Keywords: Inositol / Solid-state reaction / Transesterification / Weak interactions / Molecular self assembly

Connecting Carbohydrates

Carbohydrates bearing alkyne and azide substituents in different positions have been connected by click chemistry techniques. The high solubilities of the protected sugars in DMF allowed us to add water to the mixtures, which accelerates the reaction. One example demonstrates the possibilities for modulating the distance between triazole-linked saccharide units.



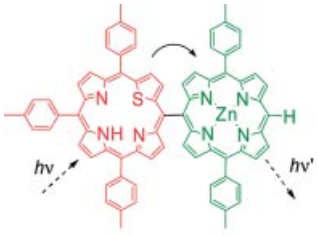
S. G. Gouin, L. Bultel, C. Falentin,
J. Kovensky* **1160–1167**

A Simple Procedure for Connecting Two Carbohydrate Moieties by Click Chemistry Techniques

Keywords: Carbohydrates / Dipolar cycloaddition / Click chemistry

Asymmetrical Porphyrin Oligomers

The synthesis of eight novel compounds with *meso*-5-bromo-10,15,20-tri(*p*-tolyl)-21-thiaporphyrin as a key synthon under mild Pd-coupling conditions is reported.



S. Punidha, N. Agarwal, I. Gupta,
M. Ravikanth* **1168–1175**

meso-5-Bromo-10,15,20-tri(*p*-tolyl)-21-thiaporphyrin as a Precursor for the Synthesis of Novel Compounds

Keywords: 21-Thiaporphyrin / Building blocks / Palladium(0) coupling / *meso*-*meso*-Linked dyad / Energy transfer

CONTENTS

CORRECTION

If not otherwise indicated in the article, papers in issue 6 were published online on January 30, 2007

