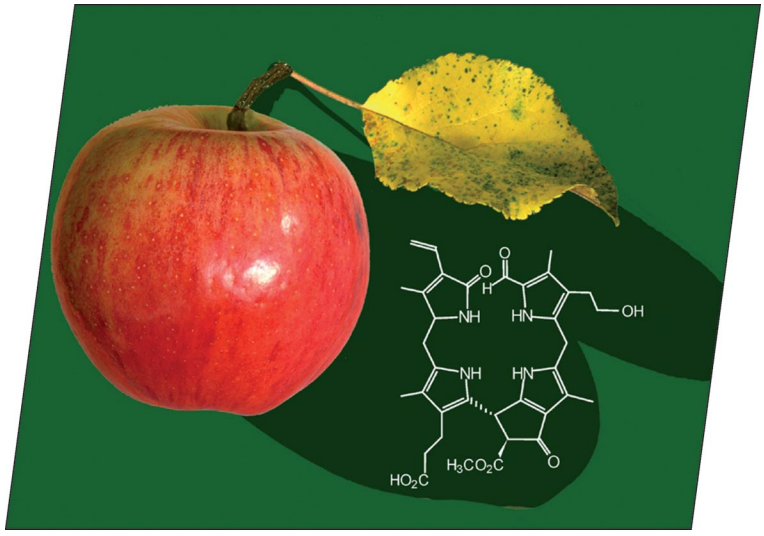
A union formed by chemical societies in Europe (ChemPubSoc Europe) has taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further members of ChemPubSoc Europe (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows a ripe apple and a yellow leaf from an apple tree. In ripening fruit and in leaf senescence, the green plant pigment chlorophyll is degraded to tetrapyrrolic, colourless catabolites (so-called NCCs), such as the one described by the structural formula given. The present knowledge on the occurrence and structural properties of chlorophyll catabolites in higher plants is outlined in the Microreview by B. Kräutler et al. on p. 21ff. Picture courtesy of Dr. Thomas Müller, University of Innsbruck, Austria.



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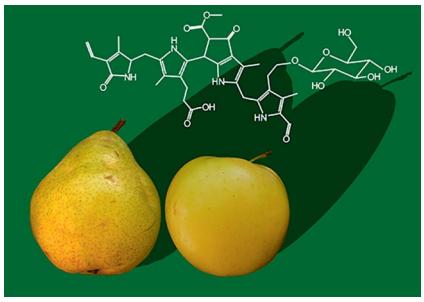
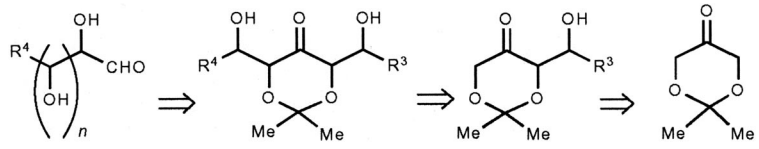
MICROREVIEW

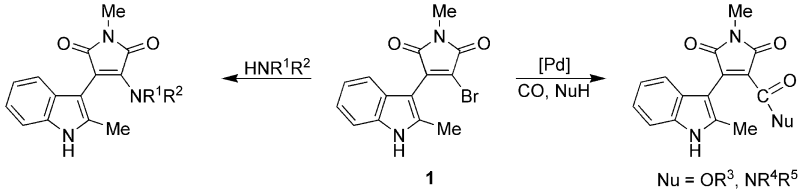


The elucidation of the chemical nature of chlorophyll catabolites has allowed the first structural insights into chlorophyll breakdown, assisting in developing understanding of the molecular basis and possible roles of this biological phenomenon. Current knowledge on chlorophyll catabolites in higher plants is outlined, as are their properties. Their antioxidant activity may give added value to fresh fruit.

SHORT COMMUNICATIONS



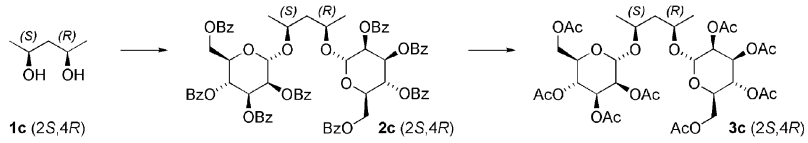
A sequence of two aldol reactions on the dioxanone scaffold – the first one organocatalytic and the second proceeding via the lithium enolate – allows access to higher carbohydrates and their derivatives.



Novel 3-substituted 4-indolylmaleimides have been synthesized by means of palladium-catalyzed carbonylation of 3-bromo-1-methyl-4-(2-methyl-3-indolyl)maleimide (**1**) with alcohols or amines in the presence of carbon monoxide. In addition, amination of **1** proceeded smoothly in the absence of catalyst and gave the desired 3-amino-4-indolylmaleimides in good yields.

FULL PAPERS

Poly(vinyl glycoside) Models

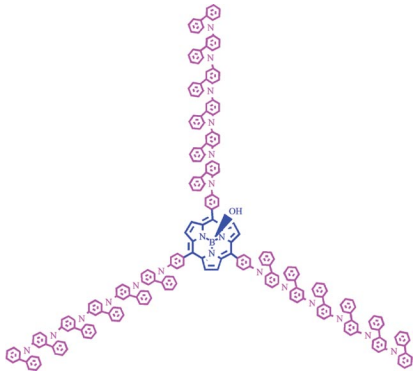


Synthesis and ^{13}C NMR Spectroscopy of Model Compounds for theMicrostructure Analysis of Poly(Vinyl Glycoside)s

Diol and triol derivatives were glycosylated in order to prepare model compounds for the stereo- and regiochemical analysis of poly(vinyl glycoside)s. The ^{13}C NMR chemical shifts of the α-C atoms of the aglycon and the anomeric C atoms exhibit a strong dependence on the absolute stereoconfiguration of the α- and the relative stereoconfiguration of the γ-C atoms, as well as the regiochemistry.

Keywords: Glycosylation / Chiral auxiliaries / Stereochemical effect / Poly(vinyl alcohol) / Microstructure

Star-Shaped Subporphyrins

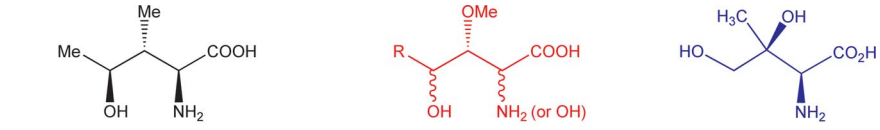


Subporphyrins with Monodisperse Oligocarbazole Arms

Novel star-shaped subporphyrins with monodisperse oligocarbazole arms were prepared by using pyridine-tri-*N*-pyrrolylborane as a template. It was found that excitation energy transfer took place from the oligocarbazole arms to the subporphyrin core.

Keywords: Porphyrinoids / Fluorescence / Conjugation / UV/Vis spectroscopy / Energy transfer

Synthetic Insulinotropic Molecules

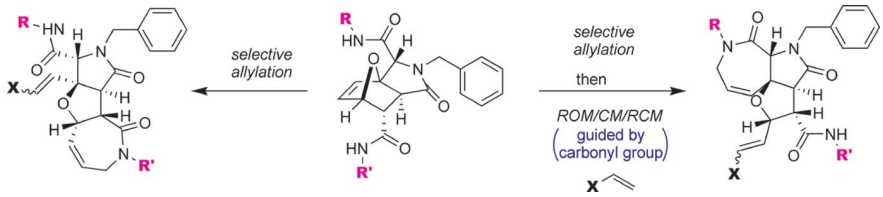


Multi-Step Synthesis and Biological Evaluation of Analogues of Insulin Secretagogue (2*S*,3*R*,4*S*)-4-Hydroxyisoleucine

Synthetic analogues of (2*S*,3*R*,4*S*)-4-hydroxyisoleucine have been prepared, mainly from D-glucose, by multi-step syntheses and evaluated for their ability to induce insulin secretion in pancreatic β-cells.

Keywords: Carbohydrates / Lactones / Nucleophilic substitution / Amino acids / Biological activity

Diversity in Heterocycle Synthesis



Chemospecific Allylation and Domino Metathesis of 7-Oxanorbornenes for Skeletal and Appendage Diversity

A common synthetic pathway to convert 7-oxanorbornenes into two distinct heterotricycles by selective *N*-allylation and subsequent domino metathesis has been developed. It is proposed that the latter reaction is guided by association of an amide carbonyl group with the Ru metal center of the catalyst. This methodology should be useful for construction of small-molecule libraries.

Keywords: Alkylation / Combinatorial chemistry / Domino reactions / Metathesis / Multicomponent reactions

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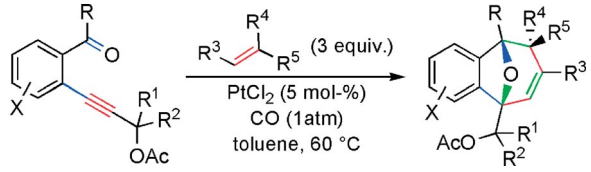
Platinum Catalysis

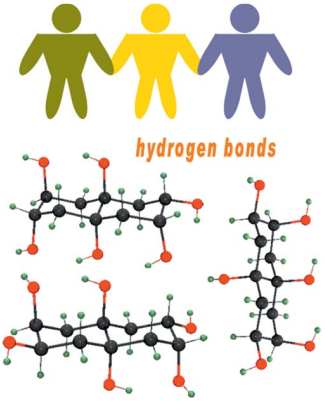


An interesting migration of the rigid structure of benzene was observed in platinum-catalyzed cyclizations of *o*-alkynyl(oxo)-benzenes with alkenes. Various 8-oxabicyclo[3.2.1]octane derivatives with many functional groups could be efficiently synthesized. The high stereo- and regioselectivity involved in this transformation was also attractive.

Keywords: Platinum / 1,2-Migration / Homogeneous catalysis / Alkenes

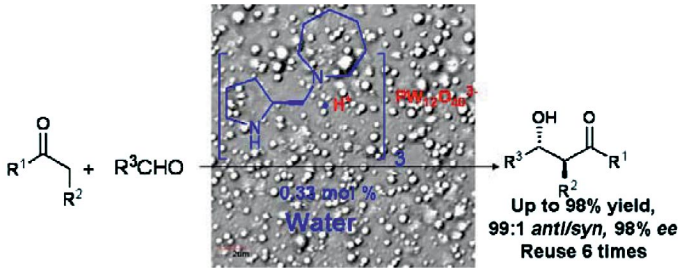
Conformationally Locked Decalins

Self-assembly of three designer perhydro-2,3,4a,6,7,8a-naphthalenehexols, all crafted on a conformationally locked *trans*-decalin framework, exhibit divergent supramolecular architecture, while conforming to core concepts of O–H···O hydrogen bonding identified in the crystal structures of alcohols and sugars.



Keywords: Chirality / Hydrogen bonds / Supramolecular chemistry / Conformational locking

Chiral Organic–Inorganic Hybrids

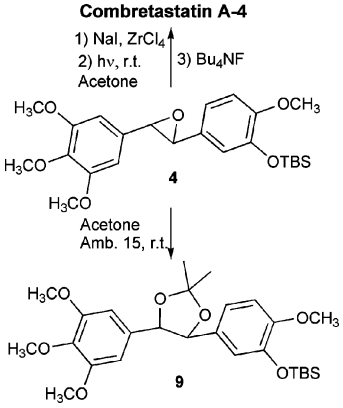


Chiral amine–polyoxometalate hybrids were found to be highly efficient and recoverable asymmetric enamine catalysts for a range of transformations with a catalyst loading as low as 0.33 mol-% under both neat and aqueous conditions.

Keywords: Polyoxometalates / Amines / Organocatalysis / Immobilization / Biphasic catalysis

Oxygenated Combretastatins

The *trans*-epoxide derivative of Combretastatin A-4 was stereoselectively prepared in good yield by sulfur ylide mediated epoxidation of silyl-protected isovanillin. From this key intermediate, a formal synthesis of CA-4, by stereoselective deoxygenation and photoisomerization, was achieved. Alternatively, a *trans*-dioxolane derivative was obtained by stereoselective acetone insertion.



Keywords: Oxygen heterocycles / Ylides / Isomerization / Epoxidation

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Supporting information on the WWW (see article for access details).

If not otherwise indicated in the article, papers in issue 36 were published online on December 8, 2008

