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Organic & Biomolecular Chemistry

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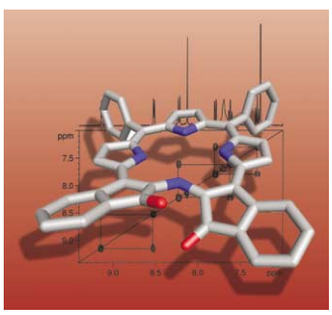
Incorporating Acta Chemica Scandinavica



Cover

See Jason R. McCarthy, Michael A. Hyland and Christian Brückner, pp. 1484–1491.
The cover shows a molecular model of indaphyrin, a novel class of *meso*-tetraarylsecochlorin-derived chromophores incorporating *o*-phenyl-to-β-linkages, over its H,H-COSY spectrum. The linkage introduces some strain into the molecule, leading to a slightly ruffled conformation of the macrocycle. The ketone-linkages also force the phenyl groups nearly into co-planarity with the porphyrinoid chromophore, resulting in an extended π-system.

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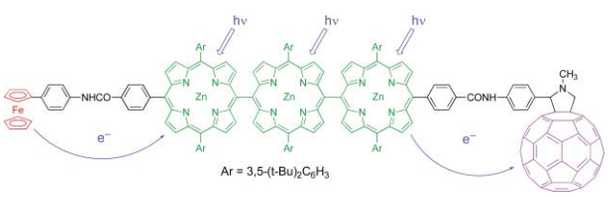
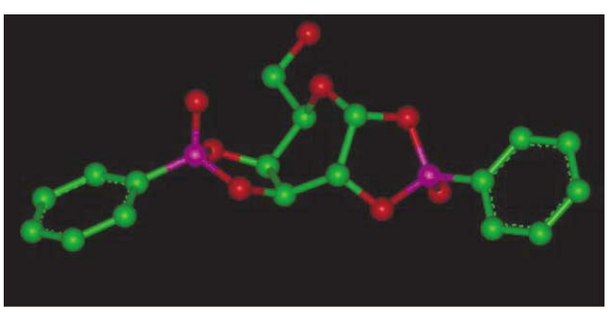
PERSPECTIVE



Porphyrin–fullerene linked systems as artificial photosynthetic mimics

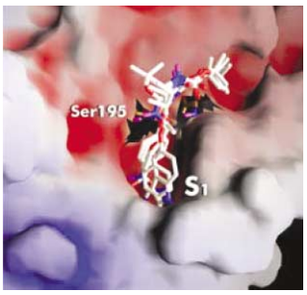
We have successfully prepared a variety of porphyrin–fullerene linked systems, which exhibit excellent photoinduced electron transfer properties.

ARTICLES



Structures of carbohydrate–boronic acid complexes determined by NMR and molecular modelling in aqueous alkaline media

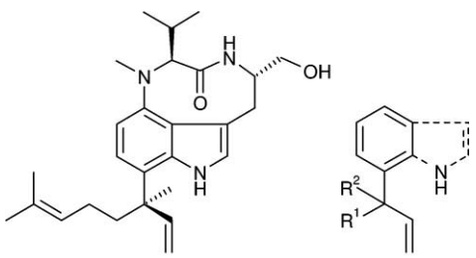
^{1}H NMR techniques coupled with molecular modelling calculations have provided a wealth of information on the structure of boronic acid complexed carbohydrates and are useful tools in the field of molecular sensing and recognition in aqueous media.



On the rational design of substrate mimetics: the function of docking approaches for the prediction of protease specificities

Robert Günther, Christian Elsner, Stephanie Schmidt, Hans-Jörg Hofmann and Frank Bordusa

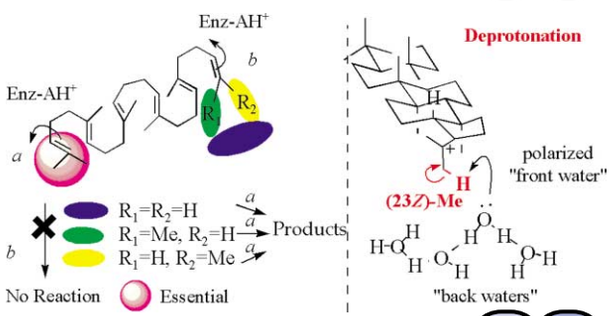
The function of an automated docking procedure in the prediction of the specificity of proteases towards substrate mimetics is reported.



Studies of the formation of all-carbon quaternary centres, en route to lyngbyatoxin A. A comparison of phenyl and 7-substituted indole systems

Janne E. Tønder, Masood Hosseini, Alex B. Ahrenst and David Tanner

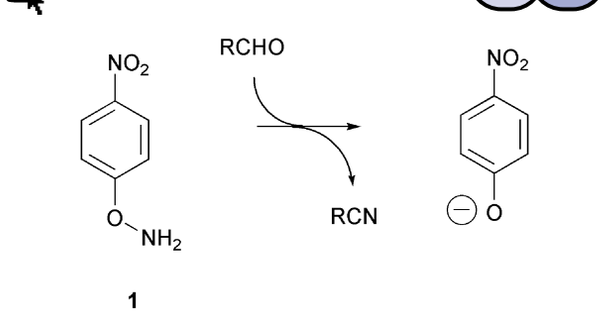
Metal mediated allylic substitutions and conjugate additions to geranyl, cinnamyl and allylic indole compounds en route to lyngbyatoxin A.



Squalene–hopene cyclase: final deprotonation reaction, conformational analysis for the cyclization of (3*R*,*S*)-2,3-oxidosqualene and further evidence for the requirement of an isopropylidene moiety both for initiation of the polycyclization cascade and for the formation of the 5-membered E-ring

Tsutomu Hoshino, Schin-ichi Nakano, Tomohiro Kondo, Tsutomu Sato and Aya Miyoshi

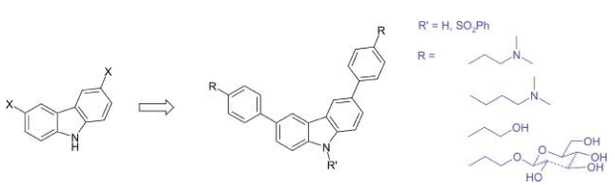
Essentiality of an isopropylidene moiety and deprotonation from 23*Z*-Me for hopene biosynthesis by squalene cyclase.



Aldehyde detection by chromogenic/fluorogenic oxime bond fragmentation

Syed Salahuddin, Olivier Renaudet and Jean-Louis Reymond

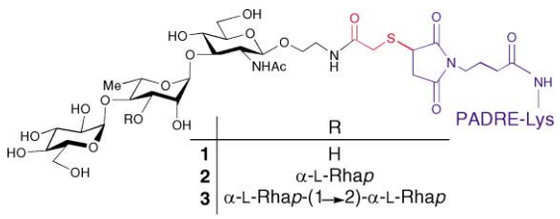
A series of new fluorogenic and chromogenic oxyamine reagents was prepared by amination of nitrophenol and umbelliferones. The oxyamines formed oximes with carbonyl compounds in organic solvent. In water, the oximes undergo chromogenic or fluorogenic fragmentation under basic conditions. The process provides an assay for formaldehyde in water.



Synthesis of diphenylcarbazoles as cytotoxic DNA binding agents

Ulrich Jacquemard, Sylvain Routier, Arnaud Tatibouët, Jérôme Kluza, William Laine, Christine Bal, Christian Bailly and Jean-Yves Mérour

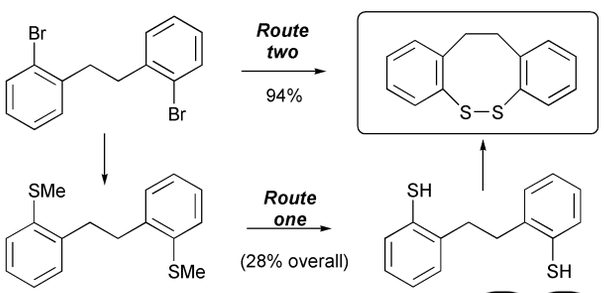
The DNA binding compounds exhibit potent cytotoxic activity toward P388 leukemia cells.



Preparation of synthetic glycoconjugates as potential vaccines against *Shigella flexneri* serotype 2a disease

Karen Wright, Catherine Guerreiro, Isabelle Laurent, Françoise Baleux and Laurence A. Mulard

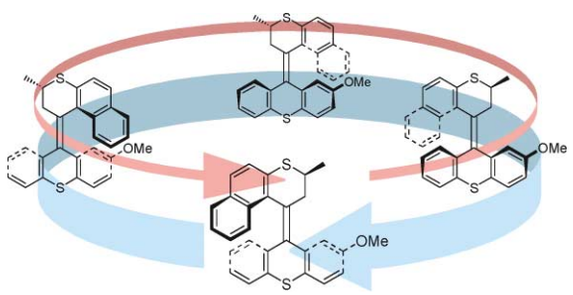
Synthesis of neoglycopeptides **1**, **2** and **3** using a modular approach.



Two routes to (11,12)-dihydrodibenzo[*c*,*g*][1,2]dithiocine

Paul Wyatt and Andrew Hudson

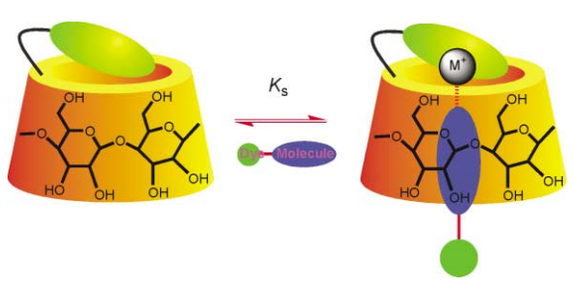
Route One features the separate introduction of two sulfur atoms and a double Pummerer reaction while Route Two uses an alternative strategy with direct introduction of both sulfur atoms using disulfur diimidazole.



Exploring the boundaries of a light-driven molecular motor design: new sterically overcrowded alkenes with preferred direction of rotation

Richard A. van Delden, Matthijs K. J. ter Wiel, Harmen de Jong, Auke Meetsma and Ben L. Feringa

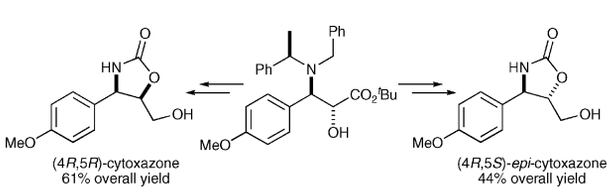
A newly designed molecular motor based on a sterically overcrowded alkene allows preferential clockwise intramolecular rotation driven by light.



Cooperative molecular recognition of dyes by dyad and triad cyclodextrin–crown ether conjugates

Yu Liu, Ying-Wei Yang, Lei Li and Yong Chen

Cooperative attracting or anti-cooperative repulsive interactions by an Na^+-crown ether cap actively contribute to the molecular recognition of cyclodextrin-crown ether-guest ternary systems.

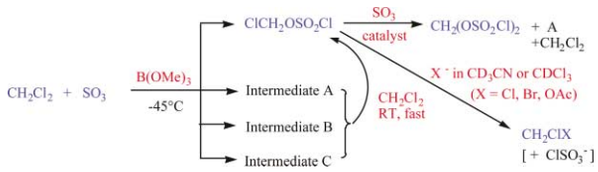


Asymmetric synthesis of (4*R*,5*R*)-cytoxazone and (4*R*,5*S*)-*epi*-cytoxazone

Stephen G. Davies, Deri G. Hughes, Rebecca L. Nicholson, Andrew D. Smith and Angela J. Wright

(4*R*,5*R*)-Cytoxazone has been prepared in four steps and in 61% overall yield, while (4*R*,5*S*)-*epi*-cytoxazone has been prepared in six steps and in 44% overall yield.

ARTICLES



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