

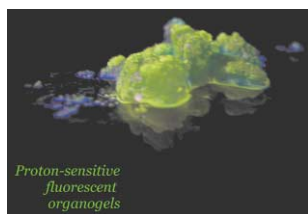
Organic & Biomolecular Chemistry

FORMERLY PERKIN TRANSACTIONS 1 AND 2

Incorporating Acta Chemica Scandinavica

Cover

See S. Shinkai *et al.*, page 895.
A small piece of proton-sensed organogel emitting green light upon UV irradiation.



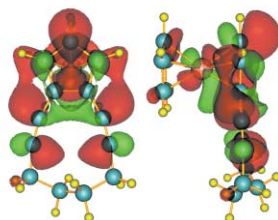
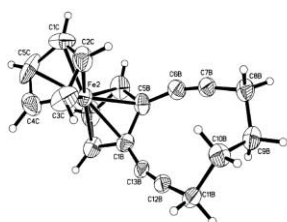
Chemical biology articles published in this journal also appear in the *Chemical Biology Virtual Journal*: www.rsc.org/chembiol

contents

COMMUNICATIONS



763 766



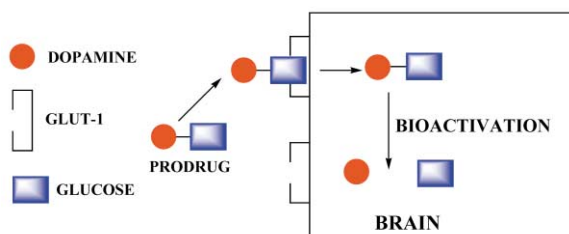
Ring-strain effects on the oxidation potential of enediynes and enediyne complexes

Kim K. Baldrige, Bernadette T. Donovan-Merkert, Joseph M. O'Connor, Linda I. Lee, Adam Closson, Daniel Fandrick, Tuan Tran, Kevin D. Bunker, Mouffouk Fouzi and Peter Gantzel

Synthetic, electrochemical, and computational studies establish a relationship between conjugated enediyne ring-strain and the electronic properties of enediynes and cyclopentadienyliron–enediyne complexes, such as the complex shown.



767 771

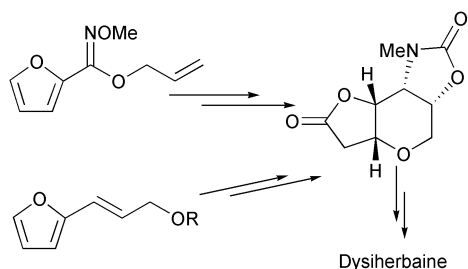


Synthesis of glycosyl derivatives as dopamine prodrugs: interaction with glucose carrier GLUT-1

Caridad Fernández, Ofelia Nieto, José Angel Fontenla, Emilia Rivas, María L. de Ceballos and Alfonso Fernández-Mayoralas

The syntheses and biological activities of dopamine glycoconjugates aiming to target the neurotransmitter into the brain are described

772 774

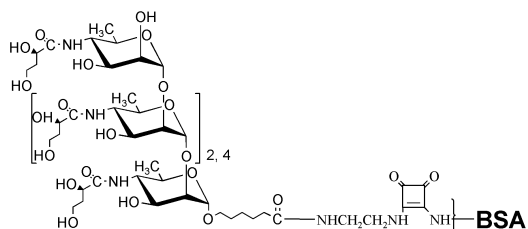
**A convenient route to the furopyran core of dysiherbaine**

Okiko Miyata, Ryuichi Iba, Jun Hashimoto and Takeaki Naito

The furo[3,2-*b*]pyran nucleus, an important element in many pharmacologically active compounds, has been synthesised by a convenient route.

ARTICLES

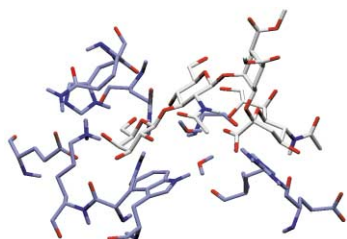
775 784

**Neoglycoconjugates from synthetic tetra- and hexasaccharides that mimic the terminus of the O-PS of *Vibrio cholerae* O:1, serotype Inaba**

Xingquan Ma, Rina Saksena, Anatoly Chernyak and Pavol Kováč

The tetra- and the hexasaccharide that mimic the upstream terminus of the O-specific polysaccharide of *Vibrio cholerae* O:1, serotype Inaba, were synthesized in the form of 5-methoxycarbonylpentyl glycosides, and linked to BSA using squaric acid diester chemistry.

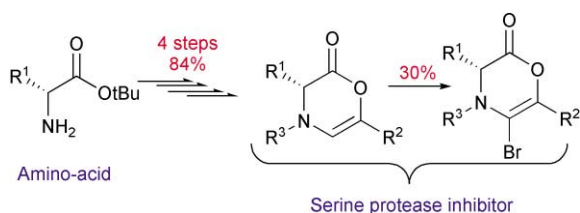
785 792

**Mimics of ganglioside GM1 as cholera toxin ligands: replacement of the GalNAc residue**

Anna Bernardi, Daniela Arosio, Leonardo Manzoni, Diego Monti, Helena Posterl, Donatella Potenza, Silvia Mari and Jesús Jiménez-Barbero

GlcNAc-containing mimics of ganglioside GM1 are as potent as their GalNAc counterparts in binding to cholera toxin.

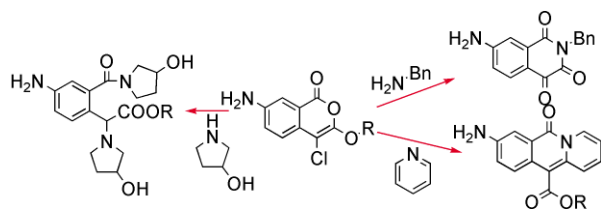
793 799

**Novel synthesis of 3,4-dihydro-5-bromo[1,4]oxazin-2-one derivatives, new protease inhibitor scaffold**

Frédéric Bihel and Jean-Louis Kraus

Synthesis of novel 5-bromooxazinones and their inhibitory activities on α -chymotrypsin.

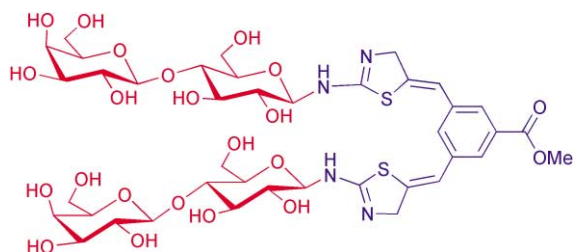
800 802

**Reactivity studies of 3-alkoxy-7-amino-4-chloroisocoumarins (β -amyloid peptide inhibitors) versus different classes of amines**

Frédéric Bihel, Robert Faure and Jean-Louis Kraus

Versatility of the 3-alkoxy-7-amino-4-chloroisocoumarin scaffold versus different classes of amines.

803 810



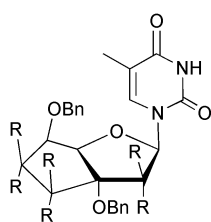
Rigidified multivalent lactose molecules and their interactions with mammalian galectins: a route to selective inhibitors

Ioannis Vrasidas, Sabine André, Paola Valentini, Corina Böck, Martin Lensch, Herbert Kaltner, Rob M. J. Liskamp, Hans-J. Gabius and Roland J. Pieters

Novel rigid multivalent lactose molecules show high inhibitory power with galectin-3, but not with galectins-1 and 5.



811 816



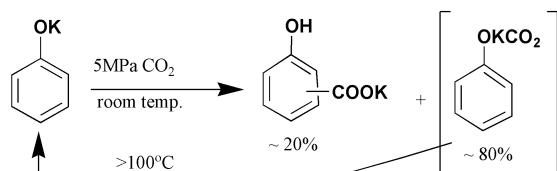
R,R = H,OH

Bicyclic nucleosides; stereoselective dihydroxylation and 2'-deoxygenation

Jacob Ravn, Morten Freitag and Poul Nielsen

A series of hydroxylated conformationally restricted bicyclic nucleosides were obtained from stereoselective dihydroxylation reactions and an optimized 2'-deoxygenation.

817 821



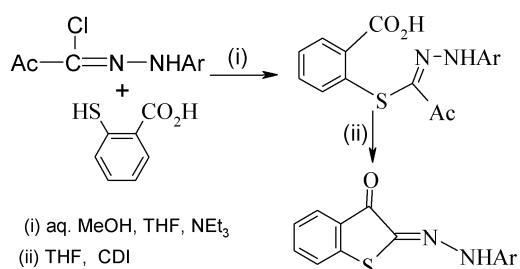
Carboxylations of alkali metal phenoxides with carbon dioxide

Yoshio Kosugi, Yoshio Imaoka, Fumisato Gotoh, Mohammad A. Rahim, Yoshihisa Matsui and Kinya Sakanishi

The formation of carboxylic acids (*ca.* 20% yield at room temperature) is competitive with that of an alkali metal-CO₂ complex, which is not an intermediate of the carboxylic acids but thermally decomposes to phenoxide.



822 825

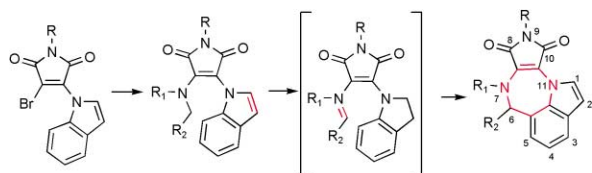


An alternative synthesis of 2-(*N*-arylhydrazono)-1-benzothiophen-3-ones

Jalal A. Zahra, Bassam A. Abu Thaher, Mustafa M. El-Abadelah and Roland Boese

New unequivocal synthetic route utilizing readily available and inexpensive reactants.

826 833



Synthesis of 6*H*-pyrrolo[3',4':2,3][1,4]diazepino[6,7,1-*hi*]-indole-8,10(7*H*,9*H*)-diones using 3-bromo-4-(indol-1-yl)-maleimide scaffold

Sergey A. Lakatosh, Yuri N. Luzikov and Maria N. Preobrazhenskaya

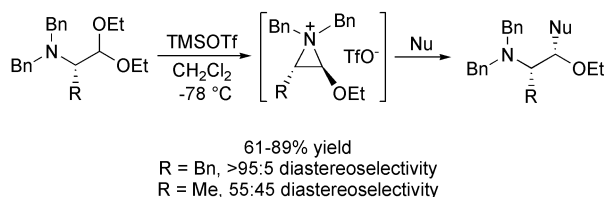
Under the action of acids, 3-arylalkyl- or 3-alkylamino-4-(indol-1-yl)maleimides and bis(indol-1-yl)maleimides form diazepines[1,4] with annelated indoline and maleimide, which upon dehydrogenation produced the corresponding indolomaleimidodiazepines[1,4].



834 849

Studies on the Lewis acid mediated cleavage of α -aminoacetals: synthesis of novel 1,2-aminoethers, and evidence for α -alkoxy aziridinium ion intermediates

Mark A. Graham, Alan H. Wadsworth, Abdul Zahid and Christopher M. Rayner

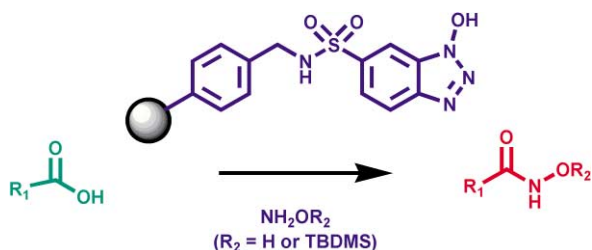
The TMSOTf-mediated nucleophilic cleavage of α -amino acetals occurs *via* addition to an α -oxocarbenium ion or α -alkoxy aziridinium ion, depending on the nature of the nucleophile used.

850 853

A convenient parallel synthesis of low molecular weight hydroxamic acids using polymer-supported 1-hydroxybenzotriazole

Marc Devocelle, Brian M. McLoughlin, Caroline T. Sharkey, Desmond J. Fitzgerald and Kevin B. Nolan

A synthesis of hydroxamic acids combining the advantages inherent to both solid- and polymer assisted solution-phase methods is described.

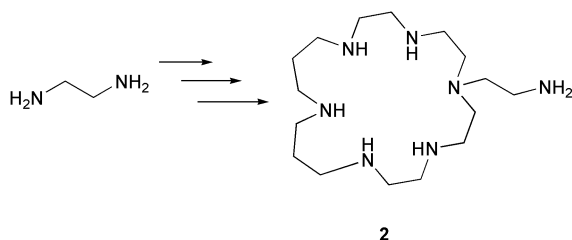


854 858

Preparation of hexaaza and heptaaza macrocycles functionalized with a single aminoalkyl pendant arm

Zhibo Zhang, Satu Mikkola and Harri Lönnberg

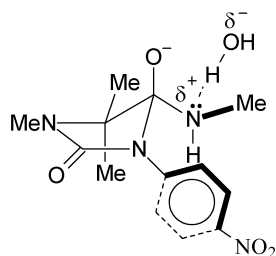
Monofunctionalized hexaaza and heptaaza macrocycles have been prepared on a multi-gram scale by carrying out the Richman–Atkins cyclization in the presence of caesium carbonate.



859 865

Kinetics and mechanism of the cyclization of ω -(*p*-nitrophenyl)-hydantoic acid amides: steric hindrance to proton transfer causes a 10^4 -fold change in rate

Violina T. Angelova, Anthony J. Kirby, Asen H. Koedjikov and Ivan G. Pojarlieff

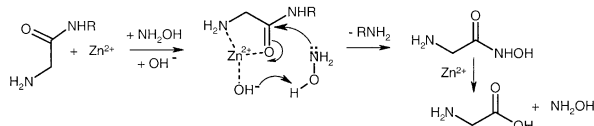
Removal of *N*-methyl accelerates hydrolysis 14000-fold by easing frontal water attack of the shielded amino group in the tetrahedral intermediate.

866 872

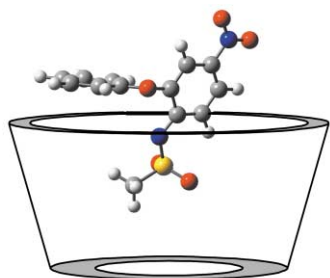
Metal-catalyzed hydroxylaminolysis of unactivated amide and peptide bonds

Baldomero Gómez-Reyes and Anatoly K. Yatsimirsky

Zn(II) accelerates the cleavage of glycine peptides and glycinamide by hydroxylamine reducing their half-lives to several hours in neutral solutions at temperatures between 50 and 60 °C.



873 878

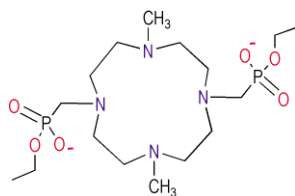


Encapsulation of sodium nimesulide and precursors in β -cyclodextrin

Susana S. Braga, Paulo Ribeiro-Claro, Martyn Pillinger, Isabel S. Gonçalves, Florbela Pereira, Ana C. Fernandes, Carlos C. Romão, Pedro Brito Correia and José J. C. Teixeira-Dias

Experimental and theoretical (*ab initio*) methods have been used to study the inclusion complexation behaviour of diphenyl ether derivatives in β -cyclodextrin.

879 886

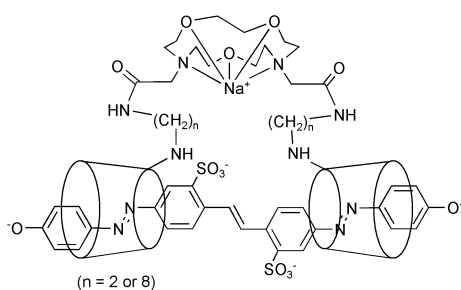


Synthesis, characterization and coordination chemistry of the new tetraazamacrocycle 4,10-dimethyl-1,4,7,10-tetraaza-cyclododecane-1,7-bis(methanephosphonic acid monoethyl ester) dipotassium salt

Claudio Bianchini, Giuliano Giambastiani, Franco Laschi, Palma Mariani, Alberto Vacca, Francesco Vizza and Piero Zanello

The new hexadentate macrocycle ligand, $\text{Me}_2\text{DO}_2\text{PME}$, based on the cyclen skeleton, is synthesized and its complexation properties with Cu^{2+} , Zn^{2+} , Gd^{3+} , and Ca^{2+} ions are studied.

887 894

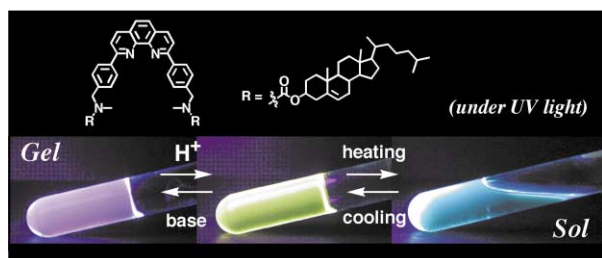


Diazaronand linked β -cyclodextrin dimer complexes of Brilliant Yellow tetraanion and their sodium(I) analogues

Lee C. West, Oska Wyness, Bruce L. May, Philip Clements, Stephen F. Lincoln and Christopher J. Easton

Two new diazaronand linked β -cyclodextrin dimers were synthesised and their complexation with Brilliant Yellow studied with 2D NMR in aqueous solution.

895 899



Proton-sensitive fluorescent organogels

Kazunori Sugiyasu, Norifumi Fujita, Masayuki Takeuchi, Sunao Yamada and Seiji Shinkai

A proton-induced energy transfer system has been constructed in phenanthroline-based organogel fibrils.

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