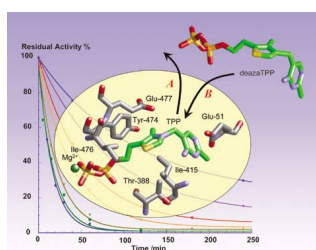


Organic & Biomolecular Chemistry

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Incorporating Acta Chemica Scandinavica

**Cover**

See Stéphane Mann, Concepcion Perez Melero, Dan Hawksley and Finian J. Leeper, pp. 1732–1741. The cover depicts, within the yellow oval, the structure of thiamine diphosphate (TPP) and some of the surrounding amino acid residues in the active site of yeast pyruvate decarboxylase. The arrows indicate that TPP must leave the active site before the inhibitor deazaTPP can bind. The graph in the background shows the type of time-dependent inhibition resulting from this process, each line representing inhibition by a different concentration of inhibitor.

Image reproduced by permission of Finian J. Leeper
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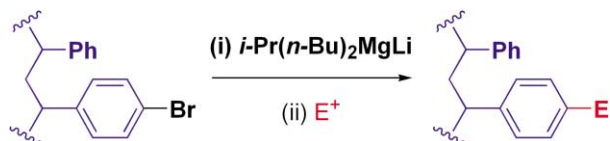
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contents

COMMUNICATIONS



1679 1681



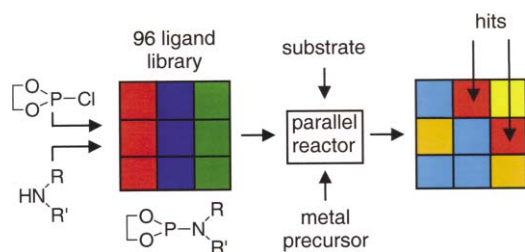
Complete functionalisation of small and large diameter bromopolystyrene beads; applications for solid-supported reagents, scavengers and diversity-oriented synthesis

Gemma L. Thomas, Mark Ladlow and David R. Spring

New robust methodology is demonstrated for the synthesis of novel, high-quality polystyrene polymers, which can be exploited as solid-supported reagents and scavengers, and for solid-supported synthesis.



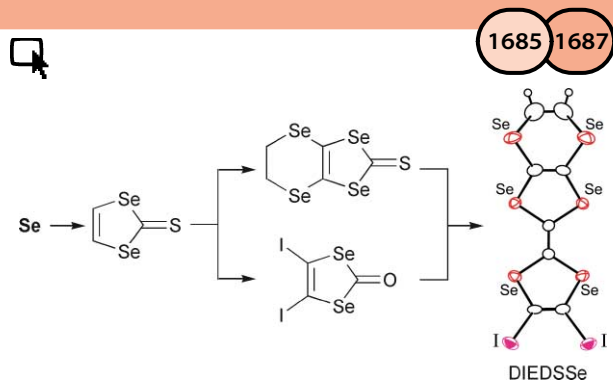
1682 1684



Synthesis and application in asymmetric C–C bond formation of solution phase ligand libraries of monodentate phosphoramidites

Ate Duursma, Laurent Lefort, Jeroen A. F. Boogers, André H. M. de Vries, Johannes G. de Vries, Adriaan J. Minnaard and Ben L. Feringa

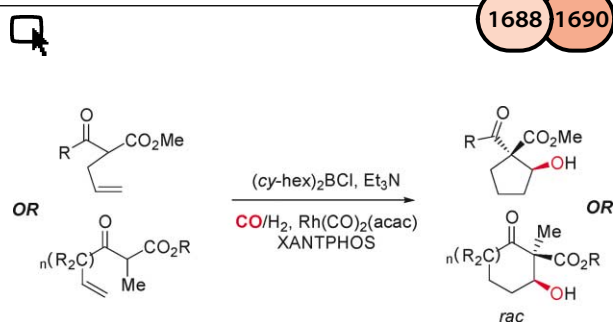
A solution phase ligand library of 96 monodentate phosphoramidites is synthesized and applied in the enantioselective vinyl-addition to enones.



Synthesis of novel selenium-containing donors as selenium analogues of diiodo(ethylenedithio)diselenadithiafulvalene (DIETS)

Takashi Shirahata and Tatsuro Imakubo

Novel selenium analogues of DIETS such as DIEDSSe have been successfully derived from [1,3]diselenole-2-thione which could be synthesized without the use of the highly toxic reagent CSe_2 and their crystal structures and electrochemical properties have been reported.

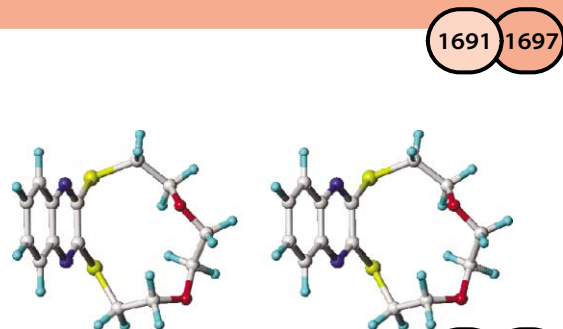


Sequential enolboronation/hydroformylation/aldol addition: a new one-pot cascade reaction for the regio- and diastereoselective formation of carbocyclic quaternary centres from acyclic olefins

Mark D. Keränen and Peter Eilbracht

A regio- and diastereoselective cascade involving enolboronation, hydroformylation and aldol-addition of unsaturated carbonyl compounds gives carbocycles containing functionalized quaternary centres.

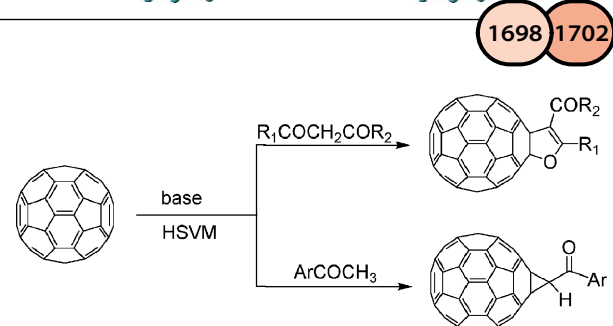
ARTICLES



Conformational analysis of mixed oxathia crown ethers and their complexational ability towards $\text{Ag}(\text{I})$ and $\text{Pd}(\text{II})$ —an experimental solution NMR and theoretical molecular modelling study

Anja Holzberger, Hans-Jürgen Holdt and Erich Kleinpeter

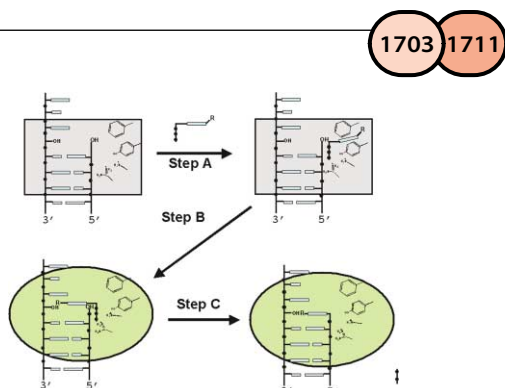
Conformation and flexibility of oxathia crown ethers both free and complexed to $\text{Ag}(\text{I})$ and $\text{Pd}(\text{II})$ were studied in CD_2Cl_2 – CD_3CN (6 : 4); stoichiometry and stability constants of the complexes were also determined.



Solvent-free reactions of C_{60} with active methylene compounds, either with or without carbon tetrabromide, in the presence of bases under high-speed vibration milling conditions

Ting-Hu Zhang, Guan-Wu Wang, Ping Lu, Yu-Jin Li, Ru-Fang Peng, You-Cheng Liu, Yasujiro Murata and Koichi Komatsu

Solvent-free mechanochemical reaction of C_{60} with various active methylene compounds, either with or without carbon tetrabromide, in the presence of a base afforded methanofullerenes, 1,4-bisadducts and dihydrofuran-fused C_{60} derivatives.



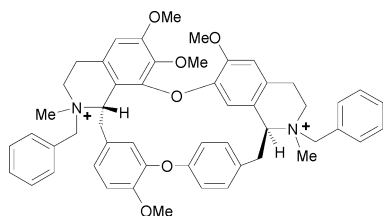
Evaluating the contributions of desolvation and base-stacking during translesion DNA synthesis

Xuemei Zhang, Irene Lee and Anthony J. Berdis

π -electron interactions contribute significantly toward enhancing DNA polymerization efficiency and fidelity.



1712 1718

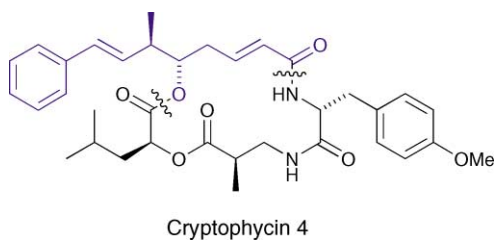


Recognition of α -amino acid derivatives by N,N' -dibenzylated S,S -(+)-tetrandrine

Karen Ochoa Lara, Carolina Godoy-Alcántar, Alexey V. Eliseev and Anatoly K. Yatsimirsky

A dicationic cyclophane-type N,N' -dibenzylated chiral derivative of a bisisoquinoline macrocyclic alkaloid S,S -(+)-tetrandrine shows high affinity and large enantioselectivity ($K(S)/K(R) \geq 10$) toward N -acetylalanine.

1719 1731

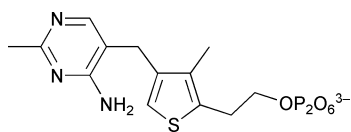


The nucleophilic addition of α -metallated 1,3-dioxanes to planar chiral cationic η^3 -allylmolybdenum complexes. Synthesis of (2*E*,5*S*,6*R*,7*E*)-6-methyl-8-phenylocta-2,7-dienoic acid methyl ester, a key component of the Cryptophycins

John Cooksey, Andrew Gunn, Philip J. Kocienski, Alexander Kuhl, Sukhjinder Uppal, John A. Christopher and Richard Bell

A key hydroxy ester component of the antitumour Cryptophycins was synthesised by the addition of an α -metallated dioxane to an η^3 -allylmolybdenum complex.

1732 1741



Inhibition of thiamin diphosphate dependent enzymes by 3-deazathiamin diphosphate

Stéphane Mann, Concepcion Perez Melero, Dan Hawksley and Finian J. Leeper

Deazathiamin diphosphate binds to thiamin diphosphate dependent enzymes far more tightly than thiamin diphosphate itself. With pyruvate decarboxylase the binding is so tight as to be effectively irreversible.

1742 1747

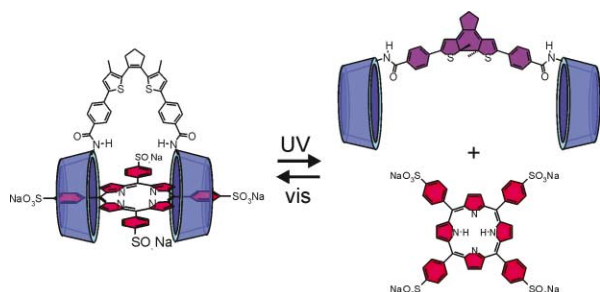


Generation of transient neutrals in the gas phase from anionic precursors. Does energised CNCCO rearrange to NCCCO?

Andrew M. McAnoy, Suresh Dua and John H. Bowie

The stability and reactivity of the neutral species CNCCO generated by one electron oxidation of the anion $[\text{CNCCO}]^-$ have been investigated by a combination of theoretical calculations and tandem mass spectrometric experiments.

1748 1755

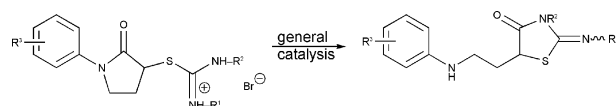


Bis(phenylthienyl)ethene-tethered β -cyclodextrin dimers as photoswitchable hosts

Alart Mulder, Amela Juković, Jurriaan Huskens and David N. Reinhoudt

Bis(phenylthienyl)ethene-tethered β -cyclodextrin dimers show reversible switching of the binding strength with TSPP upon irradiation with light.

1756 1763

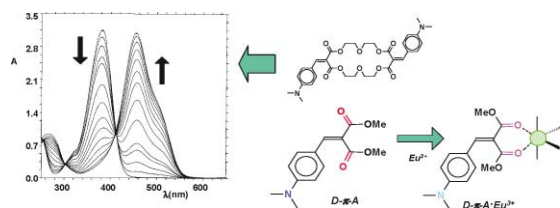


Influence of substitution on kinetics and mechanism of ring transformation of substituted *S*-[1-phenylpyrrolidin-2-on-3-yl]isothiuronium salts

Jiří Hanusek, Ludmila Hejtmánková, Vojeslav Šterba and Miloš Sedlák

Recyclisation of *S*-(1-phenylpyrrolidin-2-on-3-yl)isothiuronium bromides has been studied in aqueous amine buffers. Different reaction pathways and intermediates were observed.

1764 1769

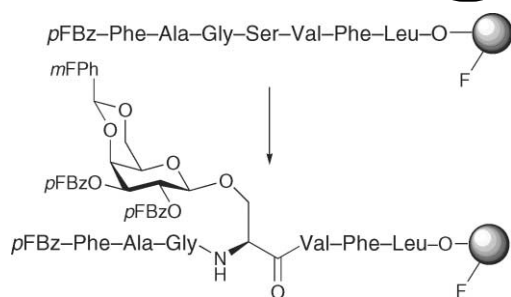


C_2 Symmetrical double chromophores: cooperativity effects in lanthanide ion complexation

Dario Pasini, Pier Paolo Righetti and Michele Zema

The complexation ability towards Eu^{3+} of the *trans* stereopure forms of C_2 symmetrical double chromophores showed how the two binding units, when the spacer is comprised of a diethylene or a triethylene glycol moiety, are able to interact in a positive way, stabilizing the resulting complexes when compared with single chromophore analogous compounds.

1770 1776

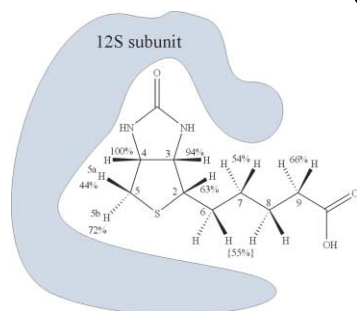


Gel-phase ^{19}F NMR spectral quality for resins commonly used in solid-phase organic synthesis; a study of peptide solid-phase glycosylations

Mickael Mogemark, Frida Gårdmo, Tobias Tengel, Jan Kihlberg and Mikael Elofsson

^{19}F NMR spectral quality for seven resins was examined in four NMR solvents. Glycosylation of resin-bound peptides furnished glycopeptides in ~80% yield.

1777 1781

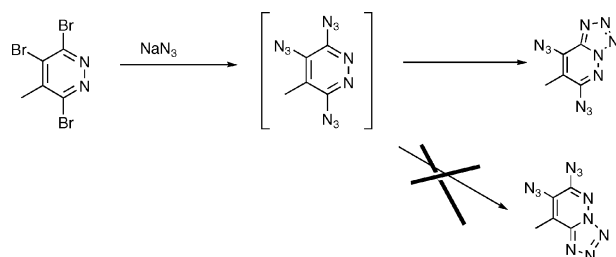


Determination of the binding specificity of the 12S subunit of the transcarboxylase by saturation transfer difference NMR

Claudia Peikert, Karsten Seeger, Rakesh Kumar Bhat and Stefan Berger

The Saturation Transfer Difference NMR (STD) technique was performed to determine the binding epitope from biotin and MMCoA to the 12S subunit. We could show by titrations during STD experiments that biotin and MMCoA bind cooperatively in one binding pocket.

1782 1788



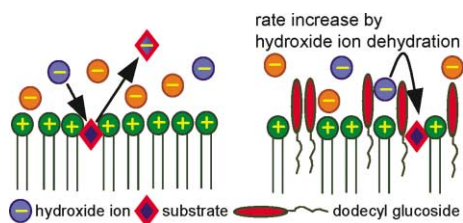
Studies on pyridazine azide cyclisation reactions

Robin D. Allan, Jeremy R. Greenwood, Trevor W. Hambley, Jane R. Hanrahan, David E. Hibbs, Samia Itani, Hue W. Tran and Peter Turner

Reaction of sodium azide with 4-methyl-3,5,6-tribromopyridazine results in the formation of 3,5,6-triazide intermediate which could cyclise to give two possible bicyclic products. However, experimentally, only one major product is isolated—3,5-diazido-4-methyl[1,5-*b*]tetrazolopyridazine.



1789 1799



The Kemp elimination in membrane mimetic reaction media. Probing catalytic properties of cationic vesicles formed from a double-tailed amphiphile and linear long-tailed alcohols or alkyl pyranosides

Jaap E. Klijin and Jan B. F. N. Engberts

The reaction of 5-nitrobenzisoxazole with hydroxide ions is efficiently catalysed by cationic vesicles. Addition of *n*-alcohols and *n*-alkyl pyranosides affects the catalytic efficiency in a subtle manner.

1800 1810



Enantiopure bicyclic piperidinones: stereocontrolled conjugate additions leading to substituted piperidinones

Andrew G. Brewster, Simon Broady, Mark Hughes, Mark G. Moloney and Gordon Woods

The conjugate addition of nucleophiles to activated bicyclic piperidinones proceeds with good to high diastereoselectivity and yield.

CONFERENCE DIARY

ix

Dates, venues and contact details of forthcoming events.

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