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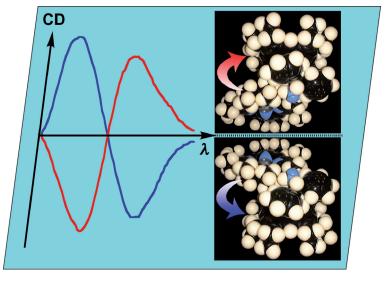


CZECH REPUBLIC

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 phenomenon of supramolecular chirogenesis in an achiral bisporphyrinoid host upon noncovalent interaction with chiral antipodal guests. This host-guest interaction results in the phenomenon of chirality transfer followed by the induction of circular dichroism in the porphyrin electronic transitions. Details are presented in the Microreview by V. Borovkov and Y. Inoue on p. 189ff.



# **MICROREVIEW**

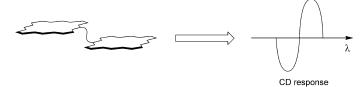
### **Bisporphyrinoids and Chirogenesis**

V. Borovkov,\* Y. Inoue\* ...... 189-197



A Versatile Bisporphyrinoid Motif for Supramolecular Chirogenesis

Keywords: Porphyrinoids / Chirality / Circular dichroism / Supramolecular chemistry / Host-guest systems



Bisporphyrinoids, thanks to their simplicity and spectral, chemical, and physicochemical properties, have been found to be the most universal and versatile structural motif yet known for investigation of supramolecular chirogenesis.

# SHORT COMMUNICATIONS

### **Organocatalysis**

A.-N. Balaguer, X. Companyó, T. Calvet, M. Font-Bardía, A. Moyano,\*

R. Rios\* ...... 199-203



Highly Regio- and Diastereoselective Oxazol-5-one Addition to Nitrostyrenes

**Keywords:** Diastereoselective catalysis / Organocatalysis / Heterocycles / Michael addition / Nitrostyrenes / N,O-Aminals

Addition of 4-alkyl-2-phenyloxazol-5-ones to nitrostyrenes takes place exclusively at the C-2 position of oxazol-5-one with very

high diastereoselectivity

#### **Enantioselective Synthesis**

S. K. Das, S. K. Dinda,

G. Panda\* ...... 204-207



Enantioselective Synthesis of Functionalized 1-Benzoxepines by Phenoxide Ion Mediated 7-endo-tet Carbocyclization of Cyclic Sulfates

Keywords: 1-Benzoxepine / Sharpless asymmetric dihydroxylation / Cyclic sulfate

R = 4-MeO only **A** was formed R = H; A/B = 4:1

In this study, we have utilized for the first time, a phenoxide ion mediated intramolecular 7-endo-tet ring opening reaction of syn-2,3-dihydroxy ester derived cyclic sulfates for the new asymmetric synthesis of 2,3-disubstituted 1-benzoxepines.



## **Neutral Carbonyl Protection**

Novel green chemistry methods have been developed to install photolabile carbonyl protecting groups. With this advancement, both protection and deprotection of carbonyl compounds can be achieved under neutral conditions without using any other chemical reagents.

Installation of Photolabile Carbonyl-Protecting Groups under Neutral Conditions without Using Any Other Chemical Reagents

**Keywords:** Carbonyl compounds / Protecting groups / Neutral conditions / Reagentfree reactions / Photolabile groups / Solvent-free reactions

# **FULL PAPERS**

**Anion Recognition** 

A series of macrocyclic azole peptides was synthesized. The investigation of their ability to bind anions in DMSO shows that theses cyclopeptides can act as sensitive and selective receptors for acetate and dihydrogen phosphate anions.

M. Schnopp, S. Ernst, G. Haberhauer\* ...... 213-222

Anion Recognition by Neutral Macrocyclic Azole Amides

**Keywords:** Anions / Host-guest systems / Hydrogen bonds / Macrocyclic ligands / Receptors

### Preparation of Paracyclophanes

Application of conventional methods of cyclophane chemistry (thiacyclophane formation, sulfone pyrolysis) furnishes [3.2]-, [4.2]-, [4.3]-, and [4.4]paracyclophane, respectively, as well as several derivatives of these hydrocarbons in preparatively satisfactory amounts allowing the study of the chemical properties of these layered aromatic compounds.

Hal HS 
$$F^2$$
  $(CH_2)_m$   $F^2$   $(CH_2)_m$   $F^2$   $(CH_2)_m$   $F^2$   $(CH_2)_m$   $(CH_2)_m$ 

Paracyclophanes: Extending the Bridges. Synthesis

**Keywords:** Cyclophanes / Thiacyclophanes / [m.n]Paracyclophanes / Sulfone pyrolysis / Ring contraction

#### **Substitution in Paracyclophanes**

$$(CH_{2})_{m}$$

$$(CH_$$

The second benzene ring or a carbonyl-containing substituent determine the regioselectivity of electrophilic substitution reactions of [m.n]paracyclophanes. If the bridges contain less than four atoms the

new substituent E is introduced next to the shorter bridge or directly opposite (pseudogeminally) the directing group. With bridges of four or more atoms, the selectivity breaks down completely.

Paracyclophanes: Extending the Bridges. Reactions

**Keywords:** Cyclophanes / [m.n]Paracyclophanes / Transannular reactions / Regioselectivity / Acylation / Aromatic substitution / Eletrophilic substitution

# **CONTENTS**

#### **Photochemistry**

A. C. Benniston,\* K. J. Elliott, R. W. Harrington, W. Clegg ...... 253-258



On the Photochemical Stability of the 9-Mesityl-10-methylacridinium Cation

**Keywords:** Acridinium cation / Degradation / Oxidation / Photochemistry / NMR spectroscopy

The 9-mesityl-10-methylacridinium cation in aerated deuterated/normal acetonitrile decomposes to give several side products when continuously exposed to white light. The main breakdown product isolated by column chromatography is identified as 3,5-dimethyl-4-(10-methylacridinium)benzaldehyde. This assignment was confirmed by a single-crystal X-ray structure determination.

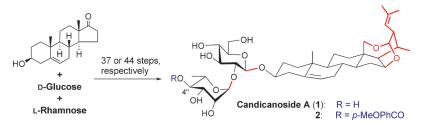
#### **Steroid Glycosides**

P. Tang, B. Yu\* ...... 259-269



Total Synthesis of Candicanoside A, a Rearranged Cholestane Disaccharide, and Its 4"-O-(p-Methoxybenzoate) Congener

**Keywords:** Glycosylation / Steroids / Synthesis design / Natural products



The genus *Ornithogalum* consists of garden lily plants indigenous to Southern Africa that contain steroid glycosides with remarkable cytostatic activities. Candicano-

side A is a minor congener possessing an unprecedented  $24(23\rightarrow22)abeo$ -cholestane aglycon.

## **Cross-Coupling Reactions**

W. Li, M. Shi\* ...... 270-274



Palladium-Catalyzed Coupling Reactions of Diarylvinylidenecyclopropanes with 2-Iodophenol and N-(2-Iodophenyl)-4-methylbenzenesulfonamide

**Keywords:** Palladium / Cross-coupling / Annulation / Heterocycles / C-C coupling

An annulation reaction of diarylvinylidenecyclopropanes and functionalized aryl halides catalyzed by palladium complexes gives a convenient route to synthesize cyclopropane-containing five-membered heterocyclic derivatives.

#### **Nitrogen-Rich Polymers**

Synthesis of N-[1-(2-Hydroxyethyl)-1H-tetrazol-5-yl]-N-methylhydrazine as Polymeric Precursor

**Keywords:** Hydrazine / Nitrogen heterocycles / Nitrogen-rich compounds / Polymers

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$$\begin{array}{c} O \\ O \\ O \\ O \end{array} \begin{array}{c} NCS \\ \hline \\ O \\ NCS \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_4 \\ \hline \\ NM_2 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_4 \\ \hline \\ NM_2 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_4 \\ \hline \\ NM_2 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_3 \\ \hline \\ NM_4 \\ \hline \\ NM_4 \\ \hline \\ NM_5 \\ N$$

The five-step formation of *N*-[1-(2-hydroxyethyl)-1*H*-tetrazol-5-yl]-*N*-methyl-hydrazine starting with ethanolamine is presented. Moreover, a nitrogen-rich, ther-

mal stable polymer, with a nitrogen content of 33% was synthesized by using *N*-[1-(2-hydroxyethyl)-1*H*-tetrazol-5-yl]-*N*-methyl-hydrazine and hexamethylene diisocyanate.



#### **Enantiopure Heterocycles**

1,3-Dioxolanyl-substituted 1,2-oxazines rearrange under Lewis acidic conditions to provide novel tricyclic products with com-

plex skeleton. Reductive transformations of these tricycles allow the synthesis of a range of enantiopure heterocycles.

Unusual Enantiopure Heterocyclic Skeletons by Lewis Acid Promoted Rearrangements of 1,3-Dioxolanyl-Substituted 1,2-Oxazines

**Keywords:** Heterocycles / 1,2-Oxazines / Reduction / Furans / Hydrogenation / 1,2-Alkyl shift

Cyclization

A modified Pictet-Spengler reaction has been applied to generate libraries based on

three structural variants of the isocryptolepine alkaloid. New Route to the Synthesis of the Isocryptolepine Alkaloid and Its Related Skeletons Using a Modified Pictet—Spengler Reaction

**Keywords:** Cyclization / Natural products / Polycycles / Nitrogen heterocycles

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

If not otherwise indicated in the article, papers in issue 1 were published online on December 8, 2008

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