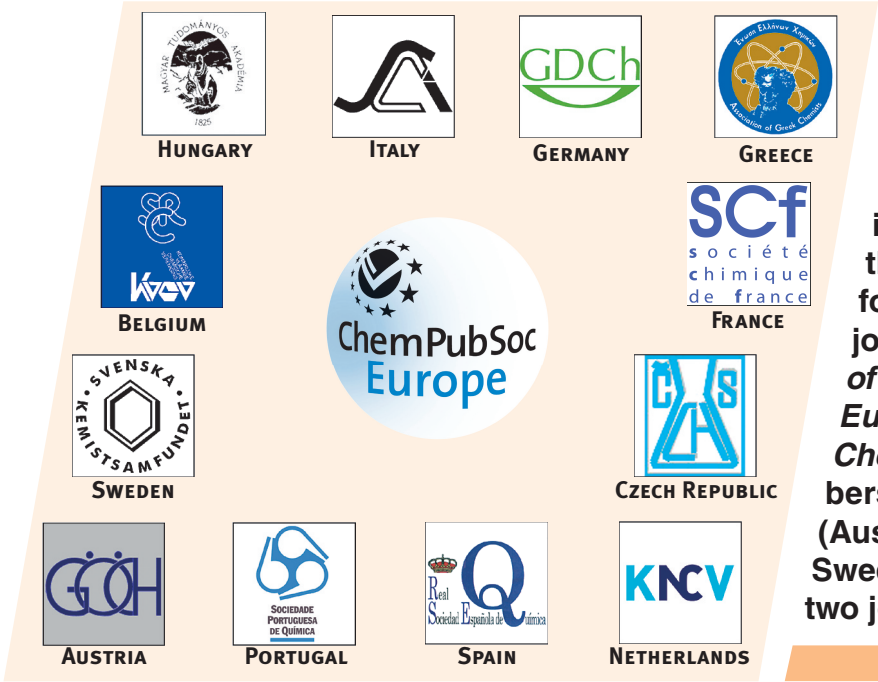
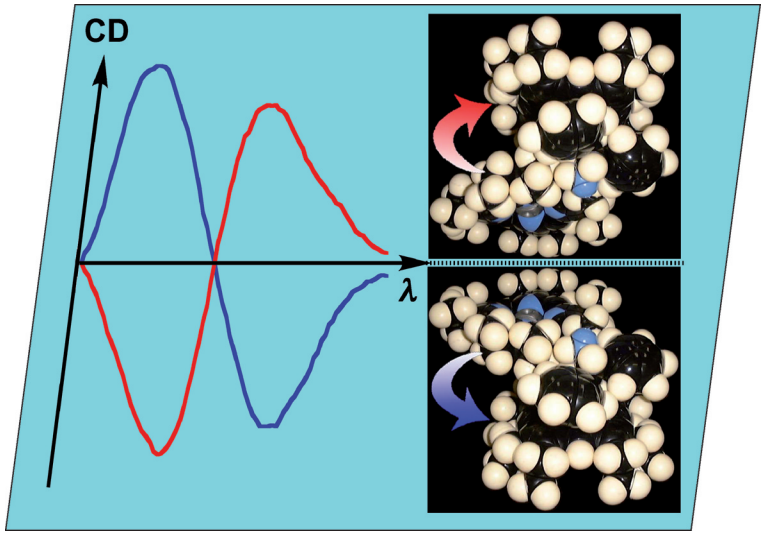


A union formed by chemical societies in Europe (ChemPubSoc Europe) has taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further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

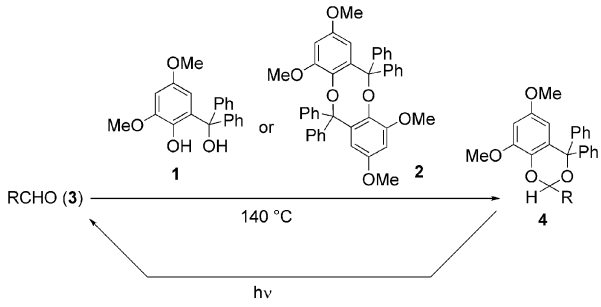


CONTENTS

MICROREVIEW

SHORT COMMUNICATIONS

Neutral Carbonyl Protection



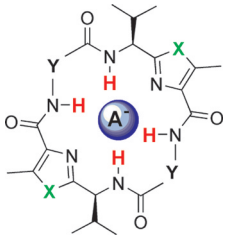
Keywords: Carbonyl compounds / Protecting groups / Neutral conditions / Reagent-free reactions / Photolabile groups / Solvent-free reactions

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.

FULL PAPERS

Anion Recognition

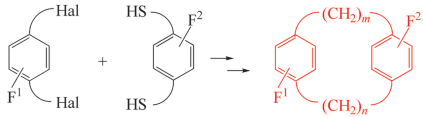
A series of macrocyclic azole peptides was synthesized. The investigation of their ability to bind anions in DMSO shows that theses cyclopeptides can act as sensitive and selective receptors for acetate and dihydrogen phosphate anions.



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

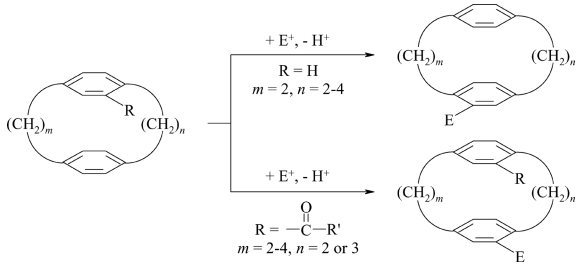
Preparation of Paracyclophanes

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.



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

Substitution in Paracyclophanes



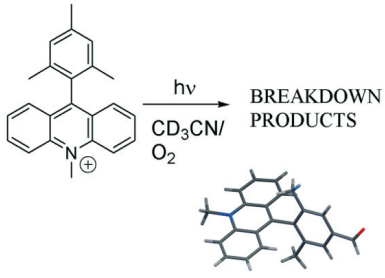
Keywords: Cyclophanes / [*m.n*]Paracyclophanes / Transannular reactions / Regioselectivity / Acylation / Aromatic substitution / Elctrophilic substitution

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.

CONTENTS

Photochemistry

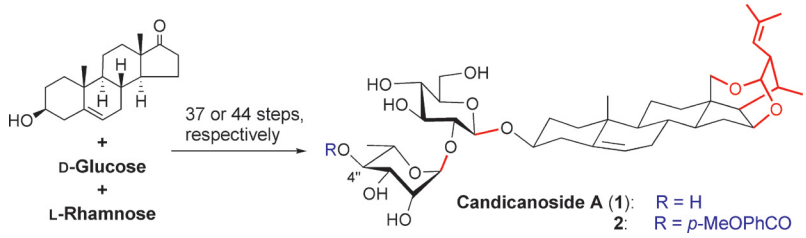
Keywords: Acridinium cation / Degradation / Oxidation / Photochemistry / NMR spectroscopy



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

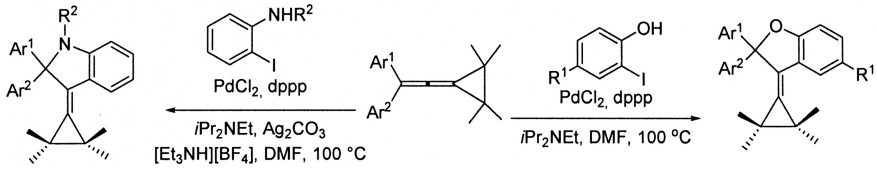
Keywords: Glycosylation / Steroids / Synthesis design / Natural products



The genus *Ornithogalum* consists of garden lily plants indigenous to Southern Africa that contain steroid glycosides with remarkable cytostatic activities. Candicanoside A is a minor congener possessing an unprecedented 24(23→22)*abeo*-cholestane aglycon.

Cross-Coupling Reactions

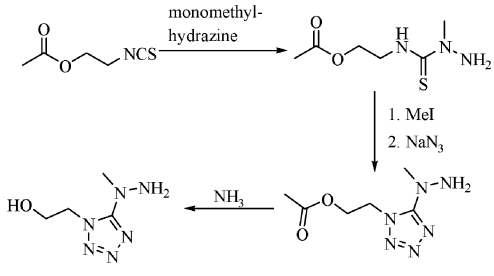
Keywords: Palladium / Cross-coupling / Annulation / Heterocycles / C–C coupling



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.

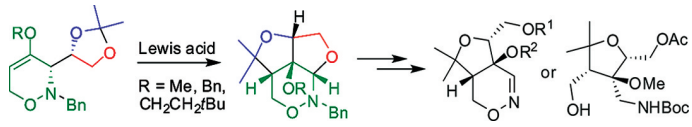
Nitrogen-Rich Polymers

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



The five-step formation of *N*-[1-(2-hydroxyethyl)-1*H*-tetrazol-5-yl]-*N*-methylhydrazine starting with ethanolamine is presented. Moreover, a nitrogen-rich, thermal stable polymer, with a nitrogen content of 33% was synthesized by using *N*-[1-(2-hydroxyethyl)-1*H*-tetrazol-5-yl]-*N*-methylhydrazine and hexamethylene diisocyanate.

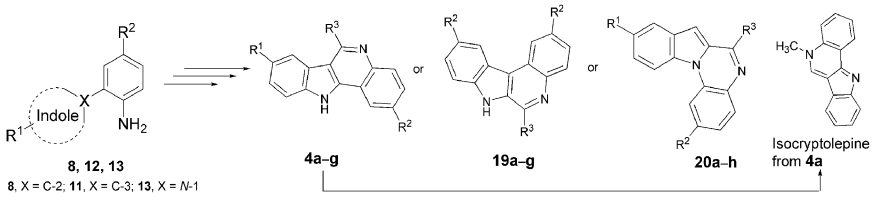
Enantiopure Heterocycles



1,3-Dioxolanyl-substituted 1,2-oxazines rearrange under Lewis acidic conditions to provide novel tricyclic products with complex skeleton. Reductive transformations of these tricycles allow the synthesis of a range of enantiopure heterocycles.

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.

Keywords: Cyclization / Natural products / Polycycles / Nitrogen heterocycles

* Author to whom correspondence should be addressed.

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

