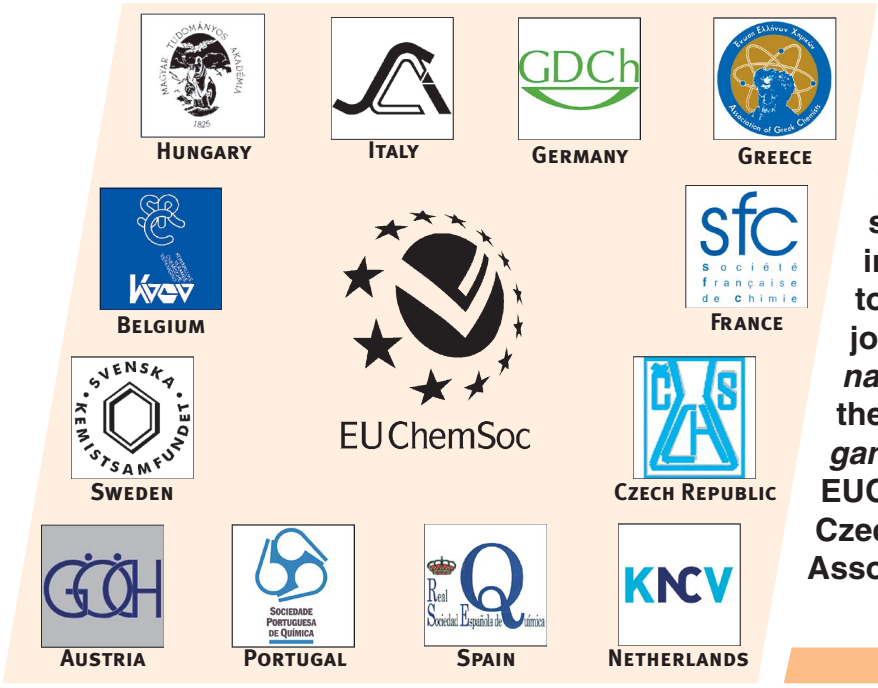
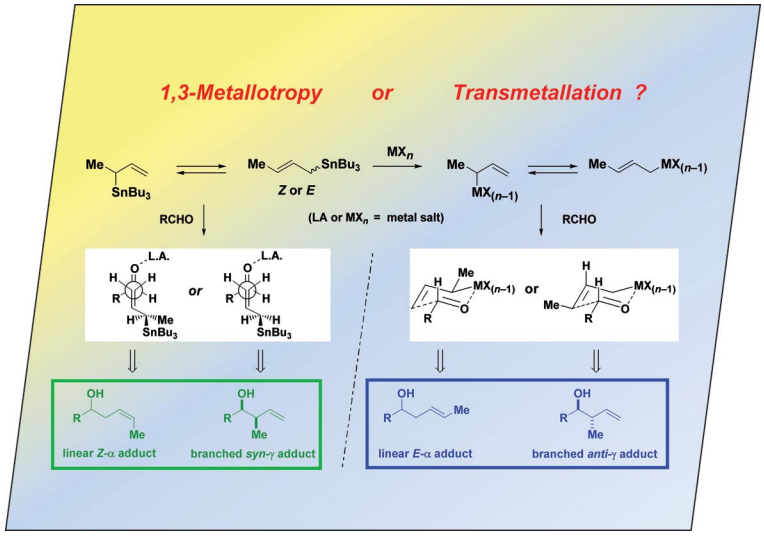


The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry.* Three further EUChemSoc Societies (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows the different pathways that can be involved in the reaction of crotyltins with aldehydes in the presence of metal salts. Depending on the experimental conditions, the crotyltins can isomerize through 1,3-metallotropy or transmetallate with metal salts. The ratio of *E*/*Z* linear homoallylic alcohols and the ratio of *syn*/*anti* branched homoallylic alcohols are used to discriminate between these pathways. Details are discussed in the article by F. Zammattio, J.-P. Quintard et al. on p. 1681ff.



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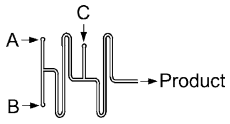
MICROREVIEW

Synthetic Methodology



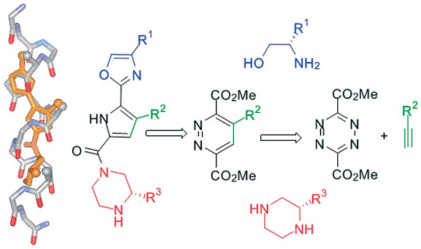
Keywords: Microreactors / Flow reactors / Methodology / Organic synthesis

It is the aim of this Microreview to provide the reader with an overview of recent advances made within the field of continuous-flow synthesis and highlight, in particular for those new to the field, examples that illustrate the intrinsic benefits associated with this rapidly growing area of organic synthesis.

SHORT COMMUNICATIONS

α-Helix Mimetics

Keywords: Helical structures / Mimetics / Inverse electron demand Diels–Alder reactions / Nitrogen heterocycles



The design and synthesis of nonpeptidic α-helix mimetics based on a tricyclic oxazole–pyrrole–piperazine scaffold is described. The scaffolds present both a hydrophobic surface for recognition and a hydrophilic edge that is rich in hydrogen-bond donors and acceptors.

Functionalized Tetrahydrothiophenes

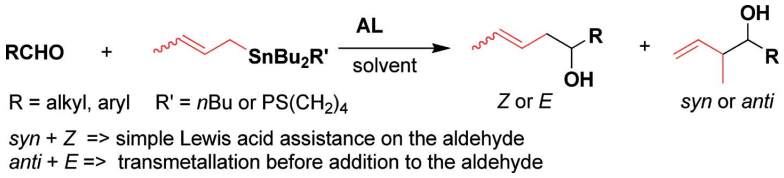
Keywords: Thiolesters / Ylides / Ammonium salts / Sulfur heterocycles

A novel intramolecular reaction of thiolesters with nitrogen ylides is presented, which leads to the formation of a functionalized tetrahydrothiophene skeleton through a 1,2-thiolate shift.

FULL PAPERS

Crotylation Mechanisms

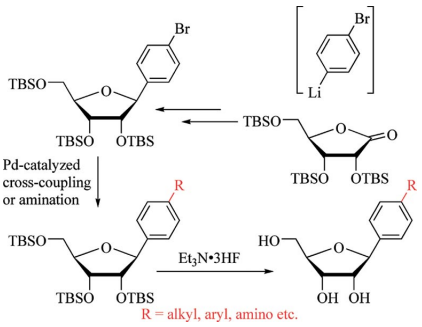
Keywords: Aldehydes / Allylation / Diastereoselectivity / Regioselectivity / Reaction mechanisms



The crotylation of aldehydes by crotyltins is highly dependent on the nature of the aldehyde, metal salt and solvent. By using $CeCl_3/7H_2O/NaI$, *Z*-linear α adducts (crotyltributyltin) and *syn*-branched γ adducts (polymer-supported crotyltin) are obtained. By using InX_3, the reaction is Lewis acid assisted in CH_2Cl_2 but moves to a transmetallation process in MeCN with a preference for the *E*-α adduct and the *anti*-γ adduct.

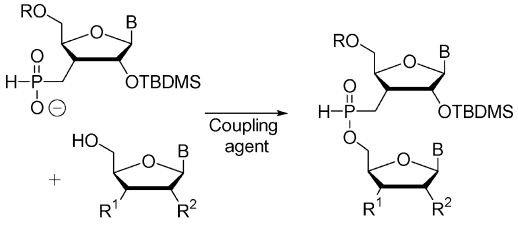
Benzene C-Ribonucleosides

A modular and efficient synthesis of a series of diverse 4- and 3-substituted benzene and aniline C-ribonucleosides was developed on the basis of Pd-catalyzed cross-coupling and amination reactions of protected bromophenyl C-nucleosides.



Keywords: Nucleosides / Cross-coupling / Amination / Arene

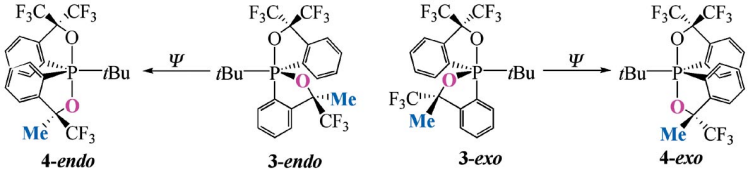
Oligonucleotide Analogues



Several classes of coupling agents for the formation of dinucleoside 3′-*C*-methylene-phosphinates were investigated with respect to rate and side reactions.

Keywords: Oligonucleotides / Nucleotides / Phosphinates / Phosphonates / Methylenephosphonates / Condensation reactions

Anti-Apicophilic Phosphoranes

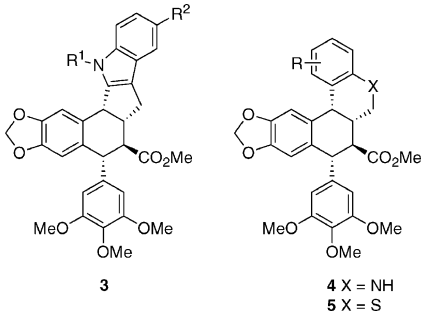


Diastereomeric anti-apicophilic phosphoranes (*O*-equatorial phosphoranes) have been found to undergo stereospecific pseudorotation to different *O*-apical diastereomers.

Keywords: Anti-apicophilicity / Pseudorotation / Phosphoranes / Stereospecificity / Oxidation

Friedel–Crafts-Type Cyclization

The synthesis of a 1-aryltetralin privileged-structure-based library of novel angular heterocyclic lignans is described. Indolotetralins **3**, tetrahydroquinolinotetralins **4**, and thiochromanotetralins **5** were obtained from the methyl ester of thuriferic acid **2** according to a three-step procedure involving an $InCl_3$-catalyzed Friedel–Crafts-type cyclization as the key step.



Keywords: Friedel–Crafts cyclization / Heterocyclic lignans / Indium / Michael addition / Privileged structures

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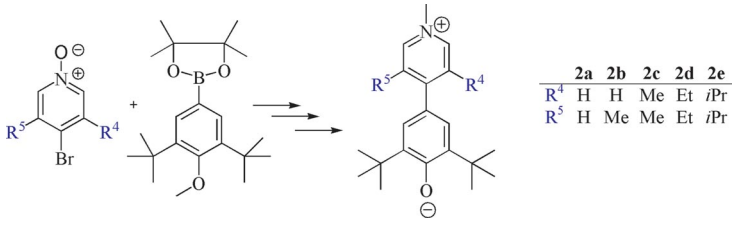
Pyridinium Phenolate Betaines

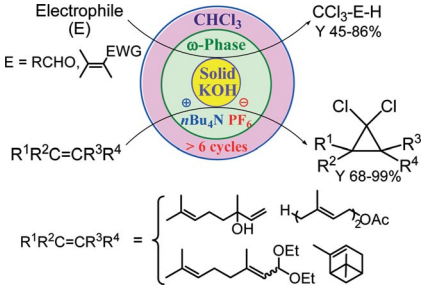


Efficient syntheses of chromophores for quadratic optics by using a Suzuki cross-coupling reaction between 4-bromopyridine *N*-oxides and *tert*-butylated boronic ester are described.

Keywords: Donor–acceptor systems / Zwitterions / Nonlinear optics / Cross-coupling / Chromophores / N heterocycles

Recoverable Phase-Transfer Catalyst

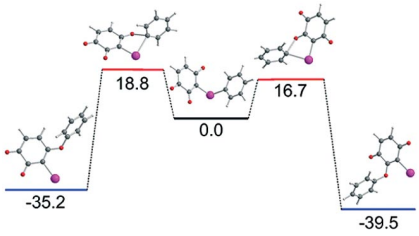
Tetraalkylammonium salts bearing PF_6^- and BF_4^- anions have been recognized as recoverable phase-transfer catalysts for the synthesis of 1,1-dichlorocyclopropane and α-(trichloromethyl)carbinol derivatives from alkenes or aldehydes in the heterogeneous system KOH(s)/$CHCl_3$. The catalysts retained their catalytic activity over several reaction cycles.



Keywords: Phase-transfer catalysis / Dichlorocyclopropanation / Ionic liquids / Fluorinated anions / Heterogeneous reactions

Ylide Rearrangements

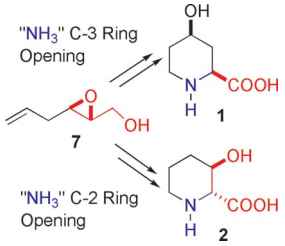
Theoretical calculations predict that ketene formation in phenyliodonium ylides of hydroxyquinones is a more favorable reaction path than the phenyl-group migration path observed in analogous cyclic ylides. This is in excellent agreement with experimental data. Both rearrangements follow a single-step concerted mechanism via different transition states.



Keywords: Density functional calculations / Transition states / Ylides / Quinones

Chiral Unsaturated Epoxides

Enantioselective routes to both enantiomers of *cis*-4-hydroxypipecolic acid (**1**) and *trans*-3-hydroxypipecolic acid (**2**) are described. The regioselective C-3 ring opening of **7** leads to **1**, whereas C-2 ring opening leads to **2**. This chemistry was also used in the preparation of *trans*-3-hydroxy-2-hydroxymethylpiperidine and the natural product baikiain.



Keywords: Epoxidation / Asymmetric synthesis / Ring-opening / Natural products

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CORRECTION

If not otherwise indicated in the article, papers in issue 9 were published online on March 4, 2008