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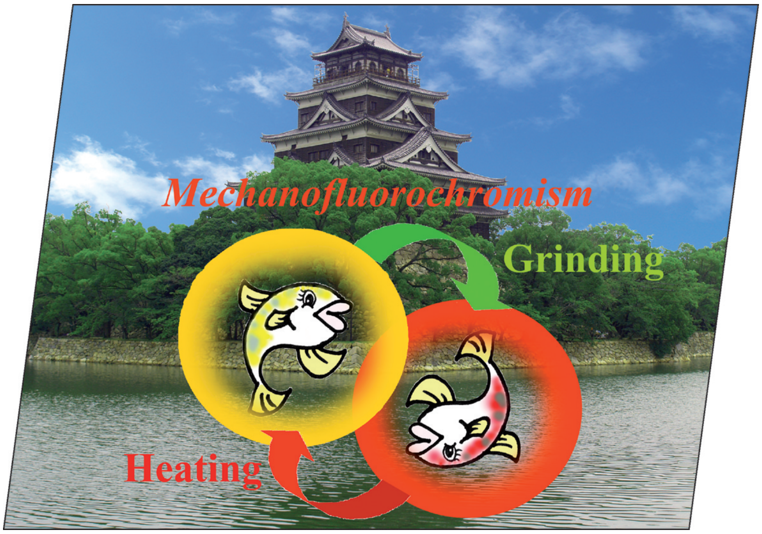
A union formed by chemical societies in Europe (ChemPubSoc Europe) has taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further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

COVER PICTURE

The cover picture shows "mechanofluorochromism" of a new class of donor-π-acceptor-type fluorescent dyes; a series of benzofuro[2,3-*c*]oxazolo[4,5-*a*]carbazole-type fluorophores show fluorescent color change with a remarkable enhancement in fluorescence quantum yield caused by mechanical stress and reversion to the original fluorescent color by heating or exposure to solvent vapor. Details are discussed in the article by Y. Harima et al. on p. 5321ff. The background shows the Hiroshima Castle, called the "Carp Castle" in Hiroshima, Japan, which was the castle of the *daimyo* (feudal lord) of the Hiroshima *han* (feudal clan), constructed in 1589–1599.



CONTENTS

MICROREVIEW

Microwave-Assisted Cycloaddition

M. Pineiro,
T. M. V. D. Pinho e Melo* 5287–5307

Microwave-Assisted 1,3-Dipolar Cycloaddition: an Eco-Friendly Approach to Five-Membered Heterocycles

This review focuses on the more recent developments in microwave-assisted 1,3-dipolar cycloadditions, with particular emphasis on aspects relating to efficiency and to regio- and stereoselectivity.

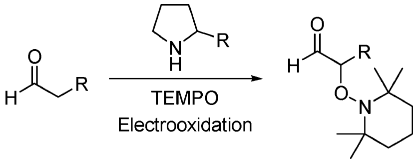
Keywords: Microwave chemistry / Cycloaddition / 1,3-Dipolar cycloaddition / Heterocycles / Fullerenes / Nanotubes

SHORT COMMUNICATIONS

Green Catalysis

N.-N. Bui, X.-H. Ho, S.-i. Mho,
H.-Y. Jang* 5309–5312

Organocatalyzed α-Oxyamination of Aldehydes Using Anodic Oxidation



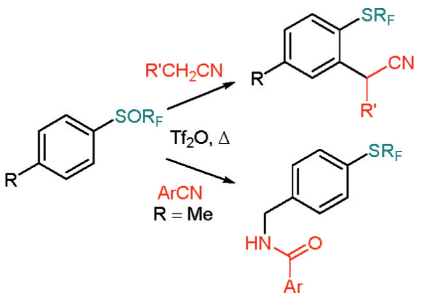
Anodic oxidation was used to promote the organocatalyzed α-oxyamination of aldehydes. Under galvanostatic conditions, cationic radical intermediates are formed as key intermediates. Cyclic voltammetry and control experiments were carried out to confirm the proposed intermediates and the mechanism of the reaction.

Keywords: Oxidation / Organocatalysis / Enamines / Oxyamination / Cyclic voltammetry

C–H Functionalization

Y. Macé, C. Urban, C. Pradet,
J.-C. Blazejewski,
E. Magnier* 5313–5316

Aromatic and Benzylic C–H Bond Functionalization Upon Reaction between Nitriles and Perfluoroalkyl Sulfoxides



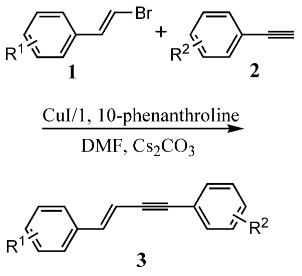
Unusual behavior was observed during the reaction of perfluoroalkyl sulfoxides, activated by trifluoromethanesulfonic anhydride, with nitriles under moderate thermal conditions. Depending on the reactants, either *ortho* C-alkylation or benzylic *N*-alkylation occurs by C–H bond functionalization with concomitant reduction of the sulfoxide group.

Keywords: Rearrangement / C–H activation / Fluorine / Sulfur / Nitriles / Elimination

Copper Catalysis

Y. Y. Liu, J. G. Yang,
W. L. Bao* 5317–5320

Palladium-Free Synthesis of Conjugated Enynes by Direct Olefination of Terminal Alkynes Using Vinyl Bromides



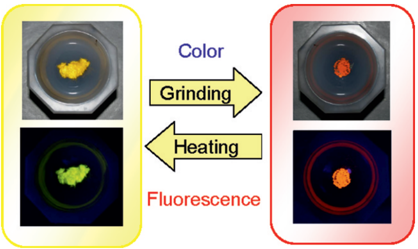
A series of conjugated enynes were successfully synthesized by the direct copper-catalyzed coupling reaction of vinyl bromides and alkynes. The reaction proceeds smoothly in DMF at 110 °C to give the corresponding products in good to excellent yields. Moreover, the products were furnished as specific *E* isomers, as the stereochemistry of the vinyl bromides was retained.

Keywords: Conjugation / Enynes / Alkynes / Copper / Olefination

FULL PAPERS

Mechanofluorochromism

A new class of donor-π-acceptor-type fluorescent dyes displaying mechanofluorochromism was found; a series of benzofuro[2,3-*c*]oxazolo[4,5-*a*]carbazole-type fluorophores show a fluorescent color change with remarkable enhancement of fluorescence quantum yield caused by mechanical stress and reversion to the original fluorescent color by heating or exposure to solvent vapor.



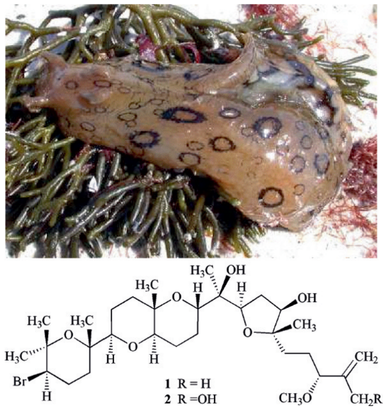
Y. Ooyama, Y. Kagawa, H. Fukuoka, G. Ito, Y. Harima* **5321–5326**

Mechanofluorochromism of a Series of Benzofuro[2,3-*c*]oxazolo[4,5-*a*]carbazole-Type Fluorescent Dyes

Keywords: Mechanofluorochromism / Fluorescence / Dyes/pigments / Pi interactions / Amorphous solids

Squalene-Derived Bromotriterpenes

Two novel triterpenoids, aplysqualenols A and B, have been isolated from Caribbean specimens of the anaspidean mollusk *Aplysia dactylomela*. The structures of **1** and **2**, including their relative stereochemistries, were determined mainly by NMR spectroscopic techniques aided by quantum mechanical calculations of NMR properties (QM-NMR).



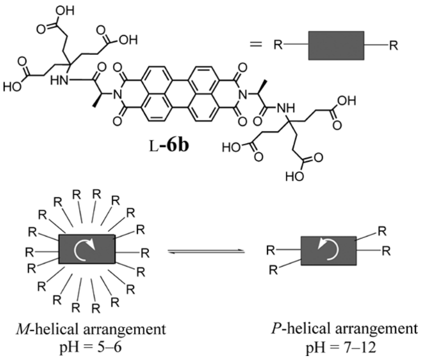
B. Vera, A. D. Rodríguez,* E. Avilés, Y. Ishikawa **5327–5336**

Aplysqualenols A and B: Squalene-Derived Polyethers with Antitumoral and Antiviral Activity from the Caribbean Sea Slug *Aplysi-a dactylomela*

Keywords: *Aplysia dactylomela* / Aplysqualenols A and B / Natural products / Structure elucidation / Polyethers / Biological activity

Chiral Superstructures

The synthesis and aggregation studies of covalently linked highly water-soluble chiral perylenediimides (PDIs) with amino acids in imide position as chiral subunits is presented. The subunits are coupled to Newkome-type dendrimers as hydrophilic groups. For the 1st generation alanine compound **6b** pH- and concentration-dependent chiral superstructures were determined.



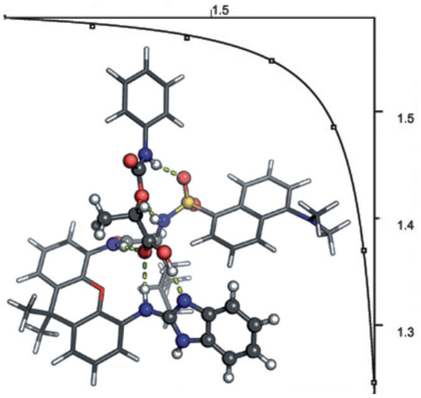
C. D. Schmidt, C. Böttcher, A. Hirsch* **5337–5349**

Chiral Water-Soluble Perylenediimides

Keywords: Perylene / Dendrimers / Chirality / Circular dichroism / Aggregation / Fluorescence / Supramolecular chemistry

Enantioselective Receptors

Dalexabe is a chiral receptor able to associate certain carboxylic acids. Only in the cases of guests with high acidity are the association constants in the range 10^4 to $10^5\ \mathrm{M}^{-1}$. The presence of the dansyl moiety in dalexabe makes it possible to utilize this compound as a sensor. Finally, the extensive H-bonding network of dalexabe allows chiral discrimination of carbamoyl lactic acid.



F. M. Muñiz, L. Simón, V. Alcázar, C. Raposo, Á. L. Fuentes de Arriba, J. R. Morán* **5350–5354**

A Highly Enantioselective Receptor for Carbamoyl Lactic Acid

Keywords: Molecular recognition / Enantioselectivity / Sensors / Carboxylic acids / Receptors

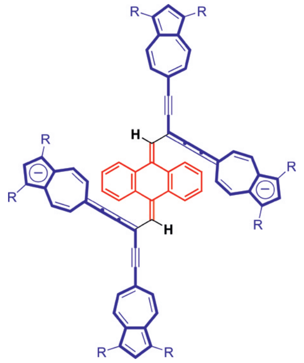
CONTENTS

Stabilized Electrochromics

S. Ito,* T. Iida, J. Kawakami, T. Okujima, N. Morita **5355–5364**

Towards the Preparation of Electrochromic Materials with Strong Absorption in the Near-Infrared Region: Synthesis and Redox Behavior of Azulene-Substituted Enediyne Scaffolds Connected by a 9,10-Anthracenediyl Spacer

Keywords: Enynes / Cyanines / Carbanions / Redox chemistry / Electrochemistry



Enediyne scaffolds connected by a 9,10-anthracenediyl spacer as a redox-active substructure with 6-azulenyl groups as π-electron-accepting groups in their periphery have been prepared. An electrochromic analysis revealed that these products developed strong absorption in the near-IR region corresponding to the formation of stabilized dianionic species.

Ferrocene Conjugates

V. S. Sudhir, N. B. R. Baig, S. Chandrasekaran* **5365–5372**

Convenient Synthesis of Ferrocene Conjugates Mediated by Benzyltriethylammonium Tetrathiomolybdate in a Multi-Step Tandem Process

Keywords: Sandwich complexes / Ferrocene conjugates / Cyclic voltammetry / Amino acids / Carbohydrates

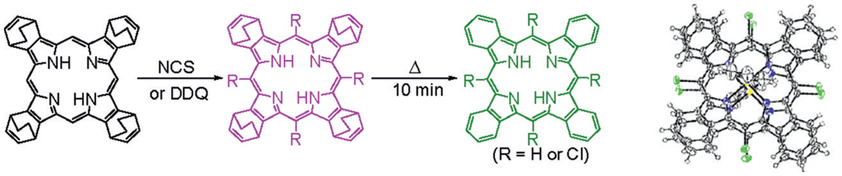
Monovalent and divalent ferrocene conjugates were synthesized employing Michael addition as the key step in a tandem process mediated by benzyltriethylammonium tetrathiomolybdate. Acryloylferrocene and 1,1′-diacryloylferrocene were employed as ferrocene labels. A few conjugates were characterized by cyclic voltammetry.

Porphyrinoids

S. Ito,* L. T. Phong, T. Komatsu, N. Igarashi, S. Otsubo, Y. Sakai, A. Ohno, S. Aramaki, Y. Tanaka, H. Uno,* T. Oba, K. Hiratani **5373–5382**

First Synthesis of *meso*-Chlorinated Tetrabenzoporphyrins

Keywords: Porphyrinoids / Halogenation / Aromatic substitution / Dyes/Pigments / Cleavage reactions



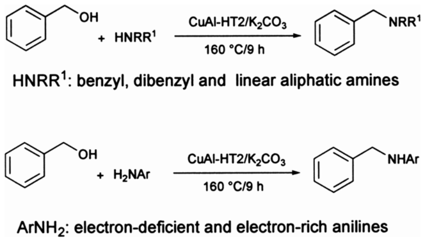
meso-Chlorinated bicyclo[2.2.2]octadiene-fused porphyrins have been synthesized by chlorination of the free base TBCODP using NCS or DDQ. The Cl_nTBCODPs were converted into tetrabenzoporphyrins (TBPs) in 100% yields by retro-Diels–Alder reaction. The introduction of chlorine at the *meso* positions of TBCODP and TBP drastically changed their electronic and structural properties.

Alcohol Amination

P. R. Likhar,* R. Arundhathi, M. L. Kantam, P. S. Prathima **5383–5389**

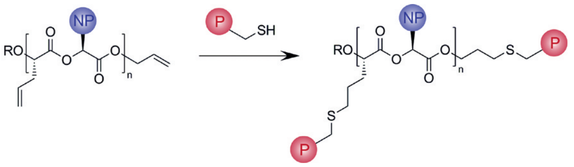
Amination of Alcohols Catalyzed by Copper-Aluminium Hydrotalcite: A Green Synthesis of Amines

Keywords: Heterogeneous catalysis / Hydrotalcite / Amines / Amination / Alcohols / Anilines



Copper-aluminium hydrotalcite (CuAl-HT)/K_2CO_3 has been employed in the activation of various benzyl alcohols with benzylamines to afford the corresponding amines in good to high yields in a one-pot and straightforward fashion. The process was further extended to amination of alcohols with anilines.

Foldamer Synthesis



A new strategy for the synthesis of uniform, sequence-defined hydrophilic/hydrophobic patterned oligo(α-hydroxy acid)s is described. The proposed approach involves the post-modification of a reactive oligoester precursor via free-radical addition of ω-functional thiol reagents.

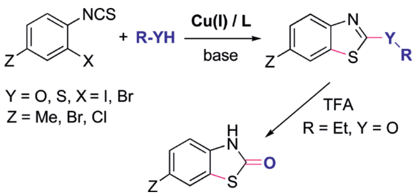
N. Franz, L. Menin,
H.-A. Klok* 5390–5405

A Post-Modification Strategy for the Synthesis of Uniform, Hydrophilic/Hydrophobic Patterned α-Hydroxy Acid Oligomers

Keywords: Oligomerization / Protecting groups / Hydroxy acids / Post-modification / Mass spectrometry

Cascade Reaction

A cascade process for the preparation of 2-substituted 1,3-benzothiazoles from 2-haloaryl isothiocyanates and oxa or thia nucleophiles by a Cu-catalyzed, intramolecular, C–S bond formation has been developed. Additionally, 2-oxobenzothiazoles having an alkyl group allow easy access to benzothiazolones.

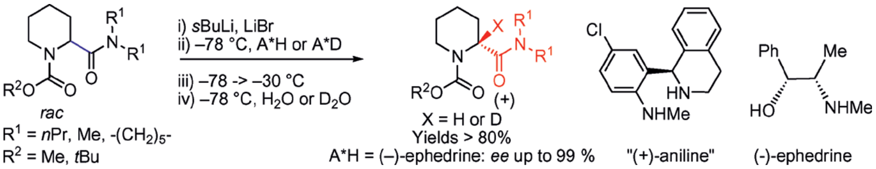


S. Murru, P. Mondal, R. Yella,
B. K. Patel* 5406–5413

Copper(I)-Catalyzed Cascade Synthesis of 2-Substituted 1,3-Benzothiazoles: Direct Access to Benzothiazolones

Keywords: Cascade reaction / Benzothiazole / Copper catalysis / Sulfur heterocycles / Synthetic methods / Solvent effects

Enantioselective Protonation



An in-depth study of the enantioselective protonation of pipecolamide lithium enolates showed unequivocally the crucial role played by the hydrolyzing agent when the chiral source had no acidic proton. This deracemization with the aid of inexpensive and commercially available ephedrines is a good alternative for the resolution of pipecolic acid derivatives.

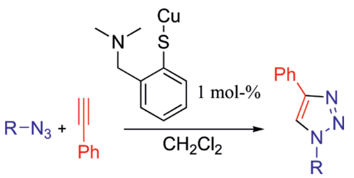
J. Martin, J.-C. Plaquevent, J. Maddaluno,
J. Rouden, M.-C. Lasne 5414–5422

Efficient Deracemization of Pipecolic Acid Amides through Enantioselective Protonation of Their Lithium Enolates: Insights into the Origin of the Transferred Proton

Keywords: Asymmetric synthesis / Protonation / Deracemization / Amides / Lithium enolates / Enantioselectivity

Copper-Catalysed Huisgen Reaction

A new copper(I) complex is shown to be an efficient catalyst for the copper-catalysed Huisgen reaction between azides and alkynes. The complex catalysed the decoration of dendrimers in organic solvents.



P. Fabbrizzi,* S. Cicchi,* A. Brandi,
E. Sperotto, G. van Koten 5423–5430

An Efficient (2-Aminoarenethiolato)copper(I) Complex for the Copper-Catalysed Huisgen Reaction (CuAAC)

Keywords: Azides / Alkynes / Click chemistry / Cycloaddition / Dendrimers / N ligands

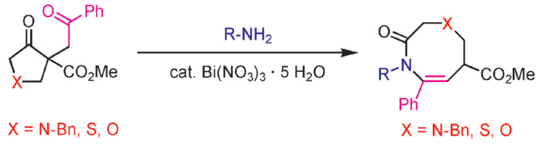
CONTENTS

N,N-, *S,N-*, and *O,N-*Heterocycles

R. Pflantz, J. Sluiter, M. Krička, W. Saak, C. Hoenke, J. Christoffers* 5431–5436

A New Synthesis of Sulfur-, Nitrogen- and Oxygen-Containing Eight-Membered Ring Lactams

Keywords: Lactams / Heterocycles / Sulfur compounds / Medium ring compounds / Ring expansion / Amines



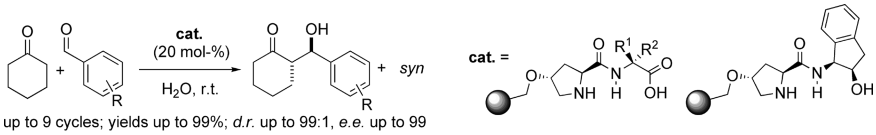
1,4-Diazocine, 1,4-thiazocine, and 1,4-oxazocine derivatives can be prepared by $Bi(NO_3)_3$-catalyzed ring expansion of pyrrolidine, tetrahydrothiophene, and tetrahydrofuran derivatives in the presence of primary amines.

Supported Organocatalysts

M. Gruttadauria,* A. M. P. Salvo, F. Giacalone, P. Agrigento, R. Noto 5437–5444

💻 Enhanced Activity and Stereoselectivity of Polystyrene-Supported Proline-Based Organic Catalysts for Direct Asymmetric Aldol Reaction in Water

Keywords: Peptides / Organocatalysis / Amino acids / Supported catalysts / Solid-phase synthesis



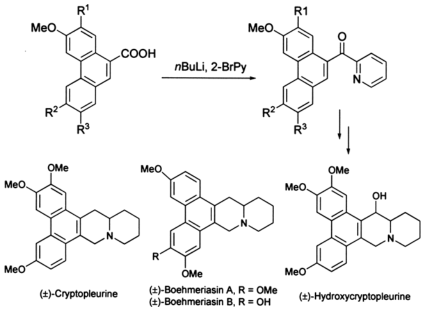
Can supported organocatalysts be more active or stereoselective with respect to the unsupported catalysts? Polystyrene-based proline dipeptide catalysts were found to be more active, as they do not need the presence of additives, whereas the polystyrene-based prolinamide catalyst was found much more stereoselective. In each case, these catalysts can be reused without loss of activity.

Alkaloid Synthesis

M. Cui, Q. Wang* 5445–5451

💻 Total Synthesis of Phenanthro-Quinolizidine Alkaloids: (±)-Cryptopleurine, (±)-Boehmeriasin A, (±)-Boehmeriasin B and (±)-Hydroxycryptopleurine

Keywords: Alkaloids / Total synthesis / Structure elucidation / Natural products / Nitrogen heterocycles



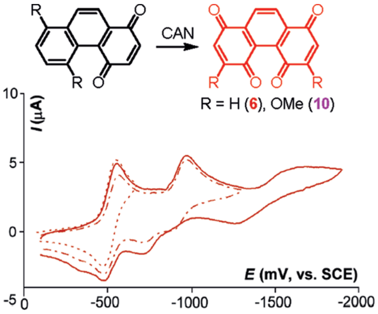
The total synthesis of the phenanthro-quinolizidine alkaloids (±)-cryptopleurine, (±)-boehmeriasin A, (±)-boehmeriasin B and (±)-hydroxycryptopleurine is described. The quinolizidine core was constructed by the coupling of the phenanthrene ring with 2-lithiopyridine followed by heterocycle reduction and Pictet–Spengler cyclization.

Phenanthrenediquinones

K. Krohn,* A. Aslan, I. Ahmed, G. Pescitelli, T. Funaioli 5452–5457

Novel 1,4,5,8-Phenanthrenediquinones and Unusual Deoxygenation with Trimethylsilyl Iodide

Keywords: Quinones / Ceric ammonium nitrate / Redox chemistry / Cyclic voltammetry / Calculations



The phenanthrenediquinones **6** and **10** were obtained nearly quantitatively from their corresponding hydroquinone methyl ethers **4** and **7** by using ceric ammonium nitrate as the oxidant. The cyclic voltammograms of the phenanthrene diquinones **6** and **10** were studied and rationalized by Hückel Molecular Orbital calculations.

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* Author to whom correspondence should be addressed.

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