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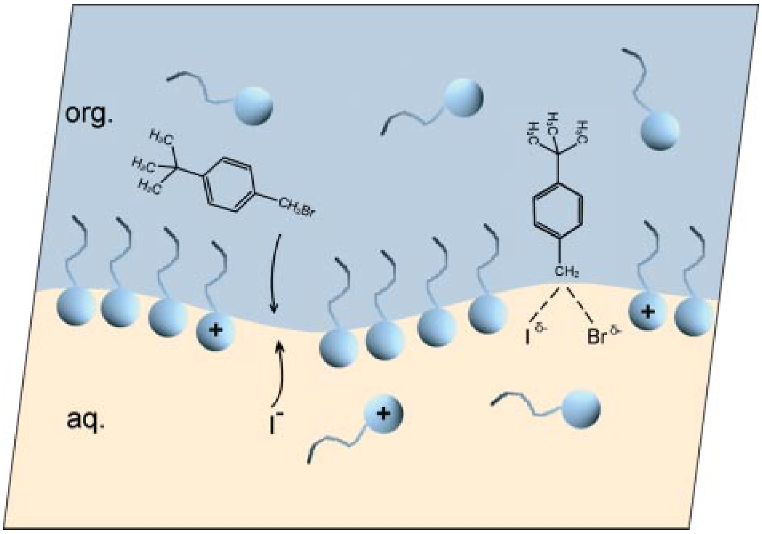
The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry.* Three further EUChemSoc Societies (Austria, Czech Republic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

COVER PICTURE

The cover picture shows how a lipophilic reactant, 4-*tert*-butylbenzyl bromide, meets a hydrophilic reactant, an iodide ion, at the oil-water interface of a microemulsion. The interface is covered by a monolayer of nonionic and cationic surfactants. Details are presented in the Microreview by K. Holmberg on p. 731ff. (Mr. Tomasz Witula is acknowledged for drawing the figure.)



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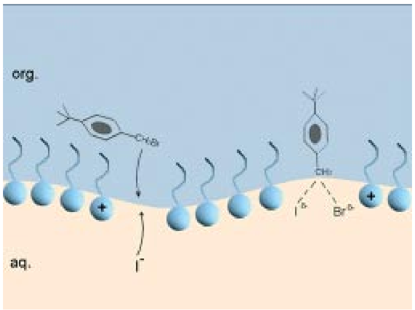
MICROREVIEW

Microemulsions

K. Holmberg* 731–742

Organic Reactions in Microemulsions

Keywords: Microemulsion / Surfactant / Organic synthesis / Organic reaction / Nucleophilic substitution / Phase-transfer catalysis



Microemulsions overcome incompatibility of reactants: Microemulsions have proven useful as media to overcome the reactant incompatibility that one often encounters in organic synthesis. Running the reaction in a microemulsion should be seen as an alternative to phase transfer catalysis. The two approaches can also be combined, giving very high reaction rates.

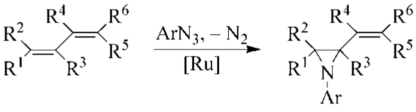
FULL PAPERS

Aziridination of Conjugated Dienes

C. Piangiolino, E. Gallo,*
A. Caselli, S. Fantauzzi, F. Ragaini,
S. Cenini 743–750

The [Ru(CO)(porphyrin)]-Catalyzed Synthesis of *N*-Aryl-2-vinylaziridines

Keywords: Aryl azides / Aziridines / Ruthenium / Porphyrins / Homogeneous catalysis



[Ru] = [Ru(CO)(porphyrin)]

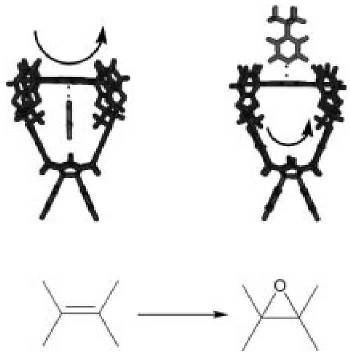
[Ru(CO)(porphyrin)] complexes were found to catalyze the aziridination of conjugated dienes by aryl azides. The reaction proceeds with high chemoselectivity to give *N*-aryl-2-vinylaziridines.

Epoxidation Catalysts

J. A. A. W. Elemans,*
E. J. A. Bijsterveld, A. E. Rowan,*
R. J. M. Nolte 751–757

Manganese Porphyrin Hosts as Epoxidation Catalysts – Activity and Stability Control by Axial Ligand Effects

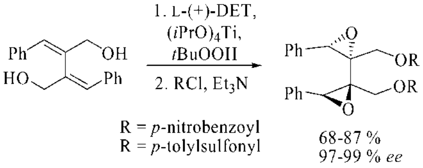
Keywords: Manganese porphyrins / Supramolecular chemistry / Host–guest chemistry / Catalysis / Epoxidation



Axial ligands in control of activity and stability: The activity of a manganese porphyrin host can be significantly enhanced by strong complexation of an axial ligand within its cavity, while binding of a bulky axial ligand to the outside of the host can prevent its premature decomposition.

Double Asymmetric Epoxidation

The double asymmetric Katsuki−Sharpless epoxidation of a conjugated diallyl alcohol proceeds with high stereoselectivity and gives epoxides with interesting chemical properties.

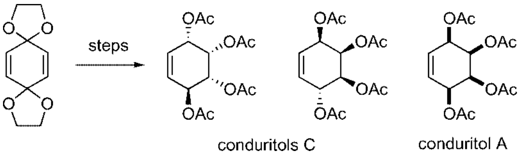


V. Bilenko, H. Jiao, A. Spannenberg, C. Fischer, H. Reinke, J. Kösters, I. Komarov, A. Börner* .... **758−767**

A New Target for Highly Stereoselective Katsuki−Sharpless Epoxidation − One-Pot Synthesis of C_2-Symmetric 2,2′-Bioxiranes

Keywords: Epoxidation / Asymmetric catalysis / Bis-epoxides / Diols / ab initio calculation

Stereochemistry and Structure



p-Benzoquinone bis(ethylene acetal) is converted into both enantiomers of conduritol C tetraacetates and of *meso*-conduritol D tetraacetate by sequential dihydroxylation, selective monodeprotection, reduction, enzymatic resolution, deprotection, reduction and acetylation.

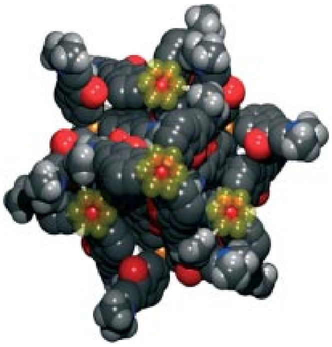
M. Lang, T. Ziegler* .... **768−776**

Synthesis of Both Enantiomers of Conduritol C Tetraacetate and of *meso*-Conduritol D Tetraacetate by Oxidation of Benzoquinone Bis(ethylene acetal)

Keywords: *p*-Benzoquinone ethyleneacetal / Epoxidation / Dihydroxylation / Coduritols

Supramolecular Structures

Tris[3-(3-dimethylamino-1-oxoprop-2-enyl)phenyl]phosphane oxide crystallizes from wet acetone with the formation of a supramolecular structure of two interpenetrating networks and the inclusion of guest molecules in two different cavities.



A. Reis, Y. Sun, G. Wolmershäuser, W. R. Thiel* .... **777−781**

Supramolecular Structures by Hydrogen Bonding: The Solid-State Structure of Tris[3-(3-dimethylamino-1-oxoprop-2-enyl)phenyl]phosphane Oxide

Keywords: Solid-state structures / Hydrogen bonds / Phosphane oxides

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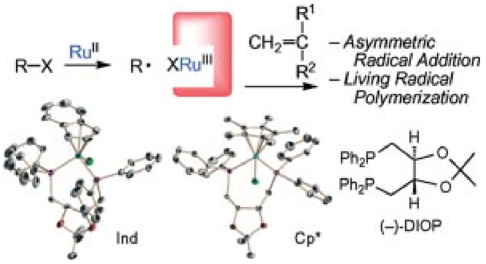
Radical Reactions



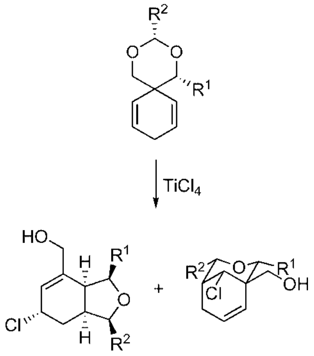
**Y. Iizuka, Z. Li, K. Satoh, M. Kamigaito,*
Y. Okamoto, J.-i. Ito,
H. Nishiyama** **782–791**

Chiral (−)-DIOP Ruthenium Complexes for Asymmetric Radical Addition and Living Radical Polymerization Reactions

Keywords: Asymmetric catalysis / Radical reactions / Polymerization / Alkenes / Phosphane ligands

A series of ruthenium complexes with chiral phosphane ligands ($Ru_2Cl_4[(-)\text{-DIOP}]_3$, Ru(Ind)Cl[(−)-DIOP], and Ru(Cp*)Cl[(−)-DIOP] were synthesized, characterized by X-ray crystallography, and employed in asymmetric halogen transfer radical addition and metal-catalyzed living radical polymerization reactions of olefins.

Desymmetrisation of Cyclohexa-1,4-dienes



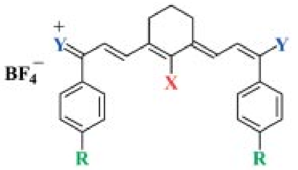
**M. C. Elliott,* N. N. E. El Sayed,
J. S. Paine** **792–803**

Diastereospecific Tandem Prins Cyclisation/Rearrangement Reactions for the Desymmetrisation of Cyclohexa-1,4-dienes

Keywords: Cyclohexadiene / Prins reaction / Wagner–Meerwein rearrangement / Desymmetrisation / Stereoselective

The Prins cyclisation has been used for the first time to desymmetrise a 1,4-diene. Products derived from both normal Prins and rearrangement pathways were obtained, all with complete stereocontrol.

Fluorescent Dyes



R = H, MeO, Ph, F, Cl, Br
or 4-R-C_6H_4 = β-naphthyl
Y = Me_2N, Et_2N or morpholino
and X = Cl
R = F, X = Y = morpholino

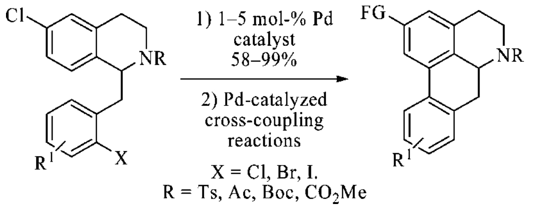
**V. Guieu, A. Izquierdo, S. Garcia-Alonso,
C. André, Y. Madaule,
C. Payrastre*** **804–810**

Fluorescent Streptocyanine Dyes: Synthesis and Photophysical Properties – Synthesis of a New Hemicarboxonium Salt

Keywords: Dyes / Fluorescence / Solvatochromism

A new series of nonacarbon chain streptocyanine dyes were synthesized from carboxonium salts by the action of amines. Their photophysical properties were evaluated to highlight that they all absorb around 700 nm and emit fluorescence above 720 nm. A new nonacarbon chain hemicarboxonium salt was also synthesized and fully characterized by X-ray crystallography.

Synthesis of Aporphines



Palladium-catalyzed direct arylation of aryl chlorides, bromides and iodides has been applied to the convergent preparation of aporphine analogues. A divergent synthesis of C2-substituted aporphines by reaction with benzodioxole, pyridine *N*-oxide and pyrazine *N*-oxide was also employed. We also describe enantioselective syntheses of (*R*)-nornuciferine and (*R*)-nuciferine.

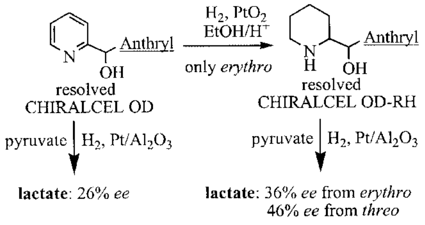
M. Lafrance, N. Blaquiere, K. Fagnou* **811–825**

Aporphine Alkaloid Synthesis and Diversification via Direct Arylation

Keywords: Aporphine alkaloids / Natural products / Palladium / Direct arylation / Homogeneous catalysis

Chiral Heterogeneous Hydrogenation

During chiral and heterogeneous hydrogenation of ethyl lactate over Pt/Al_2O_3 using (9-anthryl)(2-pyridyl)- and (9-anthryl)(2-piperidyl)methanols, it is observed that the *erythro* isomer is not necessarily the most efficient chiral modifier. In this case, this is probably because of the presence of the 9-anthryl group, which does not lead to higher enantioselectivities than that of the naphthyl group as one would expect.



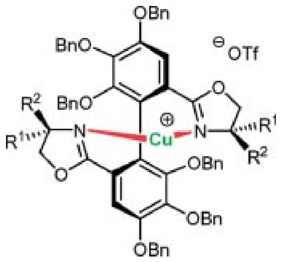
A. Solladié-Cavallo,* C. Marsol, K. Azyat, M. Roje, C. Welch, J. Chilenski, P. Taillasson, H. D'Orchymont **826–830**

Enantiopure (9-Anthryl)(2-piperidyl)- and (9-Anthryl)(2-pyridyl)methanols – Their Use as Chiral Modifiers for Heterogeneous Hydrogenation of Keto Esters over Pt/Al_2O_3

Keywords: Amino alcohols / Chiral resolution / Chiral modifiers / Hydrogenation

Asymmetric Catalysis

The synthesis of a number of new chiral copper(I) catalysts with an electron-rich biphenyl backbone and their application in the transition metal catalyzed enantioselective cyclopropanation is described.



K. Khanbabaee*, S. Basceken, U. Flörke **831–837**

Chiral 6,6′-Bis(oxazolyl)-1,1′-biphenyls as Ligands for Copper(I)-Catalyzed Asymmetric Cyclopropanation

Keywords: Chirality / Biaryls / Asymmetric catalysis / Enantioselectivity / Cyclopropanation

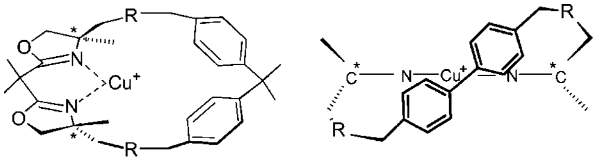
CONTENTS

Catalytic Cyclopropanation

T. Portada, M. Roje, Z. Raza, V. Čaplar, M. Žinić,* V. Šunjić **838–856**

Chiral Macrocyclic Bis(oxazoline) Cu^I Complexes – Structure/Stereoselectivity Relationships in Catalytic Cyclopropanations

Keywords: Bis(oxazolines) / Catalytic cyclopropanation / Copper(I) complexes / Diastereoselectivity / Macrocyclic ligands



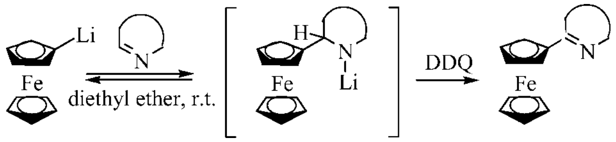
Macrocyclic Cu^I complexes, each possessing a chiral cavity and an incorporated C_2-symmetric bis(oxazoline) unit, were prepared and their catalytic properties in cyclopropanations of styrene with ethyl diazoacetate were assessed. One of the complexes gave a *trans*/*cis* diastereomeric ratio of 94:6 (*de* = 88 %), which represents the highest diastereoselectivity obtained to date for cyclopropanations catalyzed by the bis(oxazoline) class of complexes.

Azinylferrocenes from Lithioferrocene

O. N. Chupakhin,* I. A. Utepova, I. S. Kovalev, V. L. Rusinov, Z. A. Starikova **857–862**

Direct C–C Coupling of Ferrocenyllithium and Azaheterocycles by Nucleophilic Substitution of Hydrogen – Synthesis of Mono- and 1,1′-Diazinylferrocenes

Keywords: Ferrocenes / C–C coupling / Ligand design / Nucleophilic substitution



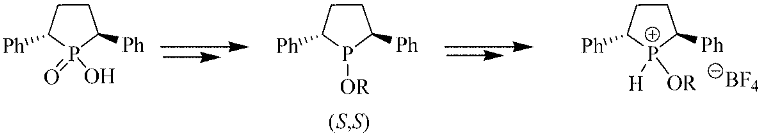
A versatile synthetic protocol for the direct C–C coupling of a ferrocene fragment with various azaheterocycles in the absence of metal catalysts by nucleophilic substitution of hydrogen is described. Mono- and 1,1′-diazinylferrocenes were obtained in good yields.

Phosphorus Chemistry

A. Galland, J. M. Paris, T. Schlama, R. Guillot, J.-C. Fiaud, M. Toffano* **863–873**

1-Alkoxy-2,5-diphenylphospholane and -phospholanium Salts in Rhodium-Catalyzed Asymmetric Hydrogenation

Keywords: Phosphorus heterocycles / P ligands / Ligand design / Asymmetric catalysis



A series of chiral enantiopure phosphinites were synthesized in four steps starting from phosphinic acid. New species were obtained as alkoxyphosphonium compounds. They can be used in asymmetric hydrogenation of functionalized alkenes.