JCCAT (21) 2423–2538 (1994)

JOURNAL OF THE CHEMICAL SOCIETY

Chemical Communications

Number 21
1994

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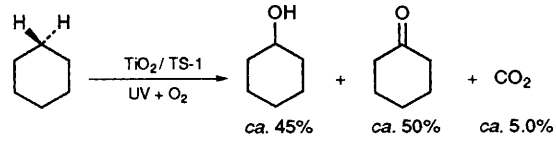
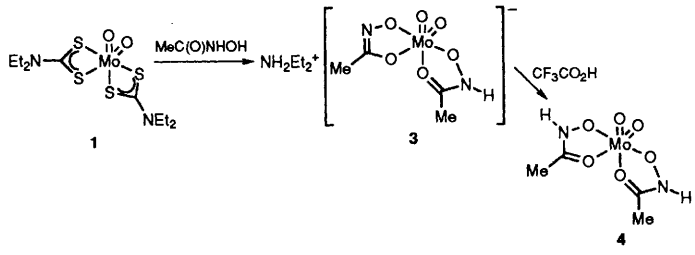
2423 **Catalytic Oxidation of Cyclohexane into Cyclohexanol and Cyclohexanone over a TiO_2/TS-1 System by Dioxygen under UV Irradiation**



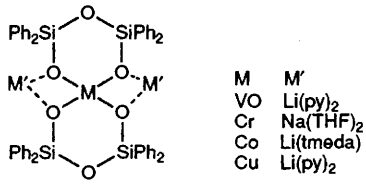
Gongxuan Lu, Huanxing Gao, Jishuan Suo, Shuben Li

2425 **Unexpected Formation of a Novel Mixed Hydroxamato/Hydroximato Complex**



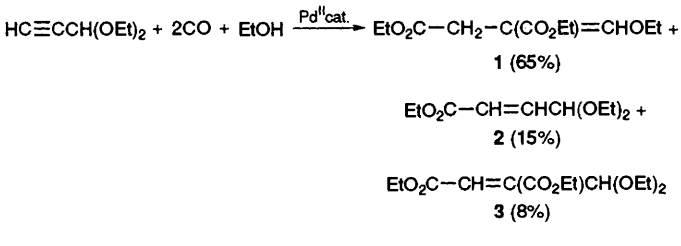
Shao Ping Lin, Masood A. Khan, Kenneth M. Nicholas

2427 **Synthesis and Structural Characterisation of the Cyclosiloxymagesium Compound $[(py)_2Li]_2$-μ-Mg[$\{Ph_2SiO\}_2O$][$\{Ph_2SiO\}_3O$] having Both Six- and Eight-membered Magnesiasiloxane Rings**



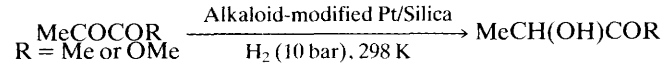
Majid Motevalli, Dipti Shah, Syed A. A. Shah, Alice C. Sullivan

2429 **Coupling of Oxidative and Reductive Processes: Catalytic Carbonylation of Acetals of Prop-2-ynal**



Alex Bonardi, Mirco Costa, Bartolo Gabriele, Giuseppe Salerno, Gian Paolo Chiusoli

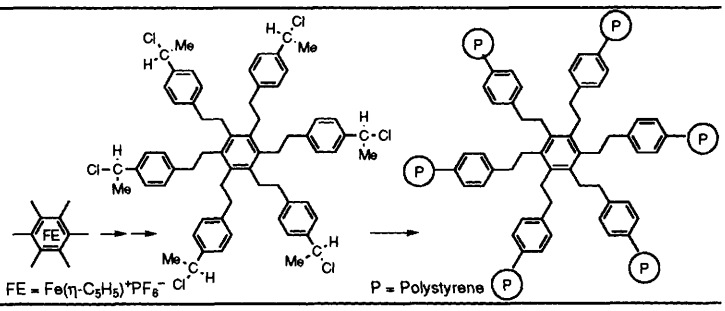
2431 **Novel Alkaloid Modifiers for Enantioselective Heterogeneous Catalysis**



Enantioselectivity in favour of *S*-product has been achieved using codeine, 7,8-dihydrocodeine, brucine and strychnine as modifiers

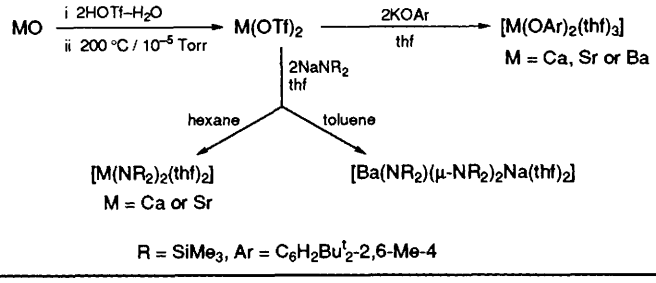
Stephen P. Griffiths, Peter Johnston, Wilhelmus A. H. Vermeer, Peter B. Wells

2433 **Hexaarm Star-Shaped Polystyrenes by Core-First Method**



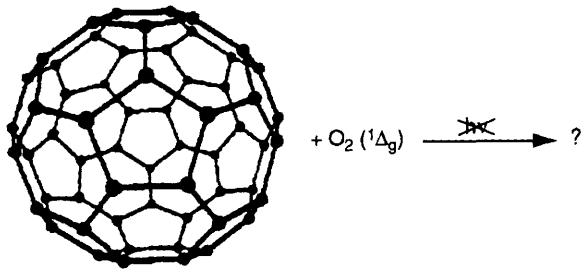
Eric Cloutet, Jean-Luc Fillaut, Yves Gnanou, Didier Astruc

2435 **A Novel High-yield Route to Organic Derivatives of Group 2 Metals; X-Ray Structure of $[\{Ba(OTf)_2\}_4(py)_{14}]\cdot py$ (OTf = OSO_2CF_3) and NMR Spectral Characterisation of $[Ba(NR_2)(\mu\text{-}NR_2)_2Na(thf)_2]$ (R = $SiMe_3$)**



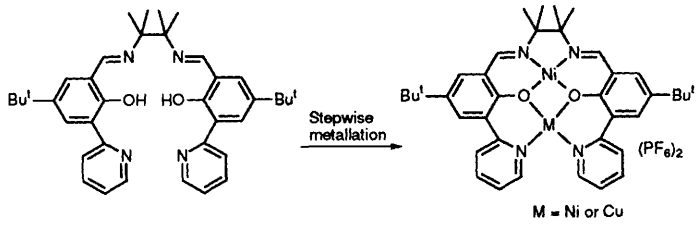
Andrew D. Frankland, Peter B. Hitchcock, Michael F. Lappert, Gerard A. Lawless

2437 **Reactivity of Fullerenes with Chemically Generated Singlet Oxygen**



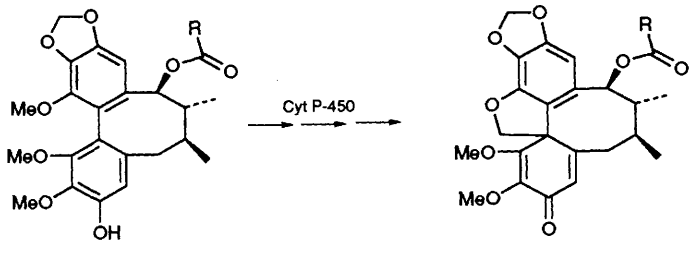
Libor Juha, Věra Hamplová, Jarmila Kodymová, Otomar Špalek

2439 **Synthesis of Novel Dinickel(II) and Nickel(II)–Copper(II) Bimetallic Complexes derived from an Acyclic Dinucleating Schiff Base–Pyridine Ligand**



Fung Lam, Ru-Ji Wang, Thomas C. W. Mak, Kin Shing Chan

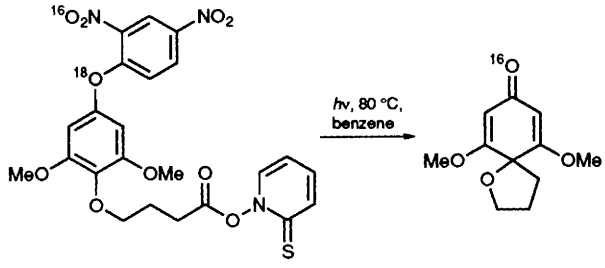
2441 **Biomimetic Spirocyclisation using Novel Intramolecular Radical Oxygenation; a Model for the Biosynthesis of the Interiorin Lignans**



Stuart P. Green, Donald A. Whiting

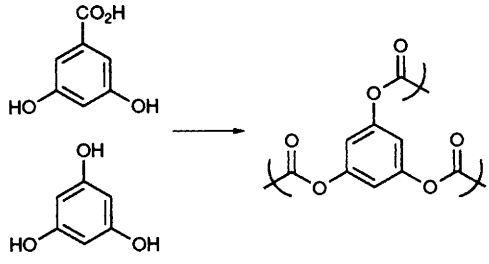
2443 **Mechanism of a Novel Spirocyclisation Reaction; Intramolecular Oxygen Transfer to Carbon Radicals by Nitro Groups**

Upendra P. Topiwala, Donald A. Whiting



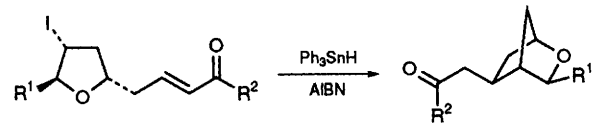
2445 **Characterisation of Aromatic Polyester Dendrimers by Matrix-assisted Laser Desorption Ionisation Mass Spectrometry**

Hardeep S. Sahota, Paul M. Lloyd, Stephen G. Yeates, Peter J. Derrick, Paul C. Taylor, David M. Haddleton



2447 **A Radical Cyclisation Approach to the 2-Oxabicyclo[2.2.1]heptane Ring System**

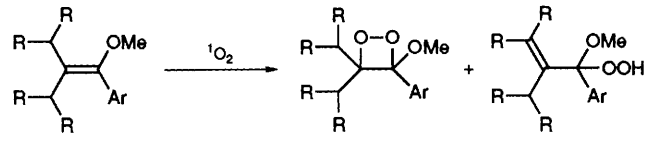
Duncan E. Shaw, Garry Fenton, David W. Knight



Both activated and non-activated alkenes can act as acceptors in intramolecular cyclisations of radicals at the β-position of THFs; cyclisations of 2,5-*cis*-THFs are stereospecific giving only *endo-exo* isomers while the corresponding 2,5-*trans* isomers give mixtures in which the di-*exo* diastereoisomers predominate.

2449 **3,3-Dicyclopropyl-1,2-dioxetanes: Unusual Temperature Effect on the Singlet Oxygenation of 1,1-Dialkylethylenes**

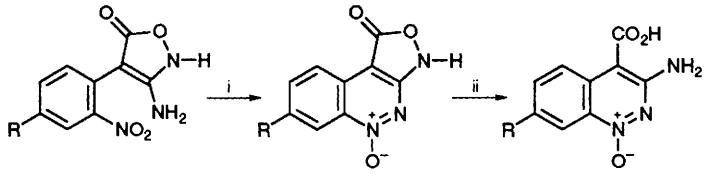
Masakatsu Matsumoto, Hiroyuki Suganuma



a: R–R = $-CH_2-CH_2-$ Ar = *m*-anisyl
b: R = Me

2451 **A Convenient Synthesis of Otherwise Inaccessible 3-Aminocinnoline-4-carboxylic Acid Derivatives**

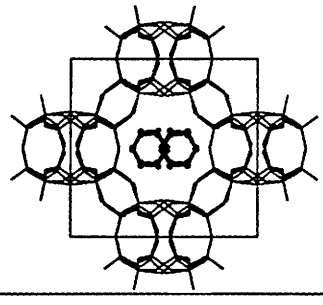
Martin Scobie, George Tennant



i, NaH, DMF, 100 °C; ii, $NH_2NH_2{\cdot}H_2O$, EtOH, reflux. {R = H, Me, MeO, Cl, CF_3}

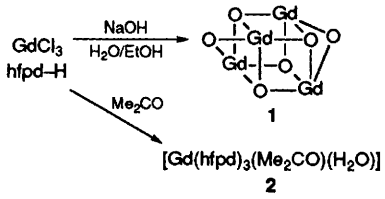
2453 **Synthesis and Characterisation of the first Three-dimensional Framework Cobalt–Gallium Phosphate $[C_5H_5NH]^+[CoGa_2P_3O_{12}]^-$**

A. M. Chippindale, R. I. Walton



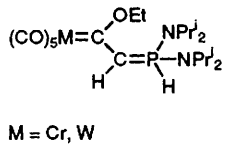
2455 **Synthesis and Structural Characterisation of Two Novel Gd^{III} β-Diketonates $[Gd_4(\mu_3\text{-}OH)_4(\mu_2\text{-}H_2O)_2(H_2O)_4(hfpd)_8]\cdot 2C_6H_6\cdot H_2O$ 1 and $[Gd(hfpd)_3(Me_2CO)(H_2O)]$ 2 (hfpd–H = 1,1,1,5,5,5-hexafluoropentane-2,4-dione)**

John C. Plakatouras, Ian Baxter, Michael B. Hursthouse, K. M. Abdul Malik, John McAleese, Simon R. Drake



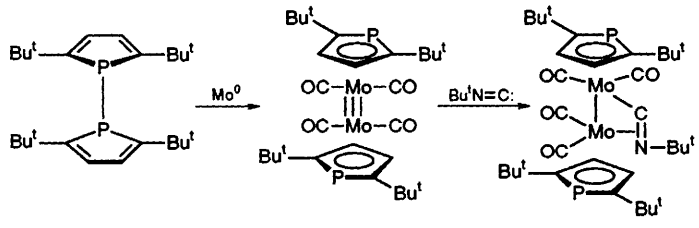
2457 **P–H-functionalized Ylide–Carbene Complexes: Synthesis of $[(CO)_5M{=}C(OEt)CH{=}P(NPr^i_2)_2H]$ (M = Cr, W) and Structure of the Chromium Derivative**

Rainer Streubel, Markus Hobbold, Jörg Jeske, Peter G. Jones



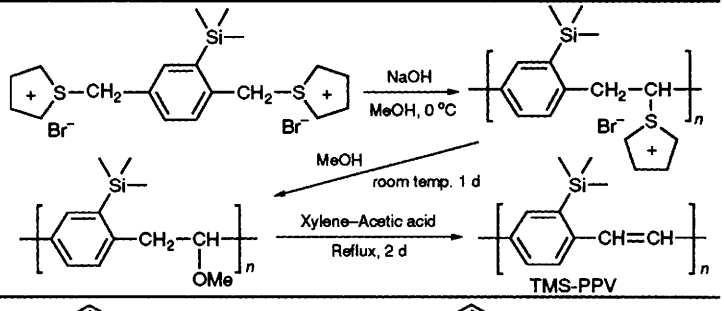
2459 **A 2,5-Di-(*tert*-butyl)phospholyl Complex containing a Molybdenum–Molybdenum Triple Bond: Synthesis, Molecular Structure and Coordination Chemistry of $[Mo_2(PC_4H_2Bu^t_2)_2(CO)_4]$**

Duncan Carmichael, Louis Ricard, François Mathey



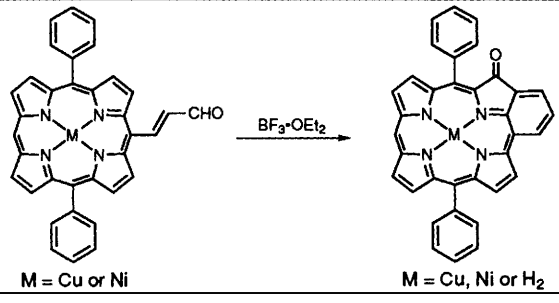
2461 **Synthesis and Properties of Multifunctional Poly(2-trimethylsilyl-1,4-phenylenevinylene): a Novel, Silicon-substituted, Soluble PPV Derivative**

Do-Hoon Hwang, Hong-Ku Shim, Jeong-Ik Lee, Kwang-Sup Lee



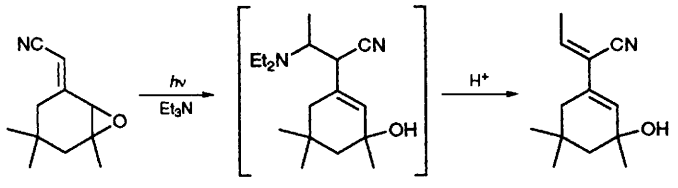
2463 **5,15-Diphenyl-7-oxobenzochlorins. Novel Long-wavelength Absorbing Photosensitizers for Photodynamic Therapy**

Ross W. Boyle, David Dolphin



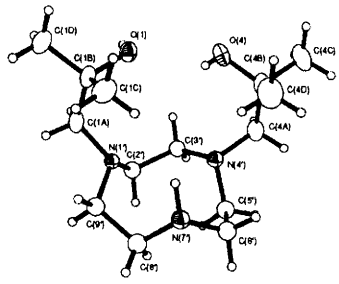
2465 **Photoreactions of α,β-Unsaturated γ,δ-Epoxy Nitriles with Amines. The Novel Photoadditions of Tertiary Amines to the α-Position of the Nitriles**

Keitaro Ishii, Masashi Kotera, Masanori Sakamoto



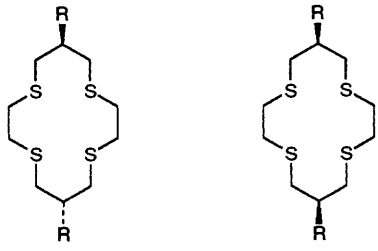
2467 **Stacked Amido Macrocyclic Complexes: Synthesis and Single Crystal X-Ray Structure of Na[Cu(L)-(NCMe)]$(BF_4)_2(NO_3)$ [L = 1-formyl-4,7-bis(2-hydroxy-2-methylpropyl)-1,4,7-triazacyclononane]**

Alexander J. Blake, Ian A. Fallis, Robert O. Gould, Simon Parsons, Steven A. Ross, Martin Schröder



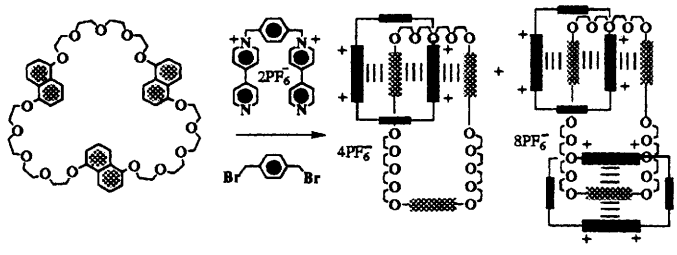
2471 **Macrocyclic Liquid Crystals from Functionalised Thioether Crowns: the Single-crystal X-Ray Structures of *cis*- and *trans*-R_2[14]aneS_4 (R = $O_2CC_6H_4OMe$-4)**

Alexander J. Blake, Duncan W. Bruce, Ian A. Fallis, Simon Parsons, Martin Schröder



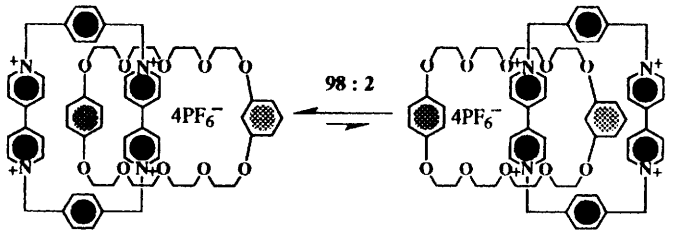
2475 **The Solid-state Self-organisation of a Self-assembled [2]Catenane**

David B. Amabilino, Peter R. Ashton, J. Fraser Stoddart, Stephan Menzer, David J. Williams



2479 **Self-assembled [2]Catenanes exhibiting Highly Selective Translational Isomerism**

David B. Amabilino, Peter R. Ashton, George R. Brown, Wayne Hayes, J. Fraser Stoddart, Malcolm S. Tolley, David J. Williams



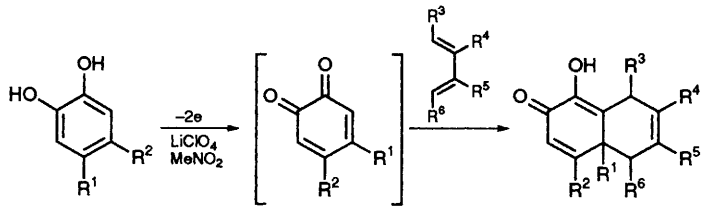
2483 **Efficient Glucose Detection in Anaerobic Solutions Using an Enzyme-modified Electrode Designed to Detect H_2O_2: Implications for Biomedical Applications**

The finding that a 'first generation' glucose oxidase modified poly(*o*-phenylenediamine) coated Pt electrode, designed to detect H_2O_2, responded to glucose in N_2-saturated solutions with a sensitivity similar to that of air-saturated media is of considerable significance for the application of biosensors in biological systems where O_2 availability is severely restricted.

John P. Lowry, Karl McAteer, Satea S. El Atrash, Robert D. O'Neill

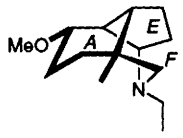
2485 **Diels–Alder Reaction of Quinones Generated *in situ* by Electrochemical Oxidation in Lithium Perchlorate–Nitromethane**

Kazuhiro Chiba, Masahiro Tada



2487 **Synthesis of the A/E/F Tricyclic Section of the Norditerpenoid Alkaloid Methyllycaconitine, a Potent Inhibitor of Neurotransmission**

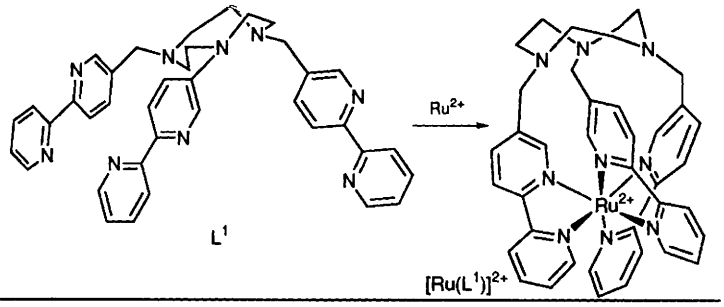
Lynn C. Baillie, John R. Bearder, Donald A. Whiting



The tricyclic amine shown, with five stereogenic centres, representing the *A/E/F* ring system of the norditerpene alkaloid methyllycaconitine, has been synthesised from penta-1,4-dien-3-ol in nine steps, with overall yield 16%.

2489 **1,4,7-tris(2,2′-Bipyridyl-5-ylmethyl)-1,4,7-triazacyclononane (L^1), a Powerful tris(2,2′-bipyridyl) Chelating Macrocyclic Ligand. X-Ray Structure of $[Ru(L^1H)][PF_6]_3$, a Complex containing a Strongly Trapped Proton**

Philippa Sheldon, William Errington, Peter Moore, Simon C. Rawle, Stephen M. Smith



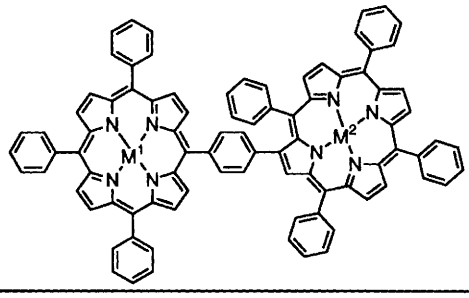
2491 **Zeolite-in-metal Membranes: Preparation and Testing**

Peter Kölsch, Dieter Venzke, Manfred Noack, Petra Toussaint, Jürgen Caro

By electrochemical metal deposition, silicalite crystals have been embedded in silver or nickel foil. The resultant composites are self-supporting, high-temperature membranes, thermally stable up to 650 K. Permeation/pervaporation studies with two-component *n*-heptane–toluene mixtures give a separation factor, α(toluene/heptane), of *ca.* 4 ± 1.5 over a wide temperature range.

2493 **Synthesis of a β-Linked Porphyrin Dimer and some Homo-, and Hetero-bimetallic Complexes**

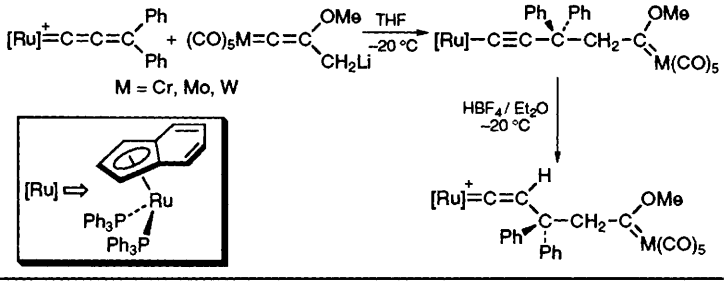
Xiang Zhou, Kin Shing Chan



	M^1	M^2
H_4L^3	2H	2H
H_2ZnL^3	2H	Zn
Zn_2L^3	Zn	Zn
$CoZnL^3$	Co	Zn
Co_2L^3	Co	Co
Ni_2L^3	Ni	Ni

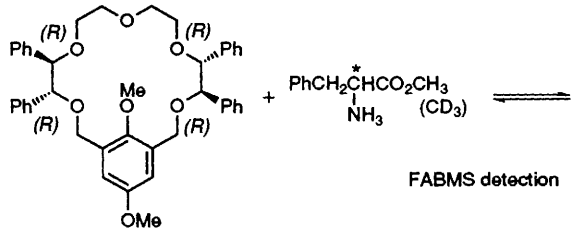
2495 **Allenylidene Indenyl Ruthenium(II) Complexes as Sources of Highly Functionalized Alkynyl Complexes: Synthesis of the First Bimetallic Derivatives containing a Vinylidene–Carbene Bridge**

Victorio Cadierno, M. Pilar Gamasa, José Gimeno, Javier Borge, Santiago García-Granda



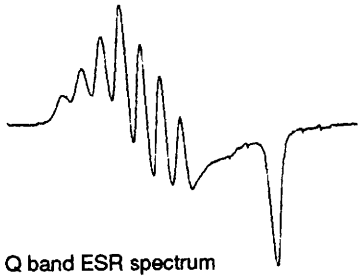
2497 **Chiral Recognition in Molecular Complexation for the Crown Ether–Amino Ester System. A Facile FAB Mass Spectrometric Approach**

Masami Sawada, Yoshio Takai, Hitoshi Yamada, Takahiro Kaneda, Kimiko Kamada, Takashi Mizooku, Keiji Hirose, Yoshito Tobe, Koichiro Naemura



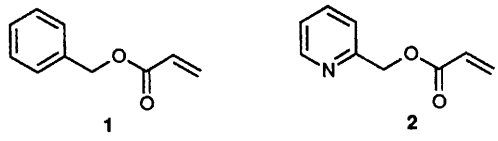
2499 **A Copper–Copper Bond by Intent**

Charles Harding, Jane Nelson, Martyn C. R. Symons, Jane Wyatt



2501 **Auxiliary Accelerated Reactions: Transition-metal Promoted Diels–Alder Cycloadditions**

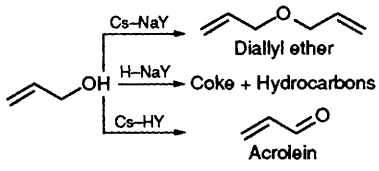
Andrew D. Westwell, Jonathan M. J. Williams



Compound **1** reacts more quickly than compound **2** in competitive Diels–Alder reactions promoted by $Cu(OTf)_2$.

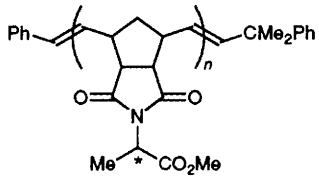
2503 **Selectivity Control in the Reaction of Allyl Alcohol Over Zeolite Y**

Graham J. Hutchings, Darren F. Lee



2505 **Amino Acid derived Homochiral Polymers *via* Ring-opening Metathesis Polymerisation**

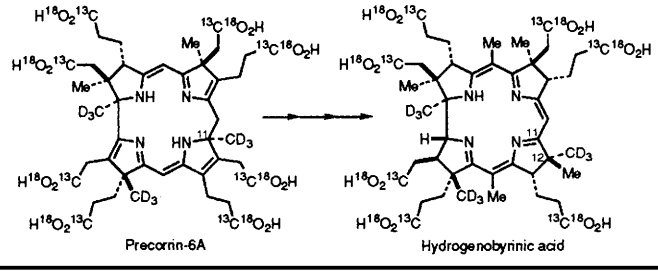
Martyn P. Coles, Vernon C. Gibson, Luisa Mazzariol, Michael North, William G. Teasdale, Carol M. Williams, Dora Zamuner



Ring opening metathesis polymerisation has been used to synthesise homochiral polymers bearing amino acid ester groups.

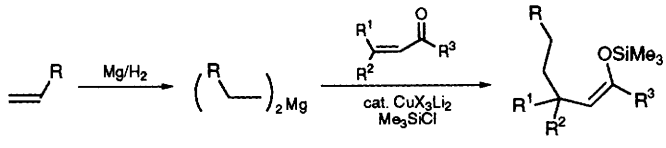
2507 **Biosynthesis of Vitamin B_{12}: Mechanistic Studies on the Transfer of a Methyl Group from C-11 to C-12 and Incorporation of ^{18}O**

Yongfu Li, Alex I. D. Alanine, Ram A. Vishwakarma, Sarala Balachandran, Finian J. Leeper, Alan R. Battersby

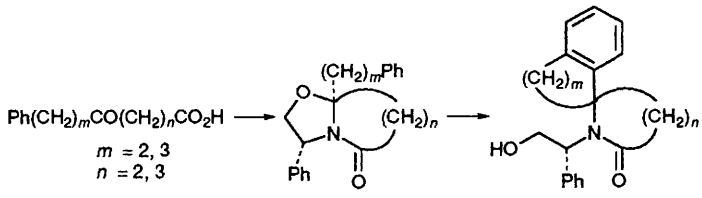


2509 **CuX_3Li_2-Catalysed Conjugate Addition of Dialkylmagnesium Reagents to α,β-Unsaturated Carbonyl Compounds**

Manfred T. Reetz, Alois Kindler

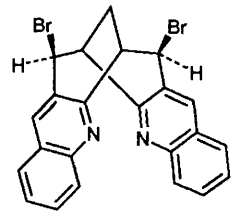


2511 **Asymmetric Synthesis of Spiro 2-Pyrrolidin-5-ones and 2-Piperidin-6-ones**



Abood A. Bahajaj, Patrick D. Bailey, Madeleine H. Moore, Keith M. Morgan, John M. Vernon

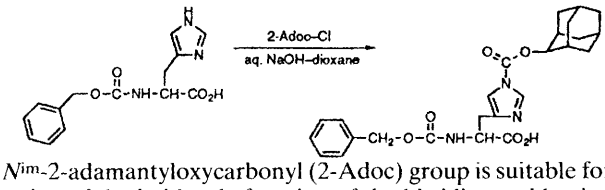
2513 **Use of Halogen Sensor Groups for Specific Trapping of Polyhaloalkanes**



forms complexes with small polyhaloalkanes

Christopher E. Marjo, Roger Bishop, Donald C. Craig, Andrew O'Brien, Marcia L. Scudder

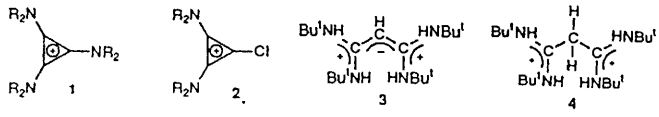
2515 **Application of the 2-Adamantyloxycarbonyl (2-Adoc) Group to the Protection of the Imidazole Function of Histidine in Peptide Synthesis**



The N^{im}-2-adamantyloxycarbonyl (2-Adoc) group is suitable for the protection of the imidazole function of the histidine residue in peptide synthesis in terms of its stability to trifluoroacetic acid, tertiary amines and 1-hydroxybenzotriazole, and its reduction of racemization rate during the coupling reaction.

Yasuhiro Nishiyama, Noriyuki Shintomi, Yukihiro Kondo, Yoshio Okada

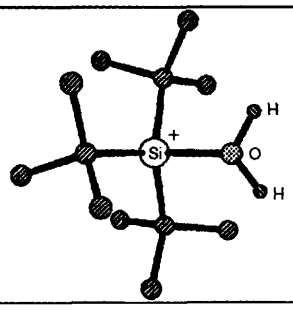
2517 **Allyl, Amidinium and Cyclopropenyl Cations from the Reactions of Primary and Secondary Amines with Pentachlorocyclopropane**



Reactions of amines with pentachlorocyclopropane provide a direct entry to the chemistry of cations **1**–**4** with amino substituents. These are explored by X-ray, Raman and NMR means, and C–N rotational barriers in **2** and **4**, are measured.

Michael J. Taylor, Peter W. J. Surman, George R. Clark

2519 **Isolation of a Protonated Silanol: $Bu^t_3Si(OH_2)^+$**



Zuowei Xie, Robert Bau, Christopher A. Reed

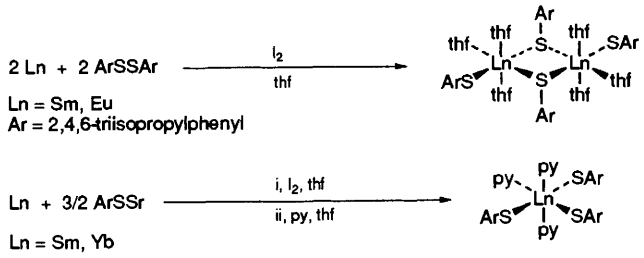
2521 **UV–VIS and ESR Spectroscopic Evidence for a Strongly π–π Interacting (Resonant) Allodial Mixed-valence Compound: the Perchloro-4,4′-ethynylenebis(triphenylmethyl) Anion Radical**

Compelling UV–VIS and ESR spectroscopic evidence for the formation of the first stable allodial anion radical with strong π–π electron interaction (resonance) in perchloroorganic chemistry is presented and discussed.

V. M. Domingo, J. Castañer, J. Riera

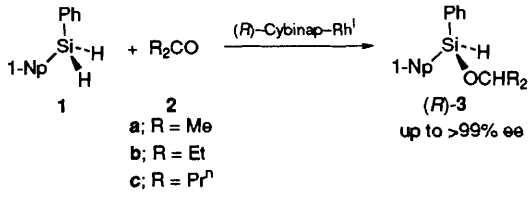
2523 **Formation of Lanthanoid(II) and Lanthanoid(III) Thiolate Complexes derived from Metals and Organic Disulfides: Crystal Structures of [{Ln(SAr)(μ-SAr)(thf)$_3$}$_2$] (Ln = Sm, Eu), [Sm(SAr)$_3$(py)$_2$(thf)] and [Yb(SAr)$_3$(py)$_3$] (Ar = 2,4,6-Triisopropylphenyl; py = Pyridine)**

Kazushi Mashima, Yuushou Nakayama, Hiroki Fukumoto, Nobuko Kanehisa, Yasushi Kai, Akira Nakamura



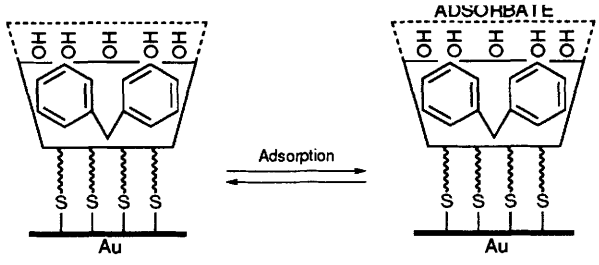
2525 **Asymmetric Synthesis of Silanes with a Stereogenic Centre at Silicon *via* Hydrosilylation of Symmetric Ketones with Prochiral Diaryl Silanes Catalysed by binap–Rh^I Complexes**

Tetsuo Ohta, Masato Ito, Akira Tsuneto, Hidemasa Takaya



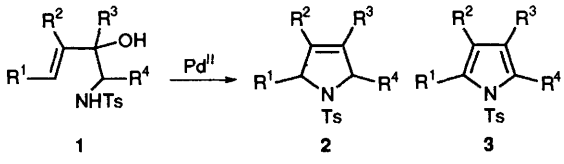
2527 **Selective Adsorption in Gold–Thiol Monolayers of Calix-4-resorcinarenes**

Harry Adams, Frank Davis, Charles J. M. Stirling



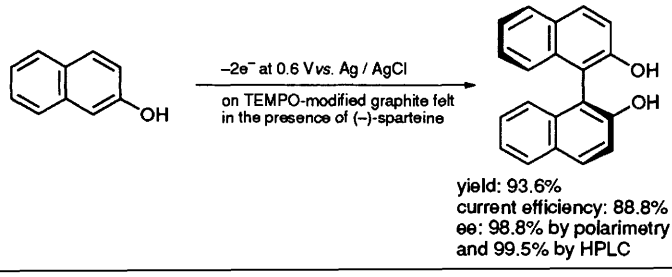
2531 **Palladium(II) Catalysed 5-*endo-trigonal* Cyclization of 2-Hydroxy-3-butenylamines: Synthesis of Five-membered Nitrogen Heterocycles**

Masanari Kimura, Hiroto Harayama, Shuji Tanaka, Yoshinao Tamaru



2535 **Enantioselective, Electrocatalytic Oxidative Coupling of Naphthol, Naphthyl Ether and Phenanthrol on a TEMPO-modified Graphite Felt Electrode in the Presence of (−)-Sparteine (TEMPO = 2,2,6,6-Tetramethylpiperidin-1-yloxyl)**

Tetsuo Osa, Yoshitomo Kashiwagi, Yoshinori Yanagisawa, James M. Bobbitt



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ISSN 0959-9428 JMACEP(9) 1359–1509 (1994)

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