

JOURNAL OF THE CHEMICAL SOCIETY

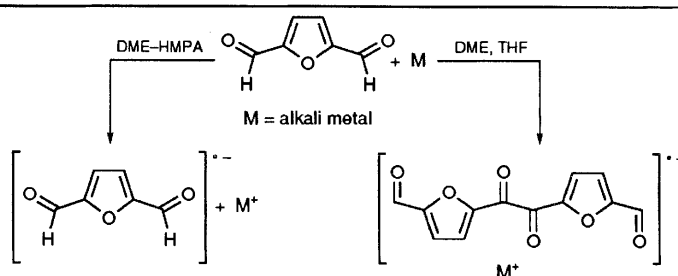
Chemical Communications

Number 8
1995

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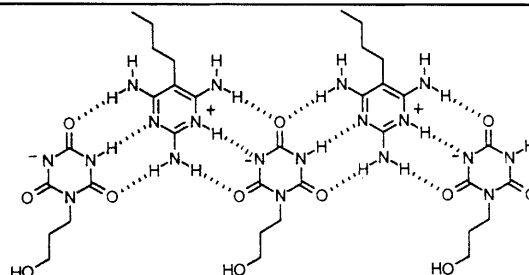
- 803 **An Electron-transfer Induced Reaction Path Controlled by Ion-pair Formation: an ESR/ENDOR Study of Furan Carbaldehydes and their Reactivity**

Markus Scholz, Georg Gescheidt, J. Daub



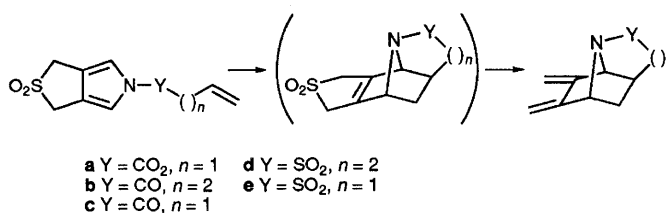
- 805 **The Ion-pair Reinforced, Hydrogen-bonding Molecular Ribbon**

Mark Mascali, Philip S. Fallon, Andrei S. Batsanov, Brigid R. Heywood, Simon Champ, Michael Colclough



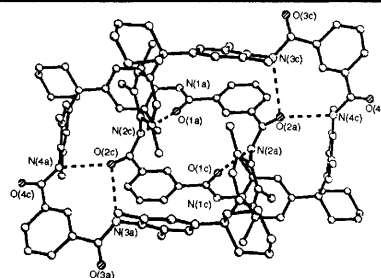
- 807 **Intramolecular Diels–Alder Reaction of New Building Blocks, *N*-Substituted 3,5-Dihydro-1*H*-thieno[3,4-*c*]-pyrrole *S,S*-Dioxides; a General Route to the Tricyclic Azanorbornane Framework**

Takayoshi Suzuki, Hiroaki Takayama

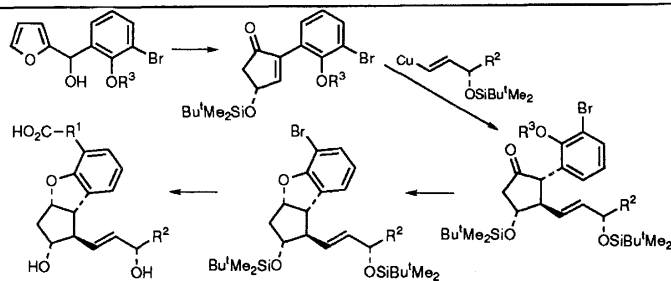


- 809 **[2]Catenane or not [2]Catenane?**

Harry Adams, Fiona J. Carver, Christopher A. Hunter



811 An Efficient Approach to Optically Active Benzoprostacyclins by a Two-component Coupling Process



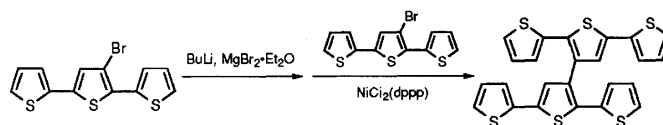
Yukio Yoshida, Yoshitaka Sato, Sentaro Okamoto, Fumie Sato

813 Detection of Surface CN and NCO Species as Possible Reaction Intermediates in Catalytic Lean NO_x Reduction

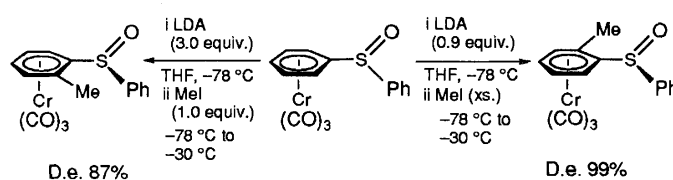
Surface species characterized by IR bands at 2140 and 2190 cm^{-1} and assigned to CN and NCO species were observed as possible reaction intermediates under reaction conditions for lean NO_x reduction by propene or ethanol over Cu-ZrO₂.

Can Li, Kathleen A. Bethke, Harold H. Kung, Mayfair C. Kung

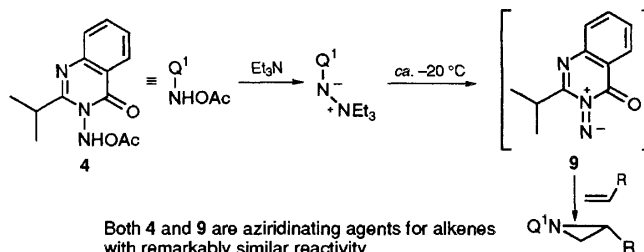
815 A New Polythiophene Prepared by the Electropolymerization of a Branched Sexithienyl



Susumu Tanaka, Masami Kumei

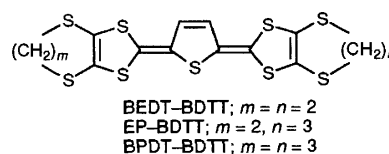
817 Regioselective *ortho* Substitution of Diphenyl Sulfoxide Chromium Tricarbonyl: Complementary Stereoselectivities for the Mono- and Di-anions

Stephen G. Davies, Tracey Loveridge, John M. Clough

819 Aziridination of Alkenes using 3-Acetoxyaminoquinazolin-4-(3*H*)-ones in the Presence of Tertiary Amines: Evidence for an Azaimide (*N*-Nitrene) Intermediate

Robert S. Atkinson, Emma Barker

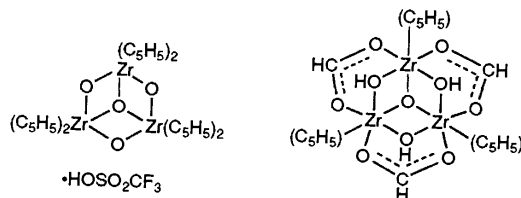
821 Thienoquinonoid-extended Analogues of Bis-(alkylenedithio)tetrathiafulvalenes and their Conductive Complexes



Kazuko Takahashi, Kensuke Tomitani

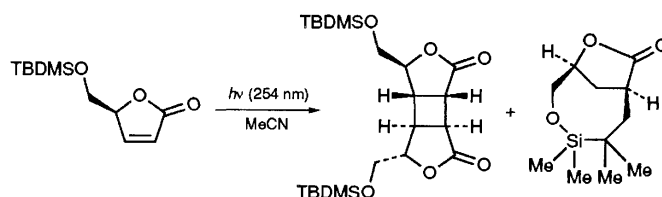
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Florence Boutonnet, Maria Zablocka, Alain Igau, Joël Jaud, Jean-Pierre Majoral, Jutta Schamberger, Gerhard Erker, Stephan Werner, Carl Krüger



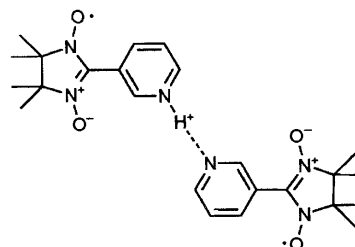
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David Brown, Christine J. Cardin, John Mann



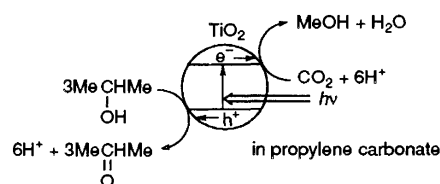
827 **Coexistence of Intermolecular Ferromagnetic Interaction and [NHN]⁺ Hydrogen Bond in N-Protonated *m*-Pyridyl Nitronyl Nitroxide**

Tsunehisa Okuno, Takeo Otsuka, Kunio Awaga



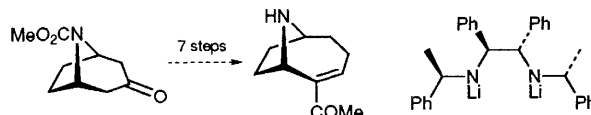
829 **Selective Photoreduction of Carbon Dioxide to Methanol on Titanium Dioxide Photocatalysts in Propylene Carbonate Solution**

Susumu Kuwabata, Hiroyuki Uchida, Akihiro Ogawa, Shigeki Hirao, Hiroshi Yoneyama



831 **A Concise Asymmetric Synthesis of (-)-Anatoxin-a using an Enantioselective Enolisation Strategy**

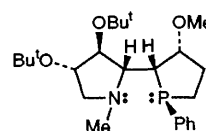
Nicholas J. Newcombe, Nigel S. Simpkins



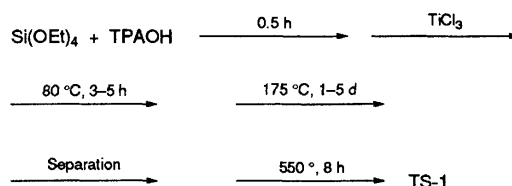
(-)-Anatoxin-a has been synthesised by a concise new route employing a chiral base deprotonation and tropane ring expansion as the key steps.

833 **A New P-Chiral Aminophosphine Ligand Containing a 2,2'-Coupled Pyrrolidine-Phospholane Ring System. Synthesis and Coordination Properties with Rhodium(I) and Iridium(I) Fragments**

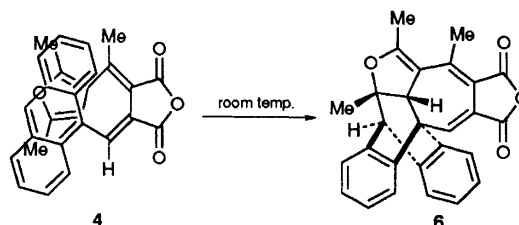
Claudio Bianchini, Stefano Cicchi, Maurizio Peruzzini, K. Michal Pietrusiewicz, Alberto Brandi



835 An Easy Way to Prepare Titanium Silicalite-1 (TS-1)

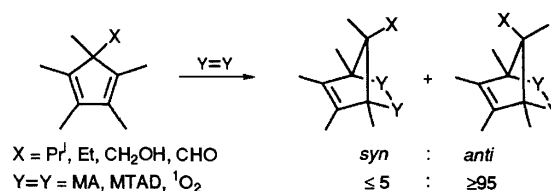


Huanxin Gao, Jishuan Suo, Shuben Li

837 The Intramolecular [2 + 4] Cycloaddition Reaction of *E,E*-9-Anthrylmethylene-[1-(2,5-dimethyl-3-furylethylidene)]succinic Anhydride

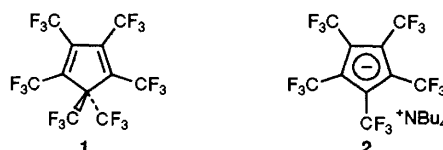
Harry G. Heller, David S. Hughes, Michael B. Hursthouse, Julian R. Levell, Matthew J. Ottaway

839 Importance of Steric Effects in the [4 + 2] Cycloaddition of 5-Substituted Pentamethylcyclopentadienes



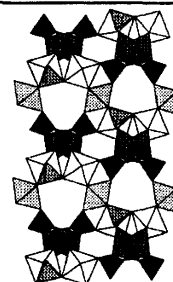
Waldemar Adam, Ulrike Jacob, Michael Prein

841 Direct Syntheses of Pentakis(trifluoromethyl)-cyclopentadienide Salts and Related Dienes



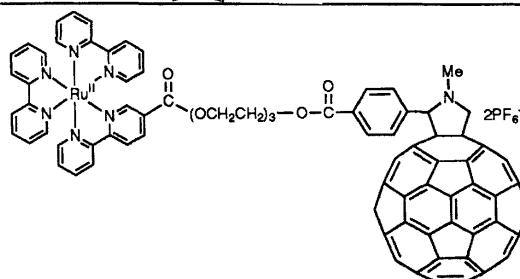
Richard D. Chambers, Steven J. Mullins, Alex J. Roche, Julian F. S. Vaughan

Cyclopentadiene 1 can be produced in high yield and easily converted into 2. Other routes to the cyclopentadienide are reported.

843 Synthesis and Structure of a Novel Microporous Gallophosphate, $\text{Na}_3\text{Ga}_5(\text{PO}_4)_4\text{O}_2(\text{OH})_2 \cdot 2\text{H}_2\text{O}$ 

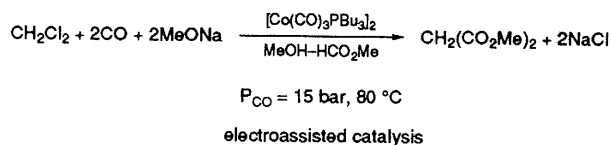
Martin P. Attfield, Russell E. Morris, Enrique Gutierrez-Puebla, Angeles Monge-Bravo, Anthony K. Cheetham

845 Synthesis of a [60]Fullerene Derivative Covalently Linked to a Ruthenium(II) Tris(bipyridine) Complex



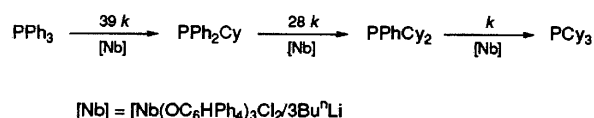
Michele Maggini, Anna Donò, Gianfranco Scorrano, Maurizio Prato

- 847 **Efficient Dimethyl Malonate Synthesis by Methoxycarbonylation of Dichloromethane catalysed by Electrogenerated $[\text{Co}(\text{CO})_3\text{PBU}_3]^-$ Species**



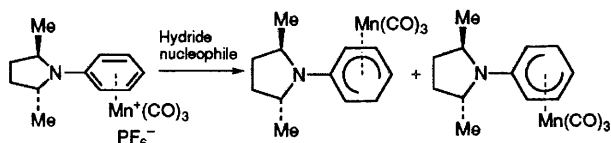
P. Suisse, S. Pellegrini, Y. Castanet, A. Mortreux, S. Lecolier

- 849 **Regio- and Stereo-selectivity in the Hydrogenation of Aryl Phosphines by Niobium Aryloxide Compounds**



Mark C. Potyen, Ian P. Rothwell

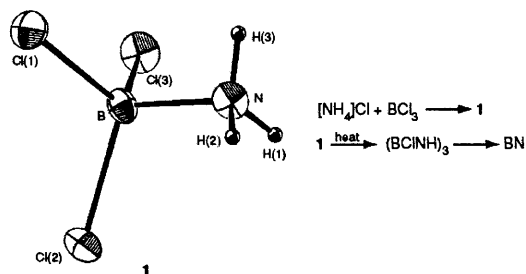
- 853 **Observations on Selectivity Reversal during Chiral Auxiliary-directed Asymmetric Nucleophile Additions to Arene-Manganese Tricarbonyl Complexes**



Anthony J. Pearson, Maria C. Milletti, Ping Y. Zhu

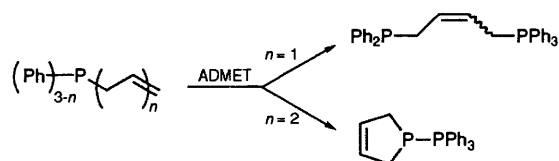
Diastereoisomer ratio is dependent on reactivity of the nucleophile. Evidence for variation of transition state location is presented.

- 855 **Preparation, Spectra and X-Ray Structure of an Archetypal Coordination Compound $[\text{BCl}_3(\text{NH}_3)]$ and its Thermolysis**



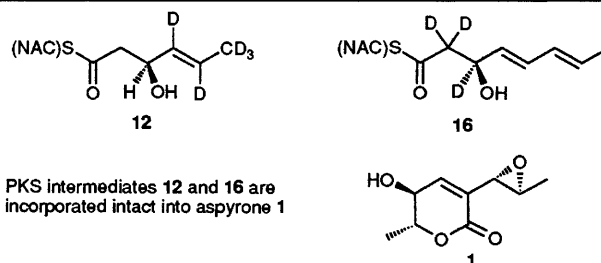
Anthony G. Avent, Peter B. Hitchcock, Michael F. Lappert, Dian-Sheng Liu, Gérard Mignani, Christophe Richard, Eric Roche

- 857 **Metathesis of Phosphorus-containing Olefins catalysed by a Cyclometallated Aryloxo(chloro)-neopentylidene-Tungsten Complex**



The late Michel Leconte, Isabelle Jourdan, Salvatore Pagano, Frédéric Lefebvre, Jean-Marie Basset

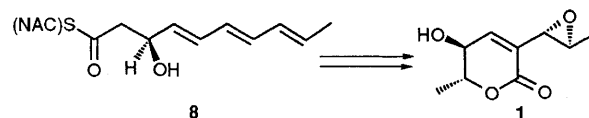
- 859 **Investigation of the Stereochemistry of the Tri- and Tetra-ketide Hydroxyacyl Intermediates in the Biosynthesis of the Polyketide Aspyrone in *Aspergillus melleus* using Deuterium Labelling and Deuterium NMR Spectroscopy**



PKS intermediates 12 and 16 are incorporated intact into aspyrone 1

Alison M. Hill, Adam Jacobs, James Staunton

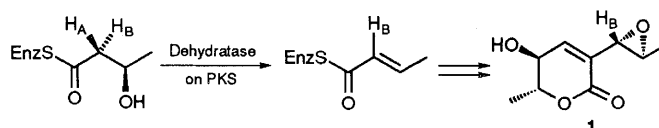
- 861 **The Pentaketide Hydroxyacyl Intermediate in Aspyrone Biosynthesis in *Aspergillus melleus* is shown to be the (S)-Enantiomer using Deuterium-labelled Precursors and ^2H NMR**



Deuterium-labelled forms of the pentaketide biosynthetic intermediate **8** are incorporated intact into aspyrone **1** *in vivo*.

Alison M. Hill, James Staunton

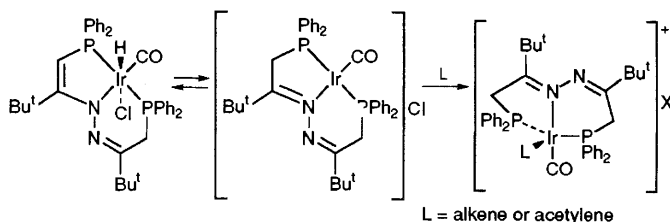
- 863 **Investigation of the Stereochemistry of the Dehydration of the Diketide, (3*R*)-3-Hydroxybutyrate to Crotonate, in the First Chain Extension Cycle on the Aspyrone Polyketide Synthase in Intact Cells of *Aspergillus melleus***



In the first chain extension cycle effected by the PKS responsible for the biosynthesis of aspyrone **1**, the dehydration of hydroxybutyrate to crotonate takes place with *syn* stereochemistry.

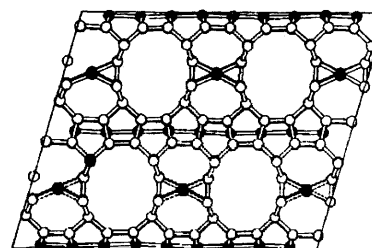
Adam Jacobs, James Staunton

- 865 **Novel Iridium Complexes of an Azine Diphosphine: Very Reactive Iridium(I) Species formed by a Unique Isomerisation of an Iridium(III) Hydride. A New Method of creating Coordinative Unsaturation**



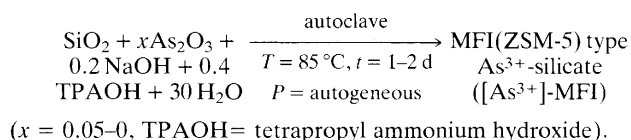
Sarath D. Perera, Bernard L. Shaw

- 867 **Ga, Ti Avoidance in the Microporous Titanogallosilicate ETGS-10**



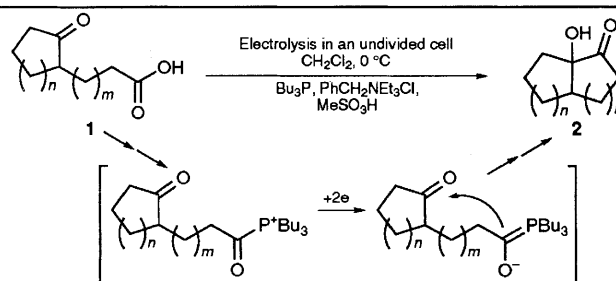
João Rocha, Zhi Lin, Artur Ferreira, Michael W. Anderson

- 869 **A New As^{3+} -Silicate Molecular Sieve with MFI Structure**



Asim Bhaumik, Rajiv Kumar

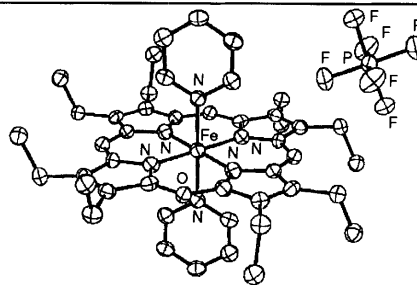
- 871 **Generation of Acyl Anion Equivalents by *In Situ* Cathodic Reduction of Acyl Tributylphosphonium Ions Anodically Generated from Tributylphosphine and Carboxylic Acids: Preparation of α -Hydroxy Cycloalkanones from Keto Acids**



Hatsuo Maeda, Toshihide Maki, Haruka Ashie, Hidenobu Ohmori

873 **Crystallographic Characterization of Octaethylverdohaem**

Alan L. Balch, Richard Koerner, Marilyn M. Olmstead

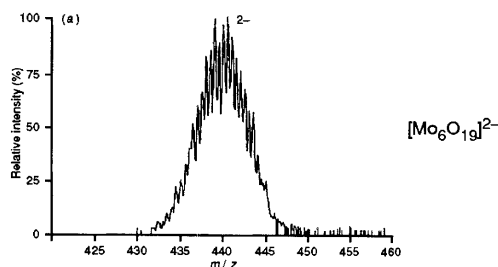
875 **Synthesis of Mesoporous Manganosilicates: Mn-MCM-41, Mn-MCM-48 and Mn-MCM-L**

Dongyuan Zhao, Daniella Goldfarb

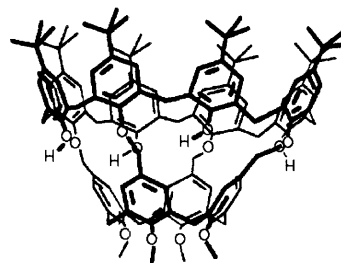
Manganese-containing M41S microporous materials were synthesized. The addition of Mn ions induces the formation of the cubic phase Mn-MCM-48 at a low surfactant : Si ratio. At constant temperature and surfactant : Si ratio the structure of the phase formed can be controlled by the NaOH content of the gel.

877 **Electrospray Tandem Mass Spectrometry of Polyoxoanions**

Tai-Chu Lau, Jiangyao Wang, Roger Guevremont, K. W. Michael Siu

879 **A New Macrocavitand from the Head to Tail Four-point Capping of *p*-*tert*-Butylcalix[8]arene with a Calix[4]arene**

Arturo Arduini, Andrea Pochini, Andrea Secchi, Rocco Ungaro

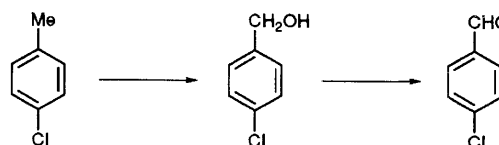
881 **Conformational Effects on Electrical and Spectroscopic Properties of Bi-, Ter-, and Polythiophenes**

Tiziana Benincori, Elisabetta Brenna, Franco Sannicò, Licia Trimarco, Giorgio Moro, Demetrio Pitea, Tullio Pilati, Giuseppe Zerbi, Gianni Zotti

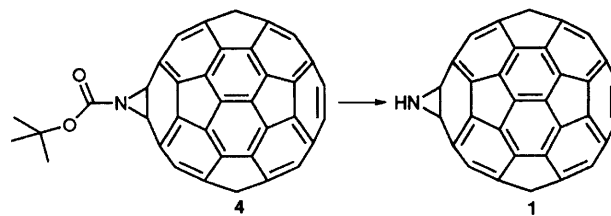
Using conformationally-constrained bi- and ter-thiophenes the effects of inter-ring torsional angles on spectroscopic properties of the corresponding polymers have been demonstrated. Effects on conductivity are complicated by inter-chain contributions.

883 **Single Step Selective Oxidation of *para*-Chlorotoluene to *para*-Chlorobenzaldehyde over Vanadium Silicate Molecular Sieves**

T. Selvam, A. P. Singh

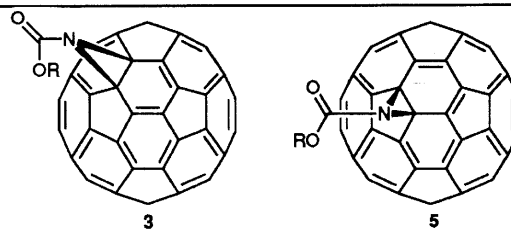


Reagents and conditions : VS-1, H₂O₂, acetonitrile, 373 K

885 **Aziridino[2',3':1,2][60]fullerene**

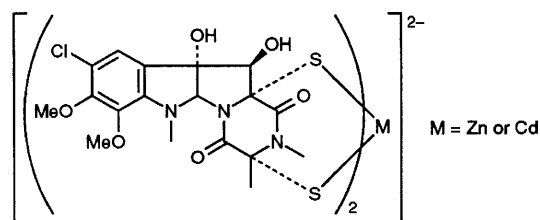
Malcolm R. Banks, J. I. G. Cadogan, Ian Gosney,
Philip K. G. Hodgson, Patrick R. R. Langridge-
Smith, John R. A. Millar, Alan T. Taylor

Thermal elimination of isobutene and CO₂ from **4** at 147 °C provides an efficient route to **1**, an isolable and stable solid.

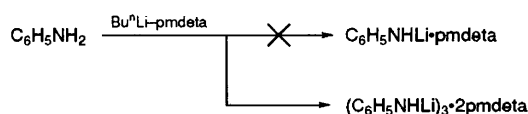
887 **Aziridino[2',3':1,6][60]fullerene: Isolation of the First Closed [5,6]-bridged Fullerene Adduct**

Malcolm R. Banks, J. I. G. Cadogan, Ian Gosney,
Philip K. G. Hodgson, Patrick R. R. Langridge-
Smith, John R. A. Millar, John A. Parkinson,
David W. H. Rankin, Alan T. Taylor

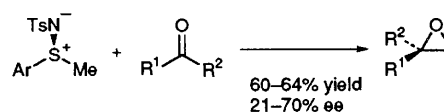
Regioisomers **3** and **5** with closed [6,6]- and [5,6]-structures have been isolated and characterised.

889 **Identification of Zinc and Cadmium Complexes of the Mycotoxin Sporidesmin A by Electrospray Mass Spectrometry**

William Henderson, Christopher O. Miles, Brian K. Nicholson

891 **Lithium Anilide Complexed by pmdeta: Expectation of a Simple Monomer, but in Reality an Odd Trinuclear Composition Combining Three-, Four- and Five-coordinate Lithium**

Donald Barr, William Clegg, Lucy Cowton, Lynne Horsburgh, Fiona M. Mackenzie, Robert E. Mulvey

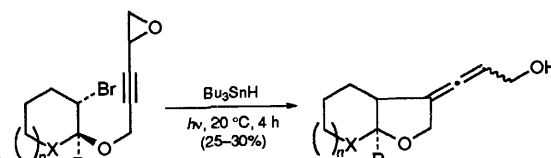
893 **Asymmetric Synthesis of Epoxides using Chiral Sulfinides**

Charlotte P. Baird, Paul C. Taylor

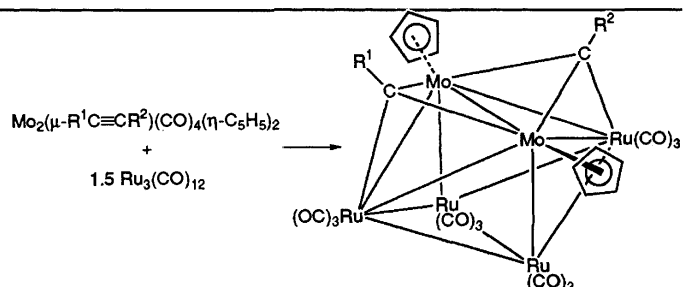
895 **Mixed-valence Perchlorotriphenylmethyl Radical Ion Polymers. A Ten Orders of Magnitude Increase in Conductivity**

The isolation of the first mixed-valence perchloropolymer with a complex structure and good semiconducting properties is presented and discussed.

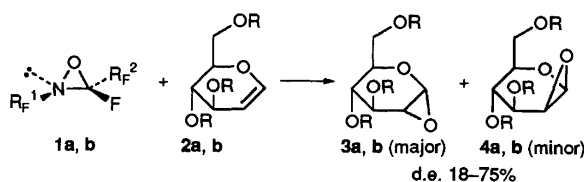
Victor M. Domingo, Juan Castañer

897 **A Synthetic Route to Allenylidene Tetrahydrofurans**

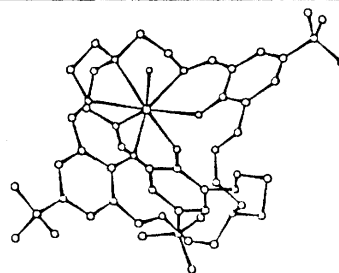
Jean-Pierre Dulcère, Estelle Dumez, Robert Faure

899 **Scission of Ethyne into Two Methylidyne Ligands: C≡C vs. C–H Bond Activation**

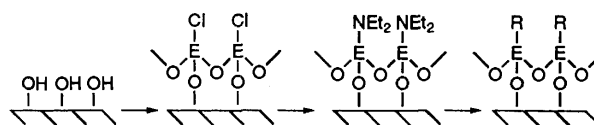
Harry Adams, Louise J. Gill, Michael J. Morris

901 **A Stereoselective and Preparative Entry to 1,2-Anhydrosugars through Oxidation of Glycals with Perfluoro-*cis*-2,3-dialkyloxaziridines**

Marcello Cavicchioli, Andrea Mele, Vittorio Montanari, Giuseppe Resnati

903 **Kinetically Stable Lanthanide Cryptates**

Michael G. B. Drew, Oliver W. Howarth, Charles J. Harding, Noreen Martin, Jane Nelson

907 **A Novel Route to Efficient Inorganic Oxide Surface Modifications: Molecularly Self-assembled Linear and Conjugated Alkynyl Thin Film Materials**

Chi Ming Yam, Ashok K. Kakkar

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Bargur P. Gangamani, Cheravakkattu G. Suresh, Krishna N. Ganesh

- 911 **Synthesis of 3-Vinylisoxazole by a Nitrile Oxide Cycloaddition/Diels–Alder Cycloreversion Pathway**
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- 911 **A Cyclization Reaction Catalysed by Antibodies**
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- 911 **A Novel, Highly Copper(II)-selective Chelating Hydrophilic Ion Exchanger based on Imidazole modified Poly(glycidyl methacrylate)**
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