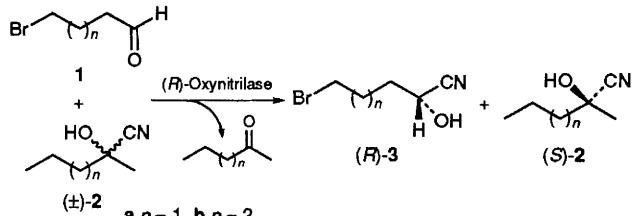


JOURNAL OF THE CHEMICAL SOCIETY

Chemical CommunicationsNumber 10
1995**CONTENTS**

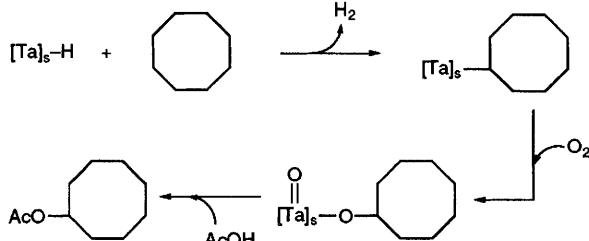
- 989 Optically Active (S)-Ketone- and (R)-Aldehyde-cyanohydrins via an (R)-Oxynitrilase-catalysed Transcyanation. Chemoenzymatic Syntheses of 2-Cyanotetrahydrofuran and 2-Cyanotetrahydropyran**

Emma Menéndez, Rosario Brieva, Francisca Rebolledo, Vicente Gotor



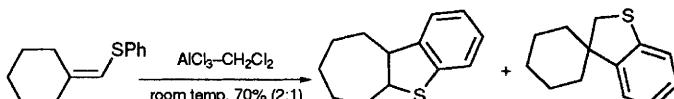
- 991 Activation and Functionalisation of the C–H Bonds of Methane and Higher Alkanes by a Silica-supported Tantalum Hydride Complex**

Véronique Vidal, Albert Théolier, Jean Thivolle-Cazat, Jean-Marie Basset



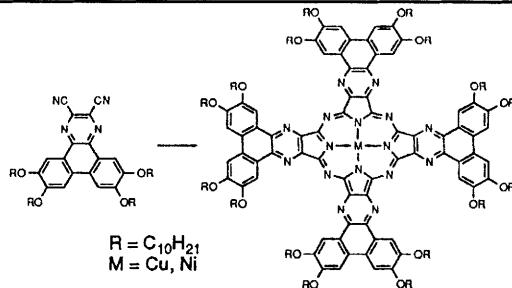
- 993 Ring Expansion or Spirocyclisation of (Phenylthiomethylene)cycloalkanes with Aluminium Chloride via β -Thio Carbocations**

Daphn  e Derouane, Jeremy N. Harvey, Heinz G. Viehe



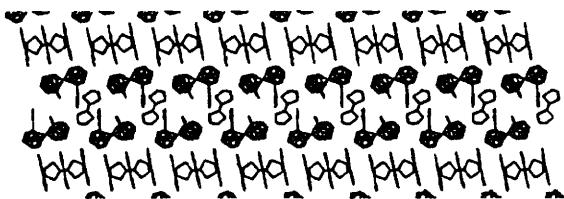
- 995 Synthesis of Triphenylene-based Porphyrazinato Metal(II) Complexes which display Discotic Columnar Mesomorphism**

Bernhard Mohr, Gerhard Wegner, Kazuchika Ohta



- 997 Two Tetrathiafulvalene Salts of a New Thiophene-functionalised Ferracarborane: Electrical Conductivity as a Function of Crystal Composition

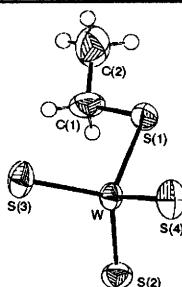
Yaw-Kai Yan, D. Michael P. Mingos, Mohamedally Kurmoo, Wan-Sheung Li, Ian J. Scowen, Mary McPartlin, A. Treeve Coomber, Richard H. Friend



Novel mixed valence tetrathiafulvalene stacks are obtained under unusually mild reaction conditions.

- 999 Alkylation of $[\text{WS}_4]^{2-}$: Synthesis and Structural Characterization of the Ethylthiolatotriethyltungstate(vi) Anion

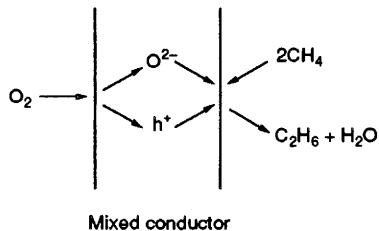
P. Michael Boorman, Meiping Wang, Masood Parvez



The labile anion $[\text{WS}_3(\text{SEt})]^-$ has been isolated from the reaction $[\text{WS}_4]^{2-} + \text{EtBr}$, and shown to be the first intermediate in the conversion of $[\text{WS}_4]^{2-}$ to $[\text{W}_3\text{S}_9]^{2-}$, when initiated by alkylation.

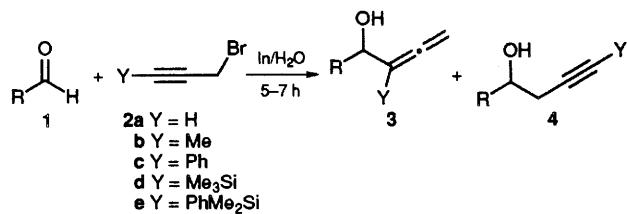
- 1001 Oxidative Coupling Reaction of CH_4 Using Oxide Ion and Electron Hole Mixed Conductive $\text{BaCe}_{0.8}\text{Gd}_{0.2}\text{O}_{3-\alpha}$ Ceramic as a Membrane Reactor

Takashi Hibino, Ken-ichi Ushiki, Yoshitaka Kuwahara

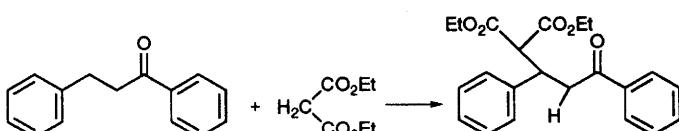


- 1003 Indium-mediated Coupling of Aldehydes with Prop-2-ynyl Bromides in Aqueous Media

Methvin B. Isaac, Tak-Hang Chan



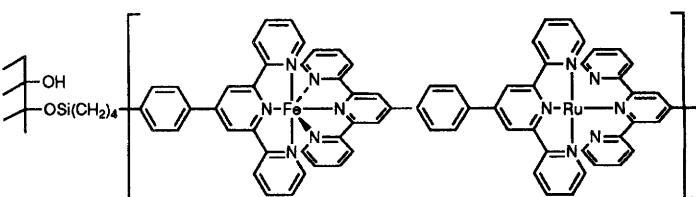
- 1005 Base and Acid Catalysis by the Alkali-containing MCM-41 Mesoporous Molecular Sieve



K. Richard Kloetstra, Herman van Bekkum

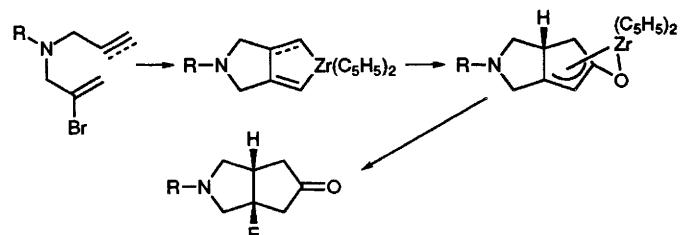
- 1007 Coordination Chemistry at a Surface: Polymetallic Complexes prepared on Quartz by Alternate Deposition of Iron(II) and Ruthenium(II) Centres

Yongwu Liang, Russell H. Schmehl



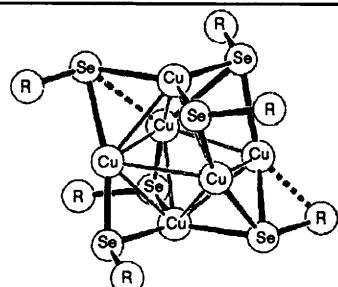
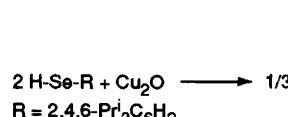
CONTENTS

- 1009 Zirconium-promoted Intramolecular Cyclization of Terminal Alkynes and Unusual Carbonylation Reaction



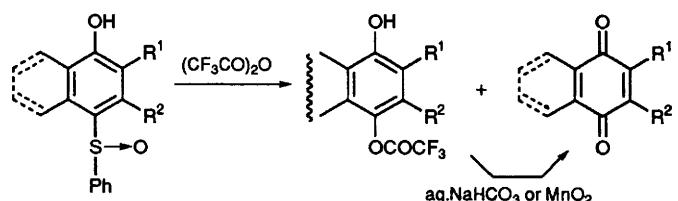
José Barluenga, Roberto Sanz, Francisco J. Fañanás

- 1011 A Hexanuclear Copper Arylselenolate: Synthesis, Structure and Proposal for its Rearrangement



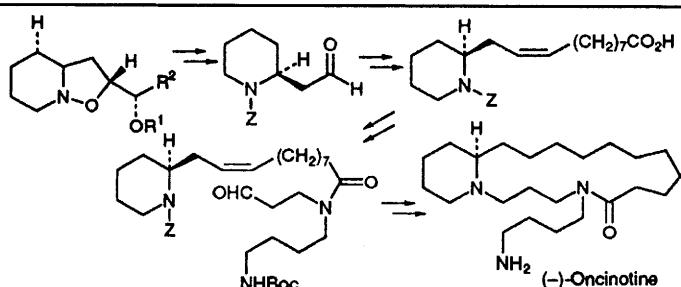
Dietmar Ohlmann, Hans Pritzkow, Hansjörg Grützmacher, Mitchell Anthamatten, Rainer Glaser

- 1013 An Efficient Synthesis of *p*-Quinones utilizing a Novel Pummerer-type Rearrangement of *p*-Sulfinylphenols



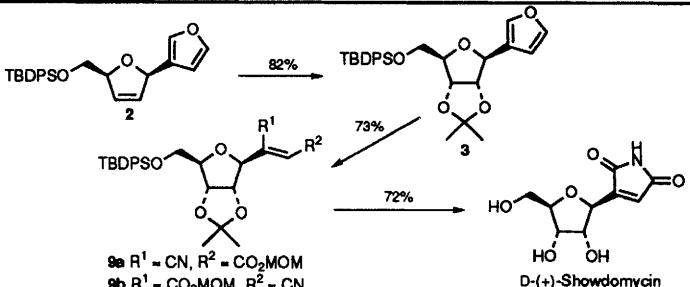
Shuji Akai, Yoshifumi Takeda, Kiyosei Iio, Yutaka Yoshida, Yasuyuki Kita

- 1015 The Chiral Total Synthesis of (-)-Oncinotine



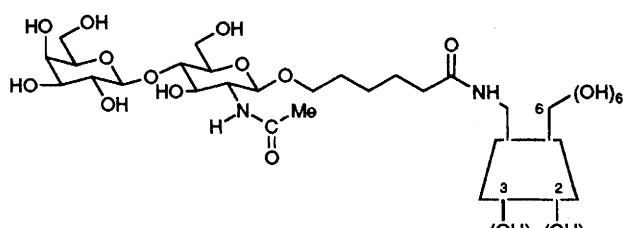
Hiroji Ina, Masayuki Ito, Chihiro Kibayashi

- 1017 A Stereocontrolled Synthesis of D-(+)-Showdomycin



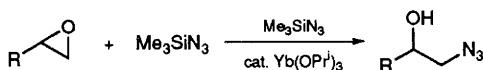
Sung Ho Kang, Sung Bae Lee

- 1019 Chemical-Enzymatic Synthesis and Bioactivity of Mono-6-[Gal- β -1,4-GlcNAc- β -(1,6')-hexyl]amido-6-deoxy-cycloheptaamylose



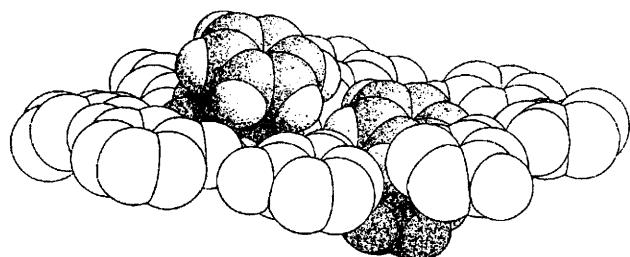
E. Leray, H. Parrot-Lopez, C. Augé, A. W. Coleman, C. Finance, R. Bonaly

1021 Ytterbium Triisopropoxide Catalysed Ring Opening of Epoxides with Trimethylsilyl Azide



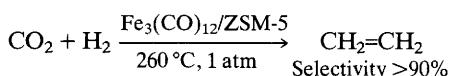
Masaki Meguro, Naoki Asao, Yoshinori Yamamoto

1023 Hosting Paramagnetic $[\text{Cr}(\text{C}_6\text{H}_6)_2]^+$ in an Organic Anion Framework via $\text{CH}\cdots\text{O}$ Hydrogen Bonds



Dario Braga, Fabrizia Grepioni, Janice J. Byrne, Andreas Wolf

1025 Light Olefin Synthesis from Carbon Dioxide by Hydrogenation over $\text{Fe}_3(\text{CO})_{12}$ Supported on ZSM-5 Zeolite Catalyst



Youmei Huang, Xianbo Meng, Zhongyuan Dang, Shanzhi Weng, Chuanan Zhang

1027 The Face-centred π Complex Isomer of the Benzenium Ion is Probably the Most Stable Form in the Gas Phase: Experimental Evidence

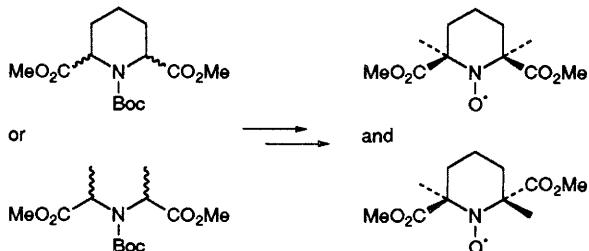


Rod S. Mason, Chris M. Williams, Peter D. J. Anderson

This gas-phase reaction is exothermic and is observed using collision induced decomposition MS.

1029 Synthesis of Stable α,α' -Bis(carboxymethyl) Substituted Nitroxides via an Original Dianion-based Strategy

Jacques Einhorn, Cathy Einhorn, Fabien Ratajczak, Jean-Louis Pierre



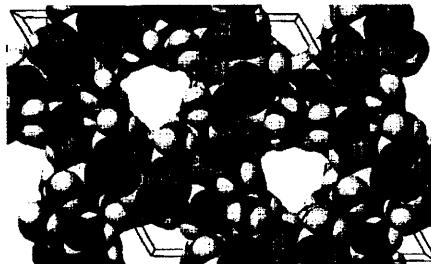
1031 Habit Modification in Synthetic Crystals of Aragonite and Vaterite



Stephen D. Sims, Jon M. Didymus, Stephen Mann

CONTENTS

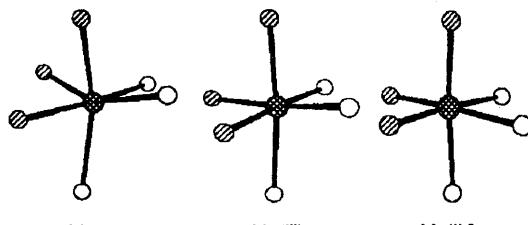
- 1033 Structure of Aluminium Methylphosphonate, AlMepO- β , with Unidimensional Channels formed from Ladder-like Organic-Inorganic Polymer Chains



The crystal structure of a microporous aluminium methylphosphonate AlMepO- β is described; the skeleton built up of fused four-ring chains forms unidimensional channels of approximately 5.8 Å fringed with methyl groups running parallel to the *c*-axis.

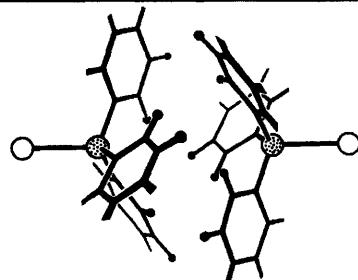
Kazuyuki Maeda, Junji Akimoto, Yoshimichi Kiyozumi, Fujio Mizukami

- 1035 Geometric Control of Manganese Redox State



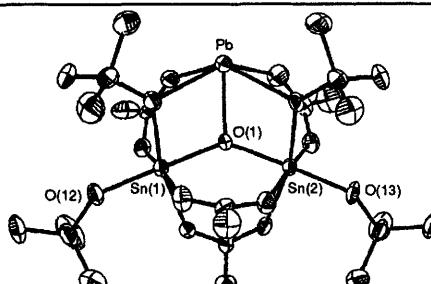
Michael G. B. Drew, Charles J. Harding, Vickie McKee, Grace G. Morgan, Jane Nelson

- 1039 The Sextuple Phenyl Embrace, a Ubiquitous Concerted Supramolecular Motif



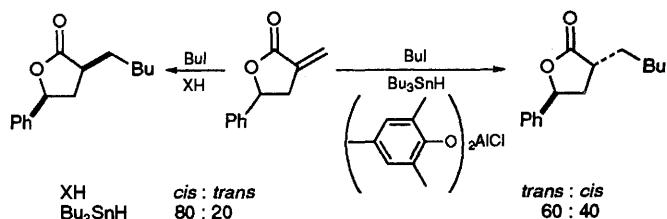
Ian Dance, Marcia Scudder

- 1041 Solvent Dependent Ester Elimination Reactions in the Preparation of Mixed-metal Oxo Clusters: the Synthesis of PbSn₂(μ_3 -O)(OBu^t)₄(OAc)₄



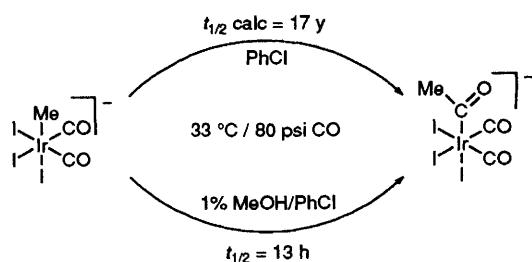
James Caruso, Mark J. Hampden-Smith, Eileen N. Duesler

- 1043 Reagent-controlled Stereoselection in Radical Addition to α -Methylenebutyrolactones



Hirokazu Urabe, Katsuhige Kobayashi, Fumie Sato

- 1045 Dramatic Acceleration of Migratory Insertion in [MeIr(CO)₂I₃]⁻ by Methanol and by Tin(II) Iodide



Jean M. Pearson, Anthony Haynes, George E. Morris, Glenn J. Sunley, Peter M. Maitlis

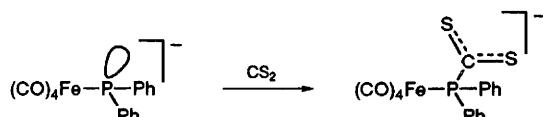
- 1047 **Carbohydrate-based Liquid Crystals: New Compounds showing Re-entrant TGB_A and Cholesteric Phases and Dopant-induced TGB_A, S_A and S_{C*} Phases**



The member of a homologous series of liquid crystals with $n = 11$ shows re-entrant TGB_A and cholesteric mesophases.

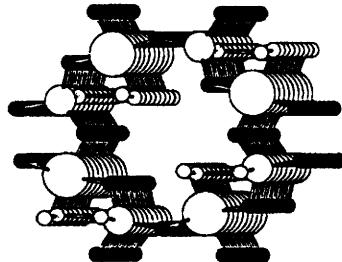
Volkmar Vill, Hanns-Walter Tunger

- 1049 **Synthesis and Molecular Structure of [K(18-crown-6)][(CO)₄FePPh₂CS₂]**



Wolfgang Petz, Frank Weller

- 1051 **Synthesis and Crystal Structure of Zn-(O₃PC₂H₄NH₂), the First Functionalized Zeolite-like Phosphonate**



Stéphanie Drumel, Pascal Janvier, David Deniaud, Bruno Bujoli

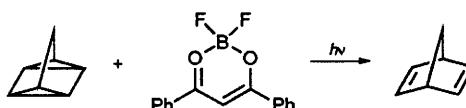
- 1053 **The Rôle of Cations in Low Power Radio Frequency Plasmas of Propenoic Acid**

A. J. Beck, L. O'Toole, R. D. Short, A. P. Ameen, F. R. Jones

Radio frequency-induced plasmas of propenoic ('acrylic') acid are investigated using MS. ESCA is used to characterise the plasma-polymer product. Protonated monomeric, dimeric and trimeric cations are observed in the mass spectra. Their relative abundance correlates with the retention of carboxylic acid functionality in the product.

- 1055 **Triplex Promoted Intersystem Crossing of Ion-Radical pairs in the Photosensitized Valence Isomerization of Quadricyclane: Chemically Induced Dynamic Nuclear Polarization (CIDNP) Evidence**

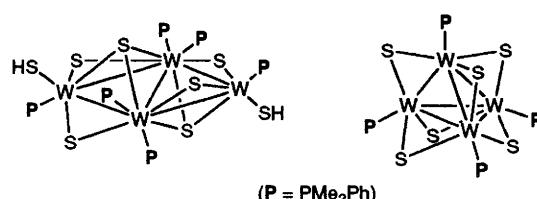
Li Yang, Mao-Xi Zhang, You-Cheng Liu, Zhong-Li Liu, Yuan L. Chow



CIDNP polarization directions of quadricyclane and norbornadiene are inverted in the presence of durene.

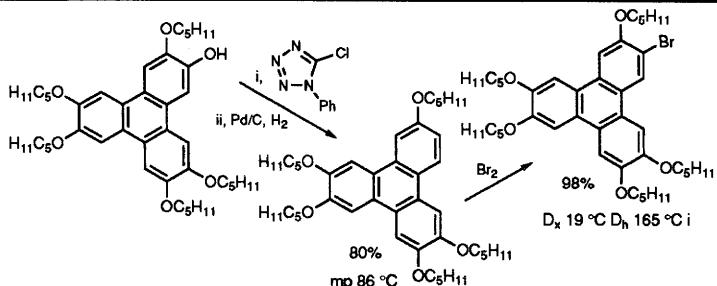
- 1057 **Syntheses of Tetranuclear Tungsten Sulfide Clusters with Raft-type and Tetrahedral Core Structures**

Shigeki Kuwata, Yasushi Mizobe, Masanobu Hidai



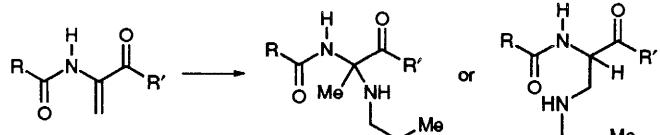
CONTENTS

- 1059 **The Synthesis of Alkoxybromotriphenylenes: New Discotic Liquid Crystals and Valuable Precursors to 'Mixed Tail' Discotics**



Philippe Henderson, Sandeep Kumar, James A. Rego, Helmut Ringsdorf, Peter Schuhmacher

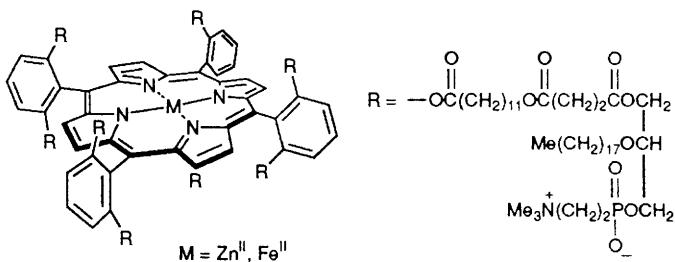
- 1061 **Control of the Regioselectivity of N-Nucleophile Addition to N-Carbonyl Protected Dehydroalanines: a Model for the Ammonia-lyase Enzymes**



M. Saeed Gulzar, Kathryn B. Morris, David Gani

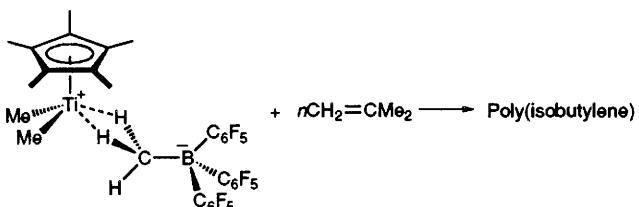
The regioselectivity of the addition of N-nucleophiles to N-carbonyl protected dehydroalanine derivatives, *i.e.* β -conjugate addition *vs.* α -imine capture can be controlled completely by varying the N-protecting group (R), or the carboxy-protecting group (R').

- 1063 **Monolayered Octopus-porphyrin Vesicle: Microstructure and Oxygen-binding in Aqueous Medium**



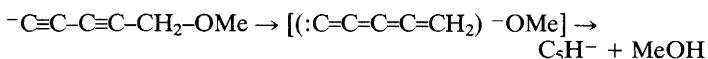
Eishun Tsuchida, Teruyuki Komatsu, Kenji Arai, Kazuhiro Yamada, Hiroyuki Nishide, Christoph Böttcher, Jürgen-Hinrich Fuhrhop

- 1065 **The First Example of Polymerization of Isobutylene induced by a Metallocene-like Initiator, $[(\eta^5\text{-C}_5\text{Me}_5)\text{TiMe}_2(\mu\text{-Me})\text{B}(\text{C}_6\text{F}_5)_3]$**



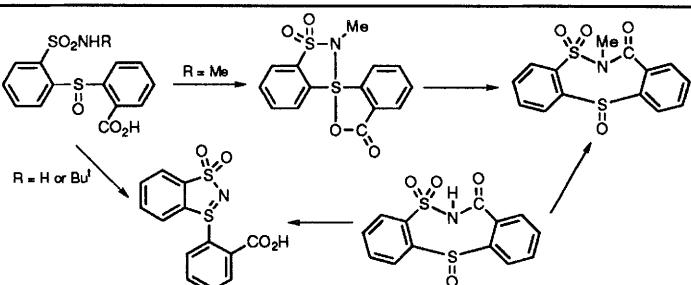
Florin Barsan, Michael C. Baird

- 1067 **The Synthesis and Structures of C_5H^- and C_5^-**



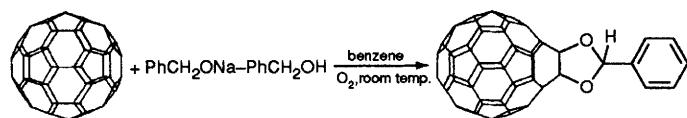
Suresh Dua, John C. Sheldon, John H. Bowie

- 1069 **Diaryl(acyloxy)sulfonylaminospiro- λ^4 -sulfanes. Synthesis, Molecular Structure and Rearrangement**



József Rábai, István Kapovits, Gyula Argay, Tibor Koritsánszky, Alajos Kálmán

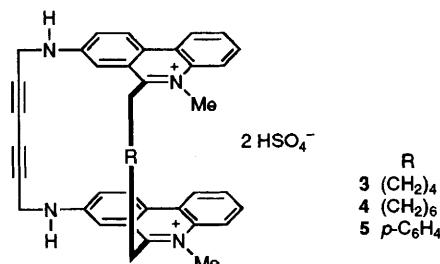
- 1071 Reaction of Sodium Alkoxides with [60]Fullerene: Formation of a 1,3-Dioxolane Derivative and Involvement of O₂ in a Nucleophilic Addition Reaction of C₆₀



Guan-Wu Wang, Lian-He Shu, Shi-Hui Wu,
Hou-Ming Wu, Xia-Fei Lao

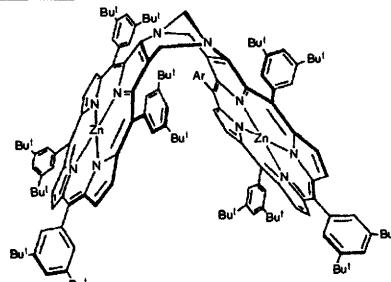
- 1073 Binding of Nucleotides in Water by Phenanthridinium Bis(intercaland) Receptor Molecules

Predrag Čudić, Mladen Žinić, Vladislav Tomišić,
Vladimir Simeon, Jean-Pierre Vigneron,
Jean-Marie Lehn



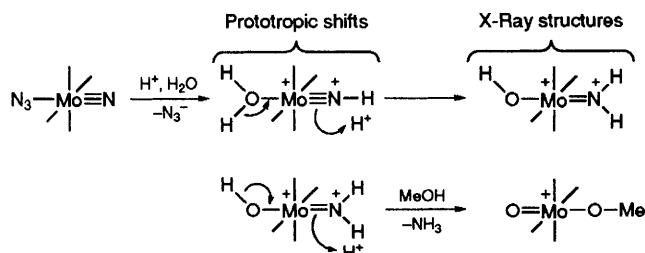
- 1077 Porphyrin Analogues of Tröger's Base: Large Chiral Cavities with a Bimetallic Binding Site

Maxwell J. Crossley, Trevor W. Hambley, Lindsey G. Mackay, Andrew C. Try, Robin Walton



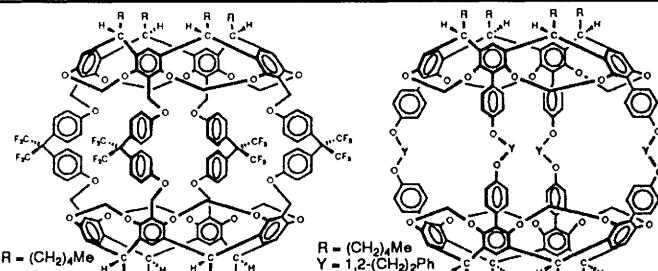
- 1081 Conversion of a Molybdenum Nitride to the Amide and thence to an Oxide and Ammonia, Reactions involving Formal 1,3-Prototropic Shifts. X-Ray Structures of *trans*-[Mo(NH₂)(OH)(dppe)₂][OTf]₂ and *trans*-[MoO(OMe)(dppe)₂][BPh₄] (dppe = Ph₂PCH₂CH₂PPh₂; OTf = CF₃SO₃)

Tomohiro Adachi, David L. Hughes, Saad K. Ibrahim, Susumu Okamoto, Christopher J. Pickett, Nobuyuki Yabanouchi, Toshikatsu Yoshida

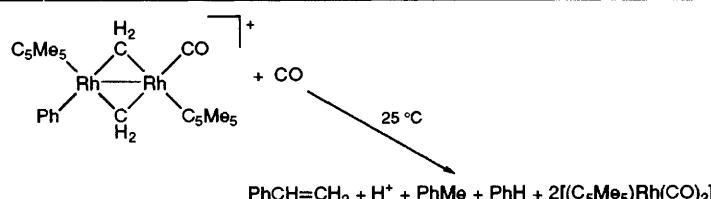


- 1085 Hemicarcerands with Interiors Potentially Capable of Binding Large Guests

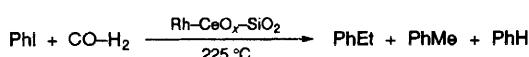
Christoph von dem Bussche-Hünnefeld, Dirk Bühring, Carolyn B. Knobler, Donald J. Cram



- 1089 The Parallel between Phenyl-initiated C–C Coupling Reactions in Dirhodium Complexes and those Catalysed by Rhodium Particles



Zhi-Qiang Wang, Helen C. Long, Michael L. Turner, Peter M. Maitlis



Corrigenda

- 1093 **Preparation of Phosphonated Polypyridyl Ligands to anchor Transition-metal Complexes on Oxide Surfaces: Application for the Conversion of Light to Electricity with Nanocrystalline TiO₂ Films**

Péter Péchy, François P. Rotzinger, Mohammed Khaja Nazeeruddin, Oliver Kohle, Shaik Mohammed Zakeeruddin, Robin Humphry-Baker, Michael Grätzel

- 1093 **Structure and Stereochemistry of Taxuchin A, a New 11(15 → 1) *Abeo*-Taxane Type Diterpene from *Taxus Chinensis***

Shunxiang Zhang, Catherine Tung-Ling Lee, Ke Chen, Yoshiki Kashiwada, De-Cheng Zhang, Andrew T. McPhail, Kuo-Hsiung Le

AUTHOR INDEX

- Adachi, Tomohiro, 1081
 Akai, Shuji, 1013
 Akimoto, Junji, 1033
 Ameen, A. P., 1053
 Anderson, Peter D. J., 1027
 Anthamatten, Mitchell, 1011
 Arai, Kenji, 1063
 Argay, Gyula, 1069
 Asao, Naoki, 1021
 Augé, C., 1019
 Baird, Michael C., 1065
 Barluenga, José, 1009
 Barsan, Florin, 1065
 Basset, Jean-Marie, 991
 Beck, A. J., 1053
 Bonaly, R., 1019
 Boorman, P. Michael, 999
 Böttcher, Christoph, 1063
 Bowie, John H., 1067
 Braga, Dario, 1023
 Brieva, Rosario, 989
 Bühring, Dirk, 1085
 Bujoli, Bruno, 1051
 Byrne, Janice J., 1023
 Caruso, James, 1041
 Chan, Tak-Hang, 1003
 Chen, Ke, 1093
 Chow, Yuan L., 1055
 Coleman, A. W., 1019
 Coomber, A. Treeve, 997
 Cram, Donald J., 1085
 Crossley, Maxwell J., 1077
 Čudić, Predrag, 1073
 Dance, Ian, 1039
 Dang, Zhongyuan, 1025
 Deniaud, David, 1051
 Derouane, Daphné, 993
 Didymus, Jon M., 1031
 Drew, Michael G. B., 1035
 Drumel, Stéphanie, 1051
 Dua, Suresh, 1067
 Duesler, Eileen N., 1041
 Einhorn, Cathy, 1029
 Einhorn, Jacques, 1029
 Fañanás, Francisco J., 1009
 Finance, C., 1019
 Friend, Richard H., 997
 Fuhrhop, Jürgen-Hinrich, 1063
 Gani, David, 1061
 Glaser, Rainer, 1011
- Gotor, Vicente, 989
 Grätzel, Michael, 1093
 Grepioni, Fabrizia, 1023
 Grützmacher, Hansjörg, 1011
 Gulzar, M. Saeed, 1061
 Hambley, Trevor W., 1077
 Hampden-Smith, Mark J., 1041
 Harding, Charles J., 1035
 Harvey, Jeremy N., 993
 Haynes, Anthony, 1045
 Henderson, Philippe, 1059
 Hibino, Takashi, 1001
 Hidai, Masanobu, 1057
 Huang, Youmei, 1025
 Hughes, David L., 1081
 Humphry-Baker, Robin, 1093
 Ibrahim, Saad K., 1081
 Iio, Kiyosei, 1013
 Ina, Hiroji, 1015
 Isaac, Methvin B., 1003
 Ito, Masayuki, 1015
 Janvier, Pascal, 1051
 Jones, F. R., 1053
 Kálmán, Alajos, 1069
 Kang, Sung Ho, 1017
 Kapovits, István, 1069
 Kashiwada, Yoshiki, 1093
 Kibayashi, Chihiro, 1015
 Kita, Yasuyuki, 1013
 Kiyozumi, Yoshimichi, 1033
 Kloetstra, K. Richard, 1005
 Knobler, Carolyn B., 1085
 Kobayashi, Katsushige, 1043
 Kohle, Oliver, 1093
 Komatsu, Teruyuki, 1063
 Koritsánszky, Tibor, 1069
 Kumar, Sandeep, 1059
 Kurmoo, Mohamedally, 997
 Kuwahara, Yoshitaka, 1001
 Kuwata, Shigeki, 1057
 Lao, Xia-Fei, 1071
 Le, Kuo-Hsiung, 1093
 Lee, Catherine Tung-Ling, 1093
 Lee, Sung Bae, 1017
 Lehn, Jean-Marie, 1073
 Leray, E., 1019
 Li, Wan-Sheung, 997
 Liang, Yongwu, 1007
- Liu, You-Cheng, 1055
 Liu, Zhong-Li, 1055
 Long, Helen C., 1089
 Mackay, Lindsey G., 1077
 McKee, Vickie, 1035
 McPartlin, Mary, 997
 McPhail, Andrew T., 1093
 Maeda, Kazuyuki, 1033
 Maitlis, Peter M., 1045, 1089
 Mann, Stephen, 1031
 Mason, Rod S., 1027
 Meguro, Masaki, 1021
 Menéndez, Emma, 989
 Meng, Xianbo, 1025
 Mingos, D. Michael P., 997
 Mizobe, Yasushi, 1057
 Mizukami, Fujio, 1033
 Mohr, Bernhard, 995
 Morgan, Grace G., 1035
 Morris, George E., 1045
 Morris, Kathryn B., 1061
 Nazeeruddin, Mohammed Khaja, 1093
 Nelson, Jane, 1035
 Nishide, Hiroyuki, 1063
 Ohlmann, Dietmar, 1011
 Ohta, Kazuchika, 995
 Okamoto, Susumo, 1081
 O'Toole, L., 1053
 Parrot-Lopez, H., 1019
 Parvez, Masood, 999
 Pearson, Jean M., 1045
 Péchy, Péter, 1093
 Petz, Wolfgang, 1049
 Pickett, Christopher J., 1081
 Pierre, Jean-Louis, 1029
 Pritzkow, Hans, 1011
 Rábai, József, 1069
 Ratajczak, Fabien, 1029
 Rebolledo, Francisca, 989
 Rego, James A., 1059
 Ringsdorf, Helmut, 1059
 Rotzinger, François P., 1093
 Sanz, Roberto, 1009
 Sato, Fumie, 1043
 Schmehl, Russell H., 1007
 Schuhmacher, Peter, 1059
 Scowen, Ian J., 997
 Scudder, Marcia, 1039
 Sheldon, John C., 1067
- Short, R. D., 1053
 Shu, Lian-He, 1071
 Simeon, Vladimir, 1073
 Sims, Stephen D., 1031
 Sunley, Glenn J., 1045
 Takeda, Yoshifumi, 1013
 Théolier, Albert, 991
 Thivolle-Cazat, Jean, 991
 Tomišić, Vladislav, 1073
 Try, Andrew C., 1077
 Tsuchida, Eishun, 1063
 Tunger, Hanns-Walter, 1047
 Turner, Michael L., 1089
 Urabe, Hirokazu, 1043
 Ushiki, Ken-ichi, 1001
 van Bekkum, Herman, 1005
 Vidal, Véronique, 991
 Viehe, Heinz G., 993
 Vignerón, Jean-Pierre, 1073
 Vill, Volkmar, 1047
 von dem Bussche-Hünnefeld, Christoph, 1085
 Walton, Robin, 1077
 Wang, Guan-Wu, 1071
 Wang, Meiping, 999
 Wang, Zhi-Qiang, 1089
 Wegner, Gerhard, 995
 Weller, Frank, 1049
 Weng, Shanzhi, 1025
 Williams, Chris M., 1027
 Wolf, Andreas, 1023
 Wu, Hou-Ming, 1071
 Wu, Shi-Hui, 1071
 Yabanouchi, Nobuyuki, 1081
 Yamada, Kazuhiro, 1063
 Yamamoto, Yoshinori, 1021
 Yan, Yaw-Kai, 997
 Yang, Li, 1055
 Yoshida, Toshikatsu, 1081
 Yoshida, Yutaka, 1013
 Zakeeruddin, Shaik Mohammed, 1093
 Zhang, Chuanan, 1025
 Zhang, De-Cheng, 1093
 Zhang, Mao-Xi, 1055
 Zhang, Shunxiang, 1093
 Žinić, Mladen, 1073