

JOURNAL OF THE CHEMICAL SOCIETY

Chemical Communications

Number 22
1989

CONTENTS

- 1697 Catalytic Dehydrosilylation of 1-Trimethylsilyloxycyclopent-1-ene into Cyclopent-2-enone with Oxygen over Palladium supported on Silica **T. Baba, K. Nakano, S. Nishiyama, S. Tsuruya, M. Masai**
- 1699 Biosynthesis of Estrogens by Microsomal Placental Aromatase; Isolation and Metabolism of 10 β -Hydroxyestr-4-ene-3,17-dione **Eliahu Caspi, H. Ranjith W. Dharmaratne, Cedric Shackleton**
- 1700 Enantioselective Addition of Diethylzinc to Aldehydes catalysed by Secondary Amino Alcohols **Kazuhiko Tanaka, Hideki Ushio, Hitomi Suzuki**
- 1702 Cyclic Sulphamidite Analogues of Penicillanic Acid **Bill K. Cuthbert, Gordon Lowe**
- 1703 Diphosphadisenatenetrazocines: Preparation and Structural Characterization of a PV₂N₄Se₂ Ring **Tristram Chivers, Daniel D. Doxsee, James F. Fait**
- 1705 A Novel Synthesis of Trimethyl-*p*-benzoquinone: Copper(II)-hydroxylamine catalysed Oxygenation of 2,3,6-Trimethylphenol with Dioxide **Katsuomi Takehira, Masao Shimizu, Yoshihito Watanabe, Hideo Orita, Takashi Hayakawa**
- 1707 Synthesis of Compounds Active Against HIV: Preparation of 6'-Fluorocarbocyclic AZT (AZT = 3'-deoxy-3'-azido-thymidine) **Clare A. Fletcher, Hans Hilpert, Peter L. Myers, Stanley M. Roberts, Richard Storer**
- 1709 Photochemistry of Cyclopentanone Derivatives in the Synthesis of Prostaglandin and Thromboxane Analogues **Manouchehr Azadi-Ardakani, Gabrielle C. Loftus, Adnan M. M. Mjalli, Roger F. Newton, Stanley M. Roberts**
- 1711 Cytotoxic Hybrid Molecules 'Metalloporphyrin-Ellipticine' having a High Affinity for DNA **Li Ding, Guita Etemad-Moghadam, Suzy Cros, Christian Auclair, Bernard Meunier**
- 1714 Synthesis of a Cyclic Porphyrin Trimer with a Semi-rigid Cavity **Harry L. Anderson, Jeremy K. M. Sanders**
- 1716 3-Oxo-4-thioxo-1,2,5,6-tetrathiapentalene (OTTP): a Novel Thiocarbon with an Unusual Chalcogen Network in its Solid State Structure **Fritz Closs, Gordana Srdanov, Fred Wudl**
- 1717 Indole Alkaloid Synthesis; a Stereospecific Preparation of Functionalised *cis*-Hexahydrocarbazoles **Clive McCarthy, Keith Jones**
- 1719 End-to-end Rotation of Co-ordinated Dinitrogen in (η^5 -C₅Me₅)Re(CO)₂(N₂) **Antonio Cusanelli, Derek Sutton**
- 1720 A Stable Ruthenium(V) Oxo Complex. X-Ray Crystal Structure and Oxidising Properties of Tetra-*n*-propylammonium Bis-2-hydroxy-2-ethylbutyrate(oxo)-ruthenate(V) **Andrew C. Dengel, William P. Griffith, Caroline A. O'Mahoney, David J. Williams**
- 1722 X-Ray Crystallographic and NMR Evidence for a Uniquely Strong OH...N Hydrogen Bond in the Solid State and Solution **Patrick Camilleri, Craig A. Marby, Barbara Odell, Henry S. Rzepa, Richard N. Sheppard, James J. P. Stewart, David J. Williams**
- 1723 Optical Resolution of Anionic Complexes by a Chromatographic Column containing (β -Cyclodextrinato)bis-(ethylenediamine)cobalt(III)(1+) Chloride **Kazuaki Yamanari, Motonori Nakamichi**
- 1725 Phenol Oxidative Coupling of Benzylisoquinoline Alkaloids is catalysed by Regio- and Stereo-selective Cytochrome P-450 linked Plant Enzymes: Salutaridine and Berbamunine **Meinhart H. Zenk, Roswitha Gerardy, Richard Stadler**
- 1727 The Photochemical [2 + 2] Cycloaddition to *N*-Methoxycarbonyl-5,6-dihydro-4-pyridone **Philippe Guerry, Reinhard Neier**
- 1729 Is the Nitro Group attracted towards Sulphur? **Srinivasachari Rajappa, Baburao M. Bhawal, Abdul Rakeeb A. S. Deshmukh, Sulur G. Manjunatha, Jayaraman Chandrasekhar**
- 1730 The Synthesis and Structure of a Macrocycle containing a Quinone Unit by Treatment of Tetrafluoro-1,4-benzoquinone with 1,11-Diamino-3,6,9-trioxoundecane **C. Dennis Hall, Peter Speers, Stanley C. Nyburg, Adrian W. Parkins**

- 1732 The First Preparation of an Unsymmetrical 1,3-Diphospha-allene carrying 2,4,6-Tri-*t*-butylphenyl and 2,4,6-Tri-*t*-pentylphenyl as Protecting Groups **Masaaki Yoshifuji, Shigeru Sasaki, Naoki Inamoto**
- 1734 Magnetic Order in Nd_{2-x}Ce_xCuO_{4-δ} **Matthew J. Rosseinsky, Kosmas Prassides, Peter Day**
- 1736 Soluble and High Molecular Weight Polyaniline **Masao Abe, Akira Ohtani, Yasuhiro Umemoto, Shinya Akizuki, Minoru Ezoe, Hiroyuki Higuchi, Keiji Nakamoto, Akitoshi Okuno, Yuzuru Noda**
- 1738 The Crystal Structure of a Hexanuclear Mixed Thiophenolato-alkynyl Copper(I) Complex: [Cu₃{SC₆H₄(CH₂NMe₂)-2}₂(C≡CBu^t)₂]: a Model for Electron Deficient Organocopper(I) Complexes with Cuprate Reactivity **D. Martin Knotter, Anthony L. Spek, Gerard van Koten**
- 1740 Resolution and Synthesis of the Individual Enantiomers of the Glycine Antagonist 3-Amino-1-hydroxypyrrolidin-2-one (HA-966) **Brian J. Williams, Paul D. Leeson, Graeme Hannah, Raymond Baker**
- 1742 An 'Open' Transition State in the Transfer Reaction of a Neutral Phosphoryl Group between Phenolate Anions **Mark A. Waring, Andrew Williams**
- 1744 A Specific Cation Stabilization Parameter for the Linear Correlation of Relative Oxidation Potentials **K. Hinkelmann, K. K. Liou, F. Wudl**
- 1746 Novel Type of Hydroprocessing Catalysts derived from the Precipitation from Homogeneous Solution (PFHS) Method **Vemulapalli Prasad, Komandur Chary, Kaza Somasekhara Rao, Panja Kanta Rao**
- 1747 Titanium Tetrachloride Binding and making Arenes from Acetylenes: the Synthesis and X-Ray Crystal Structure of a Titanium(IV)-Hexamethylbenzene Complex **Euro Solari, Carlo Floriani, Angiola Chiesi-Villa, Carlo Guastini**
- 1749 A New Method of Generation of Bismuthonium Ylides and their Efficient Trapping with Sulphenes **Takuji Ogawa, Toshihiro Murafuji, Hitomi Suzuki**
- 1751 5,10,15,20-Mesotetrakis(3,5-di-*t*-butyl-4-quinomethide)porphyrinogen: a Highly Puckered Tetrapyrrolic Macrocycle from the Facile Aerial Oxidation of a Phenolic Porphyrin **Andrew J. Golder, Lionel R. Milgrom, Kevin B. Nolan, David C. Povey**
- 1754 Can μ -Imidazolate Mediate Strong Antiferromagnetic Coupling? **Carol A. Koch, Bing Wang, Greg Brewer, Christopher A. Reed**
- 1755 ESR of an Oxidized Manganese Binuclear Cluster: a Possible Model of the Highest Oxidized State of the Oxygen-evolving Complex of Photosynthesis **S. V. Khangulov, M. G. Goldfeld, N. P. Kirpichnikova, S. N. Dobryakov, V. B. Ilyasova**
- 1757 The First Internally Functionalized Chiral [2.2]Metacyclophanes **Fritz Vögtle, Andreas Ostrowicki, Peter Knops, Peter Fischer, Hans Reuter, Martin Jansen**
- 1760 Stereochemistry of Reduction by the 5 α -Reductase Enzyme of *Penicillium decumbens* and the ¹H NMR Assignment of 5 α -Dihydrotestosterone **Herbert L. Holland, Weili Xu, Donald W. Hughes**
- 1762 Stepwise Reduction of MeNC to Me₂NH on a Metallaborane Substrate: an Interesting Reaction Sequence and the Molecular Structure of [μ -6,9-(NMe₂)-10-(PMe₂Ph)-5-(η^6 -C₆Me₆)-*arachno*-5-RuB₉H₁₀] **Evert J. Ditzel, Xavier L. R. Fontaine, Norman N. Greenwood, John D. Kennedy, Zhu Sisan, Mark Thornton-Pett**
- 1763 A Unique Acetylene-induced Reductive PPh₃ \rightarrow PH₃ Stripping of Phenyl Groups from Triphenylphosphine Ligands Bound to a Metallaborane 'B-Frame' Matrix **Jonathan Bould, Paul Brint, Xavier L. R. Fontaine, John D. Kennedy, Mark Thornton-Pett**
- 1765 A New Approach to the Assembly of Electron Donor-Spacer-Acceptor Systems **Christopher A. Hunter, Jeremy K. M. Sanders, Godfrey S. Beddard, Stuart Evans**
- 1767 Ruthenium-catalysed Atom-transfer Cyclisation of *N*-(Cyclohex-2-enyl)- α -chloro- α -(phenylthio)acetamides. A Formal Total Synthesis of (\pm)-Haemanthidine and (\pm)-Pretazettine **Hiroyuki Ishibashi, Horishi Nakatani, Satoshi Iwami, Tatsunori Sato, Nobuyuki Nakamura, Masazumi Ikeda**
- 1769 An Efficient Regioselective Synthesis of Substituted Purine Analogues of Guanosine and Inosine **Natarajan Raju, Roland K. Robins, Morteza M. Vaghefi**
- 1771 Structure Determination of Simaomicins α and β , Extremely Potent, Novel Anticoccidal Agents produced by *Actinomadura* **Taikwang M. Lee, Guy T. Carter, Donald B. Borders**
- 1772 Molecular Photodiodes consisting of Polyimide Langmuir-Blodgett Films possessing Electron Acceptor, Photo-sensitizer, and Electron Donor Units **Yasunari Nishikata, Atsushi Morikawa, Masa-aki Kakimoto, Yoshio Imai, Yoshiki Hirata, Katsuhiko Nishiyama, Masamichi Fujihira**
- 1774 Large Mössbauer Quadrupole Splittings in High-spin Iron(II) Complexes: the Structure of Di-iodo-1,5,9,13-tetrathiahexadecaneiron(II) [or 1,5,9,13-Tetrathiahexadecaneiron(II) Di-iodide] **Adrian Hills, David L. Hughes, Manuel Jimenez-Tenorio, G. Jeffrey Leigh, Andrew Houlton, Jack Silver**
- 1775 Modification and Cleavage of DNA by Ptaquiloside. A New Potent Carcinogen isolated from Bracken Fern **Makoto Ojika, Kenji Sugimoto, Tuneko Okazaki, Kiyoyuki Yamada**
- 1777 The Thermal Decomposition of 1-Methyl-1,2,3-benzotriazin-4(1*H*)-one: Matrix Isolation of the Reactive Intermediates **Ian R. Dunkin, Michael A. Lynch, Robert Withnall, A. J. Boulton, Neil Henderson**
- 1778 Palladium-catalysed Intramolecular Asymmetric Ene Reactions of Chiral Allylic Sulphones *via* Chiral Allylic Sulphinato-Sulphone Rearrangements **Kunio Hiroi, Yuji Kurihara**
- 1780 Photo-oxidative Decarboxylation of Phenylacetic Acids induced by Pyrimido[5,4-*g*]pteridine-10-oxide involving a Single-electron-transfer Process in Both Stages **Yoshifumi Maki, Magoichi Sako, Iwao Oyabu, Toshinobu Murase, Yukio Kitade, Kosaku Hirota**
- 1782 Wagner-Meerwein Rearrangements of Substituted 11-Oxatricyclo[6.2.1.0^{1,6}]undec-9-enes (2,4a-Epoxyoctahydronaphthalenes) **Brian A. Keay, Christine Rogers, Jean-Louis J. Bontront**

- 1784 Thermal Rearrangement of 4-Cyano-2,3-dihydro-5-ethoxy-3-methyl-3-(4-oxo-4*H*-1-benzopyran-3-yl)furans: a Reversed Alkoxy-carbonylcyclopropane \rightarrow 5-Alkoxy-2,3-dihydrofuran Transformation **Chandra Kanta Ghosh, Subhabrata Biswas**
- 1785 Characterisation and Properties of the Dinuclear Ruthenium Molecular Hydrogen Complex $[(\eta^2\text{-H}_2)(\text{dppb})\text{Ru}(\mu\text{-Cl})_2\text{RuCl}(\text{dppb})]$; $\text{dppb} = \text{Ph}_2\text{P}(\text{CH}_2)_4\text{PPh}_2$ **Ajey M. Joshi, Brian R. James**
- 1787 Asymmetric Alkylation of a Chiral α -Amino Alkenenitrile **Jim-Min Fang, Chih-Jung Chang**
-

Corrigendum

- 1788 Natural Carboxylic Polyether Derivatives as Lithium Ionophores **Koji Suzuki, Koji Tohda, Hideshi Sasakura, Hidenari Inoue, Kuniaki Tatsuta, Tsuneo Shirai**

AUTHOR INDEX

- Abe, Masao, 1736
 Akizuki, Shinya, 1736
 Anderson, Harry L., 1714
 Auclair, Christian, 1711
 Azadi-Ardakani, Manouchehr, 1709
 Baba, T., 1697
 Baker, Raymond, 1740
 Beddard, Godfrey S., 1765
 Bhawal, Baburao M., 1729
 Biswas, Subhabrata, 1784
 Bontront, Jean-Louis J., 1782
 Borders, Donald B., 1771
 Bould, Jonathan, 1763
 Boulton, A. J., 1777
 Brewer, Greg, 1754
 Brint, Paul, 1763
 Camilleri, Patrick, 1722
 Carter, Guy T., 1771
 Caspi, Eliahu, 1699
 Chandrasekhar, Jayaraman, 1729
 Chang, Chih-Jung, 1787
 Chary, Komandur, 1746
 Chiesi-Villa, Angiola, 1747
 Chivers, Tristram, 1703
 Closs, Fritz, 1716
 Cros, Suzy, 1711
 Cusanelli, Antonio, 1719
 Cuthbert, Bill K., 1702
 Day, Peter, 1734
 Dengel, Andrew C., 1720
 Deshmukh, Abdul Rakeeb A. S., 1729
 Dharmaratne, H. Ranjith W., 1699
 Ding, Li, 1711
 Ditzel, Evert J., 1762
 Dobryakov, S. N., 1755
 Doxsee, Daniel D., 1703
 Dunkin, Ian R., 1777
 Etemad-Moghadam, Guita, 1711
 Evans, Stuart, 1765
 Ezoe, Minoru, 1736
 Fait, James F., 1703
 Fang, Jim-Min, 1787
 Fischer, Peter, 1757
 Fletcher, Clare A., 1707
 Floriani, Carlo, 1747
 Fontaine, Xavier L. R., 1762, 1763
 Fujihira, Masamichi, 1772
 Gerardy, Roswitha, 1725
 Ghosh, Chandra Kanta, 1784
 Golder, Andrew J., 1751
 Goldfeld, M. G., 1755
 Greenwood, Norman N., 1762
 Griffith, William P., 1720
 Guastini, Carlo, 1747
 Guerry, Philippe, 1727
 Hall, C. Dennis, 1730
 Hannah, Graeme, 1740
 Hayakawa, Takashi, 1705
 Henderson, Neil, 1777
 Higuchi, Hiroyuki, 1736
 Hills, Adrian, 1774
 Hilpert, Hans, 1707
 Hinkelmann, K., 1744
 Hirata, Yoshiki, 1772
 Hiroi, Kunio, 1778
 Hirota, Kosaku, 1780
 Holland, Herbert L., 1760
 Houlton, Andrew, 1774
 Hughes, David L., 1774
 Hughes, Donald W., 1760
 Hunter, Christopher A., 1765
 Ikeda, Masazumi, 1767
 Ilyasova, V. B., 1785
 Imai, Yoshio, 1772
 Inamoto, Naoki, 1732
 Inoue, Hidenari, 1788
 Ishibashi, Hiroyuki, 1767
 Iwami, Satoshi, 1767
 James, Brian R., 1785
 Jansen, Martin, 1757
 Jimenez-Tenorio, Manuel, 1774
 Jones, Keith, 1717
 Joshi, Ajey M., 1785
 Kakimoto, Masa-aki, 1772
 Kanta Rao, Panja, 1746
 Keay, Brian A., 1782
 Kennedy, John D., 1762, 1763
 Khangulov, S. V., 1755
 Kirpichnikova, N. P., 1755
 Kitade, Yukio, 1780
 Knops, Peter, 1757
 Knotter, D. Martin, 1738
 Koch, Carol A., 1754
 Kurihara, Yuji, 1778
 Lee, Taikwang M., 1771
 Leeson, Paul D., 1740
 Leigh, G. Jeffery, 1774
 Liou, K. K., 1744
 Loftus, Gabrielle C., 1709
 Lowe, Gordon, 1702
 Lynch, Michael A., 1777
 McCarthy, Clive, 1717
 Maki, Yoshifumi, 1780
 Manjunatha, Sulur G., 1729
 Marby, Craig A., 1722
 Masai, M., 1697
 Meunier, Bernard, 1711
 Milgrom, Lionel R., 1751
 Mjalli, Adnan M. M., 1709
 Morikawa, Atsushi, 1772
 Murafuji, Toshihiro, 1749
 Murase, Toshinobu, 1780
 Myers, Peter L., 1707
 Nakamichi, Motonori, 1723
 Nakamoto, Keiji, 1736
 Nakamura, Nobuyuki, 1767
 Nakano, K., 1697
 Nakatani, Horishi, 1767
 Neier, Reinhard, 1727
 Newton, Roger F., 1709
 Nishikata, Yasunari, 1772
 Nishiyama, Katsuhiko, 1772
 Nishiyama, S., 1697
 Noda, Yuzuru, 1736
 Nolan, Kevin B., 1751
 Nyburg, Stanley C., 1730
 Odell, Barbara, 1722
 Ogawa, Takuji, 1749
 Ohtani, Akira, 1736
 Ojika, Makoto, 1775
 Okazaki, Tuneko, 1775
 Okuno, Akitoshi, 1736
 O'Mahoney, Caroline A., 1720
 Orita, Hideo, 1705
 Ostrowicki, Andreas, 1757
 Oyabu, Iwao, 1780
 Parkins, Adrian W., 1730
 Povey, David C., 1751
 Prasad, Vemulapalli, 1746
 Prassides, Kosmas, 1734
 Rajappa, Srinivasachari, 1729
 Raju, Natarajan, 1769
 Reed, Christopher A., 1754
 Reuter, Hans, 1757
 Roberts, Stanley M., 1707, 1709
 Robins, Roland K., 1769
 Rogers, Christine, 1782
 Rosseinsky, Matthew J., 1734
 Rzepa, Henry S., 1722
 Sako, Magoichi, 1780
 Sanders, Jeremy K. M., 1714, 1765
 Sasaki, Shigeru, 1732
 Sasakura, Hideshi, 1788
 Sato, Tatsunori, 1767
 Shackleton, Cedric, 1699
 Sheppard, Richard N., 1722
 Shimizu, Masao, 1705
 Shirai, Tsuneo, 1788
 Silver, Jack, 1774
 Sisan, Zhu, 1762
 Solari, Euro, 1747
 Somasekhara Rao, Kaza, 1746
 Speers, Peter, 1730
 Spek, Anthony L., 1738
 Srdanov, Gordana, 1716
 Stadler, Richard, 1725
 Stewart, James J. P., 1722
 Storer, Richard, 1707
 Sugimoto, Kenji, 1775
 Sutton, Derek, 1719
 Suzuki, Hitomi, 1700, 1749
 Suzuki, Koji, 1788
 Takehira, Katsuo, 1705
 Tanaka, Kazuhiko, 1700
 Tatsuta, Kuniaki, 1788
 Thornton-Pett, Mark, 1762, 1763
 Tohda, Koji, 1788
 Tsuruya, S., 1697
 Umemoto, Yasuhiro, 1736
 Ushio, Hideki, 1700
 Vaghefi, Morteza M., 1769
 van Koten, Gerard, 1738
 Vögtle, Fritz, 1757
 Wang, Bing, 1754
 Waring, Mark A., 1742
 Watanabe, Yoshihito, 1705
 Williams, Andrew, 1742
 Williams, Brian J., 1740
 Williams, David J., 1720, 1722
 Withnall, Robert, 1777
 Wudl, Fred, 1716, 1744
 Xu, Weili, 1760
 Yamada, Kiyoyuki, 1775
 Yamanari, Kazuaki, 1723
 Yoshifuji, Masaaki, 1732
 Zenk, Meinhard H., 1725