

JOURNAL OF THE CHEMICAL SOCIETY

Chemical Communications

Number 11
1988

CONTENTS

- 689 A Successful Application of the Concept of Making Use of Hydrophobic Forces to Prepare Large-ring Compounds
Xi-Kui Jiang, Yong-Zheng Hui, Zeng-Xiang Fei
- 691 Proton Coupled Membrane Transport of Anions Mediated by Cryptate Carriers **Bernard Dietrich, Thomas M. Fyles, M. Wais Hosseini, Jean-Marie Lehn, Katharine C. Kaye**
- 692 Synthesis and Conformation of Macrocyclic Porphyrin Dimers with Potentially Spacious Cavities **Christopher A. Hunter, M. Nafees Meah, Jeremy K. M. Sanders**
- 694 Ligand-induced Conformational Switching and Allosteric Effects in Macrocyclic Porphyrin Dimers **Christopher A. Hunter, M. Nafees Meah, Jeremy K. M. Sanders**
- 697 Transmembrane Electron Transfer catalysed by Manganese Porphyrin-linked Quinones with Various Carbon Chain Lengths **Mamoru Nango, Hiroki Kryu, Paul A. Loach**
- 698 Aromatic Nucleophilic Substitution Reactions of 1-Dialkylamino-2,4-dinitronaphthalene with Primary or Secondary Amines in Organic Solvents: Facile Amine–Amine Exchange **Shizen Sekiguchi, Tohru Horie, Tohru Suzuki**
- 700 Mixed Valence Manganese-(ii, iii) and -(iii, iv) Dinuclear Complexes: Preparation, Structure, Magnetochemistry, and E.S.R. Spectra of $Mn_2(\text{biphen})_2(\text{biphenH})(\text{bpy})_2$ and $Mn_2O_2Cl_2(\text{OAc})(\text{bpy})_2$ ($\text{biphenH}_2 = 2,2'$ -biphenol, $\text{bpy} = 2,2'$ -bipyridine) **John S. Bashkin, Ann R. Schake, John B. Vincent, H.-R. Chang, Qiaoying Li, John C. Huffman, George Christou, David N. Hendrickson**
- 702 A New Method for C–C Coupling of Terminal Alkenes *via* a Sulphonylation–Alkylation–Desulphonylation Sequence: Synthesis of *E*- and *Z*- α -Bisabolenes **Jack E. Baldwin, Robert M. Adlington, Yoshiyasu Ichikawa, Christopher J. Kneale**
- 704 Formation of a Rhenium Benzyne Derivative by Facile Ligand-induced *ortho*-Hydrogen Abstraction in a Homoleptic Rhenium Aryl; *X*-Ray Crystal Structure of $\text{Re}(\eta^2\text{-}2\text{-MeC}_6\text{H}_3)(2\text{-MeC}_6\text{H}_4)_2(\text{PMe}_2\text{Ph})_2$ **John Arnold, Geoffrey Wilkinson, Bilquis Hussain, Michael B. Hursthouse**
- 706 Stereospecificity in Diels–Alder Reactions of Dienes and Dienophiles derived from Methyl 4,6-*O*-Benzylidene- α -D-glucopyranoside **J. Christobal Lopez, Eric Lameignere, Gabor Lukacs**
- 707 Aspects of Molecular Recognition: Use of a Truncated Driven Pseudo-NOESY Experiment to Elucidate the Environment of Intermolecular Electrostatic Interactions in Vancomycin **Jonathan P. Waltho, John Cavanagh, Dudley H. Williams**
- 710 A One-Pot Conversion of an Aziridine to a β -Lactam using Nickel Tetracarbonyl **Wilaiporn Chamchaang, Allan R. Pinhas**
- 711 Facile Preparation of π -Arene Complexes of Ruthenium $[(\eta^5\text{-C}_5\text{Me}_5)\text{Ru}(\text{Arene})]\text{X}$ including a π -Pyridine and the First π -Furan Derivatives **Bruno Chaudret, Felix A. Jalon**
- 713 α -Hydride Abstraction *via* a Three-Step Pathway: Access to the Electron Rich Iron Methoxycarbene Complex $[\text{Fe}(\eta^5\text{-C}_5\text{Me}_5)(P, P'\text{-Ph}_2\text{PCH}_2\text{CH}_2\text{PPh}_2)(=\text{CHOMe})]^+\text{PF}_6^-$ **Christophe Roger, Loïc Toupet, Claude Lapinte**
- 715 Nitrosamines from *N,N*-Disubstituted Hydrazines **Joseph H. Boyer, Ashwin M. Krishnan**
- 716 Highly Enantioselective Cleavage of α -Amino Acid *p*-Nitrophenyl Esters by Chiral Metallomicelles **Roberto Fornasier, Paolo Scrimin, Umberto Tonellato, Nicola Zanta**
- 718 Enantioselectivity in Organo Transition Metal Chemistry. An Unprecedented Ligand Effect in π -Allyl Palladium Chemistry **J.-P. Genêt, S. Jugé, J. Ruiz Montés, J.-M. Gaudin**
- 720 Stabilisation of Nitrophenyl Disulphide Ions in Dimethylacetamide **Gérard Bosser, Jacky Paris, Vincent Plichon**
- 721 A Formal Synthesis of Aflatoxin B_2 **Gamini Weeratunga, Stephen Horne, Russell Rodrigo**
- 723 Electroactive Films of $[\text{Cu}(\text{dpp})_2]^+$ Covalently Attached to Polypyrrole ($\text{dpp} = 2,9$ -Diphenyl-1,10-phenanthroline) **Gérard Bidan, Bernadette Divisia-Blohorn, Jean-Marc Kern, Jean-Pierre Sauvage**
- 724 New Route to (+)-(20*R*)-De-*AB*-cholesta-8(14),22-dien-9-one and (+)-(20*S*)-De-*AB*-isocholesta-8(14),22-dien-9-one from (*S*)- and (*R*)-2,3-*O*-Isopropylidene-glyceraldehyde **Toshio Suzuki, Etsuko Sato, Katsuo Unno, Tetsuji Kametani**

- 726 Hydroxyversicolorone: Synthesis and Incorporation of a New Intermediate in Aflatoxin Biosynthesis **Craig A. Townsend, Paul R. O. Whittamore, Susan W. Brobst**
- 728 A Novel Reaction of Metal Sulphides with the Mixed Non-aqueous System Dimethyl Sulphoxide–Sulphur Dioxide **W. David Harrison, J. Bernard Gill, David C. Goodall**
- 729 New Reactions of Precious Metals and their Binary Compounds in Solvents containing Carbon Halides **Neale R. C. Jackson, W. David Harrison, David C. Goodall**
- 730 How Do Silver(I) Cations React with Hydrogen Cyanide? The Crystal Structure of $[Ag(NCH)_2][SbF_6]$ **Peter G. Jones, Herbert W. Roesky, Jürgen Schimkowiak**
- 731 Novel Reaction of Limonene(tricarbonyl)iron: Synthesis and Crystal Structure of $(\eta^4-C_{10}H_{16})\{C(OEt)C_6H_4Me-o\}-Fe(CO)_2$ and $\{(\eta^3-C_{10}H_{16})C(OEt)Ar\}Fe(CO)_2$ **Jiabi Chen, Guixin Lei, Zhongsheng Jin, Linghai Hu, Gecheng Wei**
- 732 Kinetics of Thymine Dimerization **Valda Kilfoil, Leo Salter**
- 734 Conjugate Addition of Allyltrimethylsilane to Electrophilic Cyclopropanes **Ramesh Bambal, Raymond D. W. Kemmitt**
- 735 Novel Ligand Effect on Cobalt(III) Complex Promoted Hydrolysis of a Phosphate Diester **Jik Chin, Mariusz Banaszczyk, Vrej Jubian**
- 737 Push–Pull Polyenes and Carotenoids: Synthesis and Non-linear Optical Properties **Mireille Blanchard-Desce, Isabelle Ledoux, Jean-Marie Lehn, Jacques Malthête, Joseph Zyss**
- 740 The First Example of a Direct Formal Gold(I)–Gold(III) Bond. Synthesis and Structure of $[\{Au(CH_2)_2PPh_2\}_2Au(C_6F_5)_3]$ **Rafael Usón, Antonio Laguna, Mariano Laguna, Maria Teresa Tartón, Peter G. Jones**
- 741 Organo-Phosphorus–Selenium Heterocycles **Jonathan C. Fitzmaurice, David J. Williams, Paul T. Wood, J. Derek Woollins**
- 743 Structure Elucidation of the Fumonisin, Mycotoxins from *Fusarium moniliforme* **S. Catherine Bezuidenhout, Wentzel C. A. Gelderblom, Charles P. Gorst-Allman, R. Marthinus Horak, Walter F. O. Marasas, Gerhard Spitteller, Robert Vleggaar**
- 746 Enzymatic Resolution of a Chiral Organometallic Ester: Enantioselective Hydrolysis of 2-Ethoxycarbonylbuta-1,3-dienetricarbonyliron by Pig Liver Esterase **N. W. Alcock, David H. G. Crout, Christine M. Henderson, Susan E. Thomas**
- 747 Intermolecular Energy Transfer from Phenanthrene to Europium in Aqueous Micellar Solution **James R. Darwent, Colin D. Flint, Nelson W. Sharpe**
- 748 Carbon Network Building Blocks: Triethynyl Methanol and Derivatives **Albert H. Alberts, Hans Wynberg**
- 749 Total Synthesis of Silychristin, an Antihepatotoxic Flavonolignan **Hitoshi Tanaka, Masaru Hiroo, Kazuhiko Ichino, Kazuo Ito**
- 751 Generation, Trapping, and Adduct Rearrangement of 3-Phenylselenoalk-1-enylidene Carbenes: a Novel Direct Route to 1-Hetero-substituted 1-Vinylcyclopropanes **Richard T. Lewis, William B. Motherwell**
- 753 Synthesis and Structure of a Phosphagermirene **Alan H. Cowley, Stephen W. Hall, Christine M. Nunn, John M. Power**
- 754 Preparation of New Conducting Langmuir–Blodgett Films based on an Ethylenedithiodioctadecylthiotetrathiafulvalene Charge Transfer Complex **J. Richard, M. Vandevyver, A. Barraud, J. P. Morand, R. Lapouyade, P. Delhaes, J. F. Jacquinet, M. Roullia**

AUTHOR INDEX

- Adlington, Robert M., 702
 Alberts, Albert H., 748
 Alcock, N. W., 746
 Arnold, John, 704
 Baldwin, Jack E., 702
 Bambal, Ramesh, 734
 Banaszczyk, Mariusz, 735
 Barraud, A., 754
 Bashkin, John S., 700
 Bezuidenhout, S. Catherine, 743
 Bidan, Gérard, 723
 Blanchard-Desce, Mireille, 737
 Bosser, Gérard, 720
 Boyer, Joseph H., 715
 Brobst, Susan W., 726
 Cavanagh, John, 707
 Chamchaang, Wilaiporn, 710
 Chang, H.-R., 700
 Chaudret, Bruno, 711
 Chen, Jiabi, 731
 Chin, Jik, 735
 Christou, George, 700
 Cowley, Alan H., 753
 Crout, David H. G., 746
 Darwent, James R., 747
 Delhaes, P., 754
 Dietrich, Bernard, 691
 Divisia-Blohorn, Bernadette, 723
 Fei, Zeng-Xiang, 689
 Fitzmaurice, Jonathan C., 741
 Flint, Colin D., 747
 Fornasier, Roberto, 716
 Fyles, Thomas M., 691
 Gaudin, J.-M., 718
 Gelderblom, Wentzel C. A., 743
 Genêt, J.-P., 718
 Gill, J. Bernard, 728
 Goodall, David C., 728, 729
 Gorst-Allman, Charles P., 743
 Hall, Stephen W., 753
 Harrison, W. David, 728, 729
 Henderson, Christine M., 746
 Hendrickson, David N., 700
 Hiroo, Masaru, 749
 Horak, R. Marthinus, 743
 Horie, Tohru, 698
 Horne, Stephen, 721
 Hosseini, M. Wais, 691
 Hu, Linghai, 731
 Huffman, John C., 700
 Hui, Yong-Zheng, 689
 Hunter, Christopher A., 692, 694
 Hursthouse, Michael B., 704
 Hussain, Bilquis, 704
 Ichikawa, Yoshiyasu, 702
 Ichino, Kazuhiko, 749
 Ito, Kazuo, 749
 Jackson, Neale R. C., 729
 Jacquinet, J. F., 754
 Jalon, Felix A., 711
 Jiang, Xi-Kui, 689
 Jin, Zhongsheng, 731
 Jones, Peter G., 730, 740
 Jubian, Vrej, 735
 Jugé, S., 718
 Kametani, Tetsuji, 724
 Kaye, Katharine C., 691
 Kemmitt, Raymond D. W., 734
 Kern, Jean-Marc, 723
 Kilfoil, Valda, 732
 Kneale, Christopher J., 702
 Krishnan, Ashwin M., 715
 Kryu, Hiroki, 697
 Laguna, Antonio, 740
 Laguna, Mariano, 740
 Lameignere, Eric, 706
 Lapinte, Claude, 713
 Lapouyade, R., 754
 Ledoux, Isabelle, 737
 Lehn, Jean-Marie, 691, 737
 Lei, Guixin, 731
 Lewis, Richard T., 751
 Li, Qiaoying, 700
 Loach, Paul A., 697
 Lopez, J. Christobal, 706
 Lukacs, Gabor, 706
 Malthête, Jacques, 737
 Marasas, Walter F. O., 743
 Meah, M. Nafees, 692, 694
 Montès, J. Ruiz, 718
 Morand, J. P., 754
 Motherwell, William B., 751
 Nango, Mamoru, 697
 Nunn, Christine M., 753
 Paris, Jacky, 720
 Pinhas, Allan R., 710
 Plichon, Vincent, 720
 Power, John M., 753
 Richard, J., 754
 Rodrigo, Russell, 721
 Roesky, Herbert W., 730
 Roger, Christophe, 713
 Roulliay, M., 754
 Salter, Leo, 732
 Sanders, Jeremy K. M., 692, 694
 Sato, Etsuko, 724
 Sauvage, Jean-Pierre, 723
 Schake, Ann R., 700
 Schimkowiak, Jürgen, 730
 Scrimin, Paolo, 716
 Sekiguchi, Shizen, 698
 Sharpe, Nelson W., 747
 Spitteller, Gerhard, 743
 Suzuki, Tohru, 698
 Suzuki, Toshio, 724
 Tanaka, Hitoshi, 749
 Tartón, Maria Teresa, 740
 Thomas, Susan E., 746
 Tonellato, Umberto, 716
 Toupet, Loïc, 713
 Townsend, Craig A., 726
 Unno, Katsuo, 724
 Usón, Rafael, 740
 Vandevyver, M., 754
 Vincent, John B., 700
 Vleggaar, Robert, 743
 Waltho, Jonathan P., 707
 Weeratunga, Gamini, 721
 Wei, Gecheng, 731
 Whittamore, Paul R. O., 726
 Wilkinson, Geoffrey, 704
 Williams, David J., 741
 Williams, Dudley H., 707
 Wood, Paul T., 741
 Woollins, J. Derek, 741
 Wynberg, Hans, 748
 Zanta, Nicola, 716
 Zyss, Joseph, 737

NEW BOOKS

FROM THE ROYAL SOCIETY OF CHEMISTRY

Hardcover 500pp
ISBN 0 85186 343 3

DIFFUSIVE SAMPLING

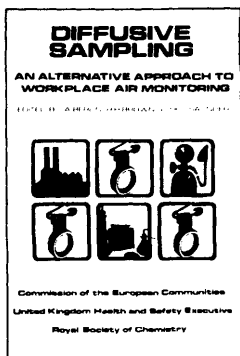
AN ALTERNATIVE APPROACH TO WORKPLACE AIR MONITORING

Edited by: A. Berlin, Health & Safety Directorate
R.H. Brown, Occupational Medicine and Hygiene Laboratories
K.J. Saunders, BP Research Centre.

Diffusive Sampling is based on a symposium held in Luxembourg in September 1986 and organised jointly by the Commission of the European Communities and the United Kingdom Health and Safety Executive in cooperation with the World Health Organization and the Royal Society of Chemistry. This book:

- Reviews the state of the art of diffusive sampler techniques
- Stimulates the exchange of technical information
- Assesses the suitability and range of applications for workplace monitoring
- Promotes the further development of this technique and its wider use.

Brief contents: Introduction, Current Field Application, Role of Diffusive Sampler in Workplace Air Monitoring, Current Trends in Development of Diffusive Systems, Acceptability of Monitoring Data Based on Diffusive Sampling, Conclusions and Recommendations.



Price £45.00 \$87.00
RSC Members Price £27.00

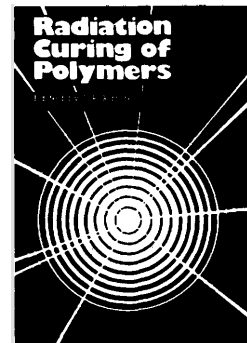
Radiation Curing of Polymers

EDITED BY D. R. RANDELL, CIBA-GEIGY INDUSTRIAL CHEMICALS

Throughout the 1970's and 1980's, there has been a growing interest in the use of radiation sources in the curing of polymers in surface coatings applications. This has arisen because the procedure presents a quick, clean and energy efficient means of achieving a hardened cross-linked polymer system. Initially ultraviolet was the sole radiation source used but more recently electron beam and laser energy sources have been introduced. Furthermore cationic as well as free radical initiators are now finding favour.

Industrial outlets now served by the technique include paper, metal, plastics and wood coatings, adhesives and printing. Consequently many workers in industry and academia are now involved in the varied aspects of developing new systems for the future.

This new book provides a timely review of progress in this rapidly developing and diverse subject area and offers useful and stimulating reading for practitioners of the radiation curing of polymers.



Softcover 216pp
ISBN 0 85186 096 4

Price £32.50 (\$63.00)
RSC Members Price £20.00

ORDERING:

RSC Members should send their orders to: The Royal Society of Chemistry, Membership Manager, 30 Russell Square, London WC1B 5DT, U.K.
Non-RSC members should send their orders to: The Royal Society of Chemistry, Distribution Centre, Blackhorse Road, Letchworth, Herts SG6 1HN, U.K.



ROYAL
SOCIETY OF
CHEMISTRY
Information
Services