

JOURNAL OF THE CHEMICAL SOCIETY

Chemical Communications

Number 19
1988

CONTENTS

- 1277 Formation of $\text{ReCl}(\text{H}_2)(\text{PMePh}_2)_4$; a Complex containing an $\eta^2\text{-H}_2$ Ligand **F. Albert Cotton, Rudy L. Luck**
- 1278 Stereoselective Preparation of (*E*)-Allyl Alcohols *via* Radical Elimination from anti- γ -Phenylthio- β -nitro Alcohols **Akio Kamimura, Noboru Ono**
- 1280 Enantioselective Synthesis of Epoxides: Sharpless Epoxidation of Alkenylsilanols **T. H. Chan, L. M. Chen, D. Wang**
- 1281 5,6-Dehydrocamphor: a Chiral Intermediate in Terpenoid Synthesis **John H. Hutchinson, David L. Kuo, Thomas Money, Benjamin Yokoyama**
- 1283 Synthesis of Selenium-containing Binaphthyls and their Application to the Asymmetric Ring-opening of Cyclohexene Oxide **Shuji Tomoda, Michio Iwaoka**
- 1284 Enantioselective Microbial Reduction of Planar Chiral Organometallics of Synthetic Interest **Siden Top, Gérard Jaouen, Jeannine Gillois, Clara Baldoli, Stefano Maiorana**
- 1285 Oxybromination Catalysed by the Heteropolyanion Compound $\text{H}_5\text{PMo}_{10}\text{V}_2\text{O}_{40}$ in an Organic Medium: Selective *para*-Bromination of Phenol **Ronny Neumann, Igal Assael**
- 1287 Singlet Stabilisation of Parent Nitrenium Ion **Hiroshi Takeuchi, Satoshi Hayakawa, Hirotaka Murai**
- 1289 Solid State ^{13}C Cross-polarisation/Magic Angle Spinning N.M.R. Spectroscopy of Titanium and Magnesium Chloride Complexes with Ethyl Acetate **N. J. Clayden, S. Holmes, P. J. V. Jones**
- 1291 Quantitative Determination of Aluminium in Zeolites by Solid-state ^{27}Al N.m.r. Spectroscopy **Pascal P. Man, Jacek Klinowski**
- 1294 Biosynthesis of Methanofuran **Wolfgang Eisenreich, Bruno Schwarzkopf, Quang Le Van, Paul J. Keller, Adelbert Bacher**
- 1296 Novel Ring-opening Reaction of Norbornadiene(tricarbonyl)iron: Synthesis and Crystal Structure of $\text{C}_7\text{H}_8(\text{CO})_2\text{FeC}(\text{OEt})\text{Ar}$ **Jiabi Chen, Guixin Lei, Meicheng Shao, Xiaojie Xu, Zeying Zhang**
- 1298 Effect of Small Amounts of Ethane on the Selective Oxidation of Methane over Silicic Acid and Quartz Glass Surfaces **G. N. Kastanas, G. A. Tsigdinos, J. Schwank**
- 1300 A New 15,16-Dimethyl-30-glyceryloxytriacontanoic Acid from Lipids of *Thermotoga maritima* **Mario De Rosa, Agata Gambacorta, Robert Huber, Virginia Lanzotti, Barbara Nicolaus, Karl O. Stetter, Antonio Trincone**
- 1301 A Synthesis of (–)-1 α -1-Deoxy-1-fluoro-*myo*-inositol; a Compound of Potential Use in sorting out the Phosphatidylinositol Response **Alan P. Kozikowski, Yan Xia, James M. Rusnak**
- 1303 Carbene-complex-promoted Ring Expansion of Aziridine: Formation of the 1-Azabicyclo[4.3.0] Ring System by a Double Alkyne and a Single Carbon Monoxide Insertion Reaction **Bernard Denise, Andrei Parlier, Henri Rudler, Jacqueline Vaissermann, J. C. Daran**
- 1305 Preparation and Crystal Structure of the Titanaspiro[7.7]heptasiloxane *cis*-Bis(Hexaphenyltrisiloxanediolato)dipyridine-titanium Bis(Toluene) Solvate **M. Altaf Hossain, Michael B. Hursthouse, Muhammed A. Mazid, Alice C. Sullivan**
- 1306 Selective Cleavage of Vancosamine, Glucose and *N*-Methyl-leucine from Vancomycin and Related Antibiotics **Ramakrishnan Nagarajan, Amelia A. Schabel**
- 1308 Four-co-ordinate Lanthanide Metal(III) Chloro(alkyl)s: Synthesis and X-Ray Structure of $[\text{LaR}_3(\mu\text{-Cl})\text{Li}(\text{pmdeta})]$ [$\text{R} = \text{CH}(\text{SiMe}_3)_2$, $\text{pmdeta} = N,N,N',N'',N'''$ -pentamethyldiethylenetriamine] **Jerry L. Atwood, Michael F. Lappert, Richard G. Smith, Hongming Zhang**
- 1309 A Novel Transylidation between Ylides from Different Elements. A One-pot Synthesis of *trans*-Fluorovinyl Epoxides **Yanchang Shen, Qimu Liao, Weiming Qiu**
- 1310 Formation of Cationic Molybdenum η^2 -Vinyl Complexes; Structural Evidence for the Coupling of η^2 -Vinyl and Alkyne Ligands **Grainne C. Conole, Michael Green, Mary McPartlin, Carolyn Reeve, Christopher M. Woolhouse**

- 1313 Spin Equilibria in Iron(II) Hexa-amine Cages **Lisandra L. Martin, Karl S. Hagen, Andreas Hauser, Raymond L. Martin, Alan M. Sargeson**
- 1315 Carbohydrates as Chiral Templates: Reactivity and Stereoselectivity of Carbohydrate Ester Enolates **Horst Kunz, Jürgen Mohr**
- 1317 On the Unexpected Cathodic Electrodimerization of Phenyl Vinyl Sulphone in slightly Protic Media: the Formation of 1,4-Bisphenylsulphonylbut-2-ene **N. Djeghidjeh, J. Simonet**
- 1318 Heterogeneous Photocatalytic Reactions of Azobenzenes on Titanium Dioxide Powder in Methanolic Solution **Katsuyoshi Shibata, Tadashi Mimura, Masaki Matsui, Takashi Sugiura, Hideki Minoura**
- 1320 Kinetic Evidence for Direct Electron Transfer between Tris(4-bromophenyl)-ammoniumyl and the Acetate Anion in Acetonitrile Solution **Richard G. Compton, Mark E. Laing**
- 1322 Transition State Geometries and the Magnitudes of S_N2 Barriers. A Theoretical Study **Sason S. Shaik, H. Bernhard Schlegel, Saul Wolfe**
- 1324 Substitution on Five μ -Oxo/ μ -Sulphido Incomplete Cuboidal Mo^{IV}_3 Ions $[Mo_3O_xS_{4-x}(H_2O)_9]^{4+}$: Kinetic Effects Resulting from the Replacement of Core Oxo by Sulphido Ligands **Bee-Lean Ooi, Manuel Martinez, A. Geoffrey Sykes**
- 1325 Insertion of Terminal Phosphinidene Complexes into a Nickel-Carbon Bond; X-Ray Crystal Structure of the Complex $[CpNi\{\eta\text{-}Me\text{-}P\text{-}CPh=CPh\text{-}NiCp\}P\text{-}W(CO)_5]$ (Cp = Cyclopentadienyl) **René de Vaumas, Angela Marinetti, François Mathey, Louis Ricard**
- 1327 Promoting Effects of Se on the Activity and Selectivity of Rh-ZrO₂ Catalyst for Ethene Hydroformylation **Y. Izumi, K. Asakura, Y. Iwasawa**
- 1328 Conformational Effects in Inorganic Heterocyclic Radicals; Generation and E.s.r. Characterization of the Thiatriphosphatetrazocinyl Radical $[Ph_6P_3N_4S]^\cdot$ **Ketut T. Bestari, A. Wallace Cordes, Richard T. Oakley**
- 1330 A Novel and Stereospecific Synthesis of Conduritol A **Yaşar Sütbeyaz, Hasan Seçen, Metin Bulcı**
- 1331 The Synthesis of the First Tetra- and Penta-gold Decaosmium Clusters, X-Ray Structure Analysis of $[Os_{10}Au_4C(CO)_{24}\{P(C_6H_5)_3\}_3]$ **Victoria Dearing, Simon R. Drake, Brian F. G. Johnson, Jack Lewis, Mary McPartlin, Harold R. Powell**
- 1333 Evidence of Adsorption of Hydrogen and Hydroxide Ions by pH-Sensitive Glass, and Chemical Potential Amplification **Kuang L. Cheng, Hung Z. Song, Susie X. R. Yang**
- 1334 X-Ray Crystal Structure and Some Properties of a Tetranuclear, Mixed-valence Manganese Complex of a Macrocyclic Ligand **Vickie McKee, Santokh S. Tandon**
- 1336 Synthesis of a Chiral Nickel(II) Complex of an Electrophilic Glycinate, and its Use for Asymmetric Preparation of α -Amino Acids **Yuri N. Belokon', Aleksander N. Popkov, Nina I. Chernoglazova, Marina B. Saporovskaya, Vladimir I. Bakhmutov, Vasili M. Belikov**
- 1338 Gold(I) Complexes with Amino-acid Derivatives: The Crystal Structure of Triphenylphosphine(hippurato)gold(I) **Peter G. Jones, Ralf Schelbach**
- 1339 Synthesis of C-Disaccharides using Nitrile Oxide Cycloaddition Chemistry **Ian M. Dawson, Trevor Johnson, R. Michael Paton, Robert A. C. Rennie**
- 1341 Mastigophorenes: Novel Dimeric Isocuparane-type Sesquiterpenoids from the Liverwort *Mastigophora diclados* **Yoshiyasu Fukuyama, Masao Toyota, Yoshinori Asakawa**
- 1342 The X-Ray Crystal Structure of the Discoid Amphiphile 2,3,6,7,10,11-Hexa-(1,4,7-trioxaocetyl)triphenylene (TP6E02M) **Neville Boden, Richard J. Bushby, Malini V. Jesudason, Bernard Sheldrick**
- 1344 Co-ordinated Ether Formation in the Metal-directed Condensation and Macrocyclization of Formaldehyde, Ethanolamine, and a Polyamine **Geoffrey A. Lawrance, Therese M. Manning, Brian W. Skelton, Allan H. White**
- 1345 Observation of Stable and Transient Intermediates in Palladium Complex-catalysed Cross-coupling Reactions **John M. Brown, Neil A. Cooley**

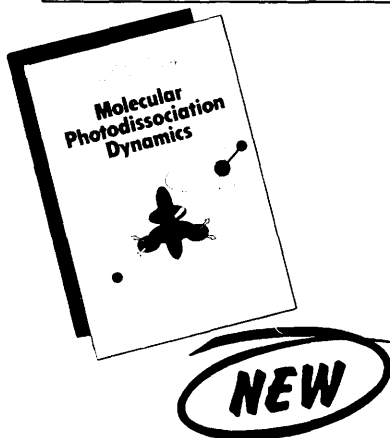
Corrigenda

- 1348 Baeyer-Villiger Reaction in the Solid State **Fumio Toda, Minoru Yagi, Koji Kiyoshige**
- 1348 A Novel Molecular Based Ferromagnet Ordering at 14 K **Francisco Lloret, Keitaro Nakatani, Yves Journaux, Olivier Kahn, Yu Pei, Jean Pierre Renard**

AUTHOR INDEX

- Altaf Hossain, M., 1305
 Asakawa, Yoshinori, 1341
 Asakura, K., 1327
 Assael, Igal, 1285
 Atwood, Jerry L., 1308
 Bacher, Adelbert, 1294
 Bakhmutov, Vladimir I., 1336
 Balci, Metin, 1330
 Baldoli, Clara, 1284
 Belikov, Vasilii M., 1336
 Belokon', Yuri N., 1336
 Bestari, Ketut T., 1328
 Boden, Neville, 1342
 Brown, John M., 1345
 Bushby, Richard J., 1342
 Chan, T. H., 1280
 Chen, Jiabi, 1296
 Chen, L. M., 1280
 Cheng, Kuang L., 1333
 Chernoglazova, Nina I., 1336
 Clayden, N. J., 1289
 Compton, Richard G., 1320
 Conole, Grainne C., 1310
 Cooley, Neil A., 1345
 Cordes, A. Wallace, 1328
 Cotton, F. Albert, 1277
 Daran, J. C., 1303
 Dawson, Ian M., 1339
 De Rosa, Mario, 1300
 Dearing, Victoria, 1331
 Denise, Bernard, 1303
 Djeghidjeh, N., 1317
 Drake, Simon R., 1331
 Eisenreich, Wolfgang, 1294
 Fukuyama, Yoshiyasu, 1341
 Gambacorta, Agata, 1300
 Gillois, Jeannine, 1284
 Green, Michael, 1310
 Hagen, Karl S., 1313
 Hauser, Andreas, 1313
 Hayakawa, Satoshi, 1287
 Holmes, S., 1289
 Huber, Robert, 1300
 Hursthouse, Michael B., 1305
 Hutchinson, John H., 1281
 Iwaoka, Michio, 1283
 Iwasawa, Y., 1327
 Izumi, Y., 1327
 Jaouen, Gérard, 1284
 Jesudason, Malini V., 1342
 Johnson, Brian F. G., 1331
 Johnson, Trevor, 1339
 Jones, P. J. V., 1289
 Jones, Peter G., 1338
 Journaux, Yves, 1348
 Kahn, Olivier, 1348
 Kamimura, Akio, 1278
 Kastanas, G. N., 1298
 Keller, Paul J., 1294
 Kiyoshige, Koji, 1348
 Klinowski, Jacek, 1291
 Kozikowski, Alan P., 1301
 Kunz, Horst, 1315
 Kuo, David L., 1281
 Laing, Mark E., 1320
 Lanzotti, Virginia, 1300
 Lappert, Michael F., 1308
 Lawrance, Geoffrey A., 1344
 Le Van, Quang, 1294
 Lei, Guixin, 1296
 Lewis, Jack, 1331
 Liao, Qimu, 1309
 Lloret, Francisco, 1348
 Luck, Rudy L., 1277
 McKee, Vickie, 1334
 McPartlin, Mary, 1310, 1331
 Maiorana, Stefano, 1284
 Man, Pascal P., 1291
 Manning, Therese M., 1344
 Marinetti, Angela, 1325
 Martin, Lisandra L., 1313
 Martin, Raymond L., 1313
 Martinez, Manuel, 1324
 Mathey, François, 1325
 Matsui, Masaki, 1318
 Mazid, Muhammed A., 1305
 Mimura, Tadashi, 1318
 Minoura, Hideki, 1318
 Mohr, Jürgen, 1315
 Money, Thomas, 1281
 Murai, Hirotaka, 1287
 Nagarajan, Ramakrishnan, 1306
 Nakatani, Keitaro, 1348
 Neumann, Ronny, 1285
 Nicolaus, Barbara, 1300
 Oakley, Richard T., 1328
 Ono, Noboru, 1278
 Ooi, Bee-Lean, 1324
 Parlier, Andrei, 1303
 Paton, R. Michael, 1339
 Pei, Yu, 1348
 Popkov, Aleksander N., 1336
 Powell, Harold R., 1331
 Qiu, Weiming, 1309
 Reeve, Carolyn, 1310
 Renard, Jean Pierre, 1348
 Rennie, Robert A. C., 1339
 Ricard, Louis, 1325
 Rudler, Henri, 1303
 Rusnak, James M., 1301
 Saporovskaya, Marina B., 1336
 Sargeson, Alan M., 1313
 Schabel, Amelia A., 1306
 Schelbach, Ralf, 1338
 Schlegel, H. Bernhard, 1322
 Schwank, J., 1298
 Schwarzkopf, Bruno, 1294
 Seçen, Hasan, 1330
 Shaik, Sason S., 1322
 Shao, Meicheng, 1296
 Sheldrick, Bernard, 1342
 Shen, Yanchang, 1309
 Shibata, Katsuyoshi, 1318
 Simonet, J., 1317
 Skelton, Brian W., 1344
 Smith, Richard G., 1308
 Song, Hung Z., 1333
 Stetter, Karl O., 1300
 Sugiura, Takashi, 1318
 Sullivan, Alice C., 1305
 Sütbeyaz, Yaşar, 1330
 Sykes, A. Geoffrey, 1324
 Takeuchi, Hiroshi, 1287
 Tandon, Santokh S., 1334
 Toda, Fumio, 1348
 Tomoda, Shuji, 1283
 Top, Siden, 1284
 Toyota, Masao, 1341
 Trincone, Antonio, 1300
 Tsigdinos, G. A., 1298
 Vaissermann, Jacqueline, 1303
 Vaumas, René de, 1325
 Wang, D., 1280
 White, Allan H., 1344
 Wolfe, Saul, 1322
 Woolhouse, Christopher M., 1310
 Xia, Yan, 1301
 Xu, Xiaojie, 1296
 Yagi, Minoru, 1348
 Yang, Susie X. R., 1333
 Yokoyama, Benjamin, 1281
 Zhang, Hongming, 1308
 Zhang, Zeying, 1296

TWO IMPORTANT NEW BOOKS FOR PHOTOCHEMISTS . . .



Molecular Photodissociation Dynamics

Series: Advances in Gas-Phase Photochemistry and Kinetics

'Advances in Gas-Phase Photochemistry and Kinetics' is the title of a new series of books which aims to provide critical reviews on a specific area of current interest at the interface of molecular spectroscopy, photochemistry and chemical kinetics. 'Molecular Photodissociation Dynamics' is the first title to be published in this series and contains contributions from a number of internationally acknowledged experts.

The next title in the series to be published will deal with gas-phase bimolecular association reactions. Customers who wish to ensure receipt of future volumes on publication are encouraged to place standing orders.

Edited by: M.N.R. Ashfold,
University of Bristol, and J.E.
Baggott, *University of Reading*
1987

Hardcover 256pp
ISBN 0 85186 373 6
Price £59.50 (\$117.00)

Photochemistry Vol. 19

"... these volumes remain one of the best ways of keeping abreast of developments in most areas of photochemistry." *Inter-American Photochemical Society Newsletter*, reviewing Vol. 16.

Photochemistry Volume 19 provides a review of the literature published between July 1986 and June 1987.

Brief Contents:

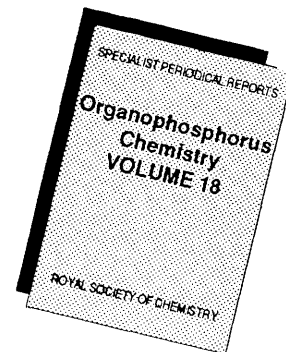
Part I Physical Aspects of Photochemistry – Photophysical Processes in Condensed Phases

Part II Photochemistry of Inorganic and Organometallic Compounds – The Photochemistry of Transition-Metal Complexes; The Photochemistry of Transition-Metal Organometallic Compounds; The Photochemistry of Compounds of the Main Group Elements

Part III Organic Aspects of Photochemistry – Photolysis of Carbonyl Compounds; Enone Cycloadditions and Rearrangements; Photoreactions of Dienones and Quinones; Photochemistry of Alkenes, Alkynes, and Related Compounds; Photo-reduction and -oxidation; Photoreactions of Compounds containing Heteroatoms other than Oxygen; Photoelimination

Part IV Polymer Photochemistry

Part V Photochemical Aspects of Solar Energy



Senior Reporters: D. Bryce-Smith
and A. Gilbert, *University of Reading*

Specialist Periodical Report
Hardcover 598pp
ISBN 0 85186 175 X
Price £110.00 (\$239.00)



To order or for further information, please write to: Royal Society of Chemistry, Distribution Centre, Blackhorse Road, Letchworth, Herts SG6 1HN, UK. or telephone (0462) 672555 quoting your credit card details. We now accept Access/Visa/MasterCard/EuroCard.

RSC Members are entitled to a discount on most RSC publications and should write to: The Membership Manager, Royal Society of Chemistry, 30 Russell Square, London WC1B 5DT, UK.