## Journal of The Chemical Society Chemical Communications

## **ISSUED TWICE MONTHLY**

Page

JCCCAT (3) 65-144 (1981)

## CONTENTS

65	Preparation and Reactions of 1-Lithio-oxy-1-lithio-amino-allene Derivatives  Robert M. Adlington and Anthony G. M. Barrett
67	A New One-dimensional 'Metal' with Conduction through Bis(dicyanoethylenedithiolato) platinum Anions Allan E. Underhill and Munir M. Ahmad
68	Switch from O- to N-Protonation of 1-Methoxycarbonylpiperidine as the Acidity Increases P. J. Battye, J. F. Cassidy, and R. B. Moodie
70	Interconversion of Carbocations, Free Radicals and Carbanions in Nitroxide Solutions  Hari Singh and John M. Tedder
71	Desulphonylation of α-Nitrosulphones with N-Benzyl-1,4-dihydronicotinamide Noboru Ono, Rui Tamura, Rikuhei Tanikaga, and Aritsune Kaji
72	Methylenethioxophosphoranes and 1,2-λ <sup>5</sup> -Thiaphosphirans Edgar Niecke and Dirk-A. Wildbredt
73	Bicycloannulation with Nitroethene and 1-Nitropropene. A One-step Synthesis of Tricyclenone Robert M. Cory, Paul C. Anderson, Fred R. McLaren, and Brian R. Yamamoto
<b>7</b> 5	Optical Resolution of Mutagenic and Carcinogenic Derivatives of Polyaromatic Hydrocarbons by High Pressure Liquid Chromatography on a Chiral Support  Young Hwan Kim, A. Tishbee, and E. Gil-Av
76	Mode of Enzymic Oxygenation at Primary Carbon Atoms: Stereochemistry of Hydroxylation of C-1 Chiral Octanes by Pseudomonas oleovorans  Eliahu Caspi, James Piper, and Stuart Shapiro
78	Nucleophilic Attack on a Ligand as a Pre-requisite for Ligand Replacement. Kinetics and Mechanism of the Replacement of PMc <sub>2</sub> Ph by P(OMe) <sub>3</sub> in [Ru(S <sub>2</sub> CH)(PMc <sub>2</sub> Ph) <sub>3</sub> {P(OMe) <sub>3</sub> }] <sup>+</sup> Terence V. Ashworth, Dirk J. A. de Waal, and Eric Singleton
79	An Example of Substitution proceeding with Retention in the $S_{RN}1$ Reaction. Trapping of a Pyramidal Benzylic Radical by Benzenethiolate Ion  Robert K. Norris and Rosalind J. Smyth-King
80	Stereochemistry of the Leucine 2,3-Aminomutase from Tissue Cultures of Andrographis paniculata  Isabel Freer, Giuseppe Pedrocchi-Fantoni, Douglas J. Picken, and Karl H. Overton
82	Catalytic Synthesis of 3-Substituted Indoles using CO as Building Block and Supported Rhodium as Catalyst  Eugène Ucciani and André Bonfand
83	Grunwald-Winstein Plots exhibiting a Maximum. Solvolysis of Methyl Perchlorate  Dennis N. Kevill and An Wang
84	The First Eight-co-ordinate Cyanide Hydride, K <sub>4</sub> [W(CN) <sub>7</sub> H].2H <sub>2</sub> O and a New Heptacyano-complex, K <sub>5</sub> [W(CN) <sub>7</sub> ].H <sub>2</sub> O  Ana M. Soares, Patrick M. Kiernan, David J. Cole-Hamilton, and William P. Griffith
85	Complex containing the Bridging Formazanido(3—) Ligand. Synthesis and X-Ray Crystal Structure of [{WBr(dppe)_2}_2{\mu-CH(N_2)_2}]^+[Cr(NH_3)_2(NCS)_4]^1/3CH_2Cl_2 Howard M. Colquboun and Kim Henrick
87	Novel Alumina-catalysed Reactions of Arylthioalkyl Halides  Veerappa B. Jigajinni, Richard H. Wightman, and Malcolm M. Campbell
88	Synthesis of Asymmetrically-substituted Cyclopentane Derivatives from Acyclic Sugars  Derek Horton and Tomoya Machinami
90	Cation-radical Transfer: Transfer Efficiency in Photosensitized Isomerization Reactions Tetsuya Gotoh, Mikihiko Kato, Masahide Yamamoto, and Yasunori Nishijima
92	H <sub>2</sub> -D <sub>2</sub> Kinetic Isotope Effect in CO Hydrogenation over Ru/SiO <sub>2</sub> Yoshihiro Kobori, Shuichi Naito, Takaharu Onishi, and Kenzi Tamaru
93	A Novel Type of Heteropolynuclear Complex Anion: X-Ray Crystal Structure of the Polymeric Complex Anion [Th(H <sub>2</sub> O) <sub>3</sub> UMo <sub>12</sub> O <sub>42</sub> ], Vladimir N. Molchanov, Irinia V. Tatjanina, Elena A. Torchenkova, and Leonid P. Kazansky
94	Photocontrol of Catalytic Activity of Capped Cyclodextrin  Akihiko Ueno, Keiko Takahashi, and Tetsuq Osa
96	The Conversion of Primary Amines into Olefins: a Mild Alternative to the Hofmann Elimination  Alan R. Katritzky and Azzahra M. El-Mowafy
97	Asymmetric Synthesis of a New Proline Analogue  Andrea Vasella and Robert Voeffray
	Contents—continued overleaf

For Notices to Authors, see issue 1, pp. 1 to 4

## Contents—continued Page Manganese 4,4',4",4"'-Tetrasulphonated Phthalocyanine, its Dioxygen Adduct, and E.s.r. Evidence for Intra-98 Neville T. Moxon, Peter E. Fielding, and Anthony K. Gregson molecular Electron Transfer in Solution Structure of Linearol, a Novel Diterpenoid from the Brown Seaweed Dictyota linearis Masamitsu Ochi, Iwao Miura, and Takashi Tokoroyama Stereochemically Pure E- and Z-Alkenes by the Wittig-Horner Reaction Antony D. Buss and Stuart Warren Fluoride Activation of Nucleophilic Displacement at Tetrahedral Phosphorus Robert J. P. Corriu, Jean-Pierre Dutheil, and Gerard F. Lanneau Crystal and Molecular Structure of [W(NPh)(μ-O)Me<sub>2</sub>(PMe<sub>3</sub>)]<sub>3</sub>; a Trimeric Oxo-bridged Imido Complex of Tungsten(vi) Donald C. Bradley, Michael B. Hursthouse, K. M. Abdul Malik, 103 and Alaistair J. Nielson Single Crystal E.S.R. Study of the 1,6-Dioxa-4,9-diaza-5-phospha(v)spiro[4.4]nonan-5-yl and the 1,6-Dioxa-4,9-diaza-2,3,7,8-dibenzo-5-phospha(v)spiro[4.4]nona-2,7-dien-5-yl Radicals Joep H. H. Hamerlinck, Pieter Schipper, and Henk M. Buck Isomerization and Hydrogenolysis of 1,3-Dioxacycloalkanes on Metal Catalysts Mihály Bartók and József Czombos The Regiospecific Preparation of 1,4-Dioxygenated Anthraquinones: A New Route to Islandicin, Digitopurpone, and Madeirin Richard A. Russell and Ronald N. Warrener General Synthesis of Imidazole C-Nucleosides From Carbohydrate Adducts of Diaminomaleonitrile James P. Ferris, Santokh S. Badesha, Wu Yun Ren, Harry C. Huang, and Ronald J. Sorcek Mechanistic Investigations into the Photochemical Oxidation of Thioketones N. Ramnath, V. Ramesh, and V. Ramamurthy A One-step Synthesis of Acridines via Palladium(II)-catalysed Ring Formation of Allylated Enaminones Hideo Iida, Yoshifumi Yuasa, and Chihiro Kibayashi Stereoselective Introduction of Hydroxy-groups into the 24-, 25-, and 26-Positions of the Cholesterol Side Chain Masaji Ishiguro, Naoyuki Koizumi, Mitsuhiro Yasuda, and Nobuo Ikekawa 115 117 Bis(trimethyltin)bis-(η-toluene)-hafnium and -zirconium; X-Ray Crystal Structure of the Hafnium Compound F. Geoffrey N. Cloke, Kevin P. Cox, Malcolm L. H. Green, Jim Bashkin, and Keith Prout 118 Preparation of Derivatives of Tricyclo[4,2,0,01,4]octane, Broken Window Compounds Steven Wolff and William C. Agosta 120 Electrochemical Reduction of 1,2-Diphenylthiiren Dioxide and Monoxide Albert J. Fry, Kjell Ankner, and Vijay K. Handa Selective Reduction of Carbonyl Compounds by Heterogeneous Catalysis on Salt Surfaces Jacqueline Boyer, Robert J. P. Corriu, Robert Perz, and Catherine Réyé CsF-promoted Michael Addition in Heterogeneous Catalysis Jacqueline Boyer, Robert J. P. Corriu, Robert Perz, and Catherine Réyé Ni/TiO2 Catalysts. The Role of the Titania in providing Active Sites Robert Burch and Anthony R. Flambard 1,3-Cycloaddition of Benzyne to Thiophens Dario Del Mazza and Manfred G. Reinecke 124 125 Zeolite Support Effects on CO-Ru Interactions Donna G. Blackmond and James G. Goodwin, Ir. Sulphide Extrusion from Methyl Sulphonium Salts of the Sulphur-bridged Sesquiterpenes Mintsulphide and Tadao Uyehara, Toshio Ohnuma, Takashi Saito, Isomintsulphide by Alkyl-lithium

- 129 The Status of Oxygen Atoms in the Removal of C-19 in Oestrogen Biosynthesis

  Muhammed Akhtar, Michael R. Calder, David L. Corina, and J. Neville Wright
- 131 A Spectrophotometric Method for analysing Mixtures of cis- and trans-Diamminedichloroplatinum(II) in Solution

  Carolyn P. Hicks and Michael Spiro
- 132 Preparation and X-Ray Crystal Structure of [S<sub>2</sub>MoS<sub>2</sub>Mo(NNMe<sub>2</sub>)<sub>2</sub>(PPh<sub>3</sub>)], a Binuclear Molybdenum Hydrazido(2-)-complex containing Co-ordinated Tetrathiomolybdate

  Jonathan R. Dilworth and Jon A. Zubieta
- 133 Electron-transfer Chain (ETC) Promotion of Aromatic Substitution Reactions. Entry into the Son2 Mechanism via Ipso Radical Attack

  Lennart Eberson and Lennart Jönsson
- 134 Alkene Formation in the Cathodic Reduction of Oxalates David W. Sopher and James H. P. Utley
- 136 Formation of Dihydrobenzofurans by Radical Cyclization Athelstan L. J. Beckwith and Gordon F. Meijs
- 138 Photosensitized (Electron Transfer) [2e + 4e] Dimerization and Cross-cycloaddition of Phenylated Olefins: Trapping the Intermediate Donald R. Arnold, Robert M. Borg, and Angelo Albini
- 139 S<sub>H</sub>2 Reactions of Diphenyl Diselenide; Preparation and Reactions of Bridgehead Selenides

M. John Perkins and Eric S. Turner

- 140 New Design of Highly Active, Paired Chromium Structures on Solid Surfaces for Propene Hydrogenation
  - Yasuhiro Iwasawa, Yukichi Sasaki, and Sadao Ogasawara
    A Water-soluble, Nitroso-aromatic Spin-trap
    Harparkash Kaur, K. H. W. Leung, and M. John Perkins

Tadahiro Kato, Toshoi Yoshida, and Katsuhiro Takahashi

144 Corrigendum