Journal of The Chemical Society Chemical Communications

16 JANUARY 1974

JCCCAT (2) 37-76 (1974)

CONTENTS

Pag	ge
37	Linkage Isomers of the Cyanate Group: O-Cyanato- and N-Cyanato-tris(triphenylphosphine)rhodium(1) S. J. Anderson, A. H. Norbury, and J. Songstad
38	Synthesis of Fourteen Vertex Metallocarboranes by Polyhedral Expansion William J. Evans and M. Frederick Hawthorne
39	The Carbon-Fluorine Bond. A Study of the Role of Fluorine 2p-Orbitals using X-Ray Emission Spectroscopy E. I. Esmail, C. J. Nicholls, and D. S. Urch
10	The Peroxo-group as a Doubly Bidentate Bridging Ligand in Five-co-ordinate Lanthanide Complexes Donald C. Bradley, Joginder S. Ghotra, F. Alan Hart, Michael B. Hursthouse, and Paul R. Raithby
11	Generation and Dimerisation of 1,2-Napthoquinone-1-methide Gordon Catterall
12	Reactions of Propynylplatinum(II) Compounds Malcolm H. Chisholm and David A. Couch
14	Preparation and Crystal Structure of π -Cyclopentadienyl-1,2-bis-(diphenylphosphino)ethaneironmagnesium Bromide Tris(tetrahydrofuran), a Transition-Metal Grignard Reagent
	Hugh Felkin, Peter J. Knowles, Bernard Meunier, André Mitschler, Louis Ricard, and Raymond Weiss
15	A New Synthesis of Aldehydes via Silane Reduction of Nitrilium Ions James L. Fry
15	Cycloaddition of 1-Azirines to 1,2,4,5-Tetrazines. Synthesis and Rearrangement of 1,2,4-Triazepines David J. Anderson and Alfred Hassner
17	Synthesis and Reactions of Thioaldehyde Dehydropeptides Related to β-Lactam Antibiotics John Cheney, Clive J. Moores, James A. Raleigh, A. Ian Scott, and Douglas W. Young
18	Photochemistry of 4-Diphenylmethylene-2,6-bis(methylthio)-3,5-diphenyl-4H-thiopyran. A Methylene Analogue of a 4H-Thiopyran-4-one N. Ishibe and M. Tamura
19	X-Ray Molecular Structure of Ru(NPEt ₂ Ph)Cl ₃ (PEt ₂ Ph) ₂ ; a Complex with a Co-ordinated Tertiary phosphineiminato(1—) Ion Frederick L. Phillips and Andrzej C. Skapski
0	Electrophilic Substitution by a Phenonium Ion Derived from 1-Chloro-2,3-dimethylbenzene: Arylation of Mesitylene and Formation of a Biphenyl Alfred Fischer and Colin C. Greig
51	Biosynthesis of the Furoquinoline Alkaloids, Skimmianine, Evoxine, and Choisyine: Mechanism of Formation of the Furan Ring. The Timing of Aromatic Hydroxylation and of Methylation Michael F. Grundon, David M. Harrison and (Mrs.) Caroline G. Spyropoulos
2	Relative Efficiencies of Hydrogen Abstraction by Recoil Phosphorus Atoms Otto F. Zeck, Gerald P. Gennaro, and Yi-Noo Tang
3	Characterisation of an Intermediate in the Oxidation of a Tin(II) Carboxylate. An Example of a Pentagonal Pyramidal Six-co-ordinate Tin(II) Atom Paul F. R. Ewings, Philip G. Harrison, Trevor J. King, and Alan Morris
4	Molecular Structures of Dicyclopentadienylmagnesium and Dicyclopentadienylchromium by Gas-phase Electron Diffraction, Arne Haaland, Janusz Lusztyk, David P. Novak, Jon Brunvoll, and Kazimir B. Starowieyski
5	Correlation Between Hydrogen-bond Shift in Nuclear Magnetic Resonance Spectra and Change in Enthalpy Kim F. Wong, Teck S. Pang, and Soon Ng
6	Structure of 2,2,4,4-Tetrachloro-6-phenyl-6-(2',2',2'-triphenylphosphazen-1'-yl)-cyclotriphosphazatriene— an Example of a Cyclophosphazene with a Phosphazenyl Side-chain Malcolm Biddlestone, Graham J. Bullen, Peter E. Dann, and Robert A. Shaw

Contents-continued overleaf

Contents-continued

57	Low-temperature Catalytic Reduction of Nitric Oxide by Carbon Monoxide on SnO ₂ -CuO Gels
	Martin J. Fuller and Malcolm E. Warwick
-0	All' COLI COLI COLO COLO COLO COLO COLO COLO

58 Addition of Cycloheptatrienylidene to 2,3-Dicyanobicyclo[2,2,2]octatriene

Katsuhiro Saito, Yoshiro Yamashita, and Toshio Mukai

- 58 Rotational Barriers in Substituted Ethyl Radicals

 Leo Radom, Jacques Paviot, John A. Pople, and Paul v. R. Schleyer
- 60 Slow Substitution Reaction of Manganese(II) Ion in Dimethyl Sulphoxide Solution

Dorothy M. W. Buck and Peter Moore

- 61 Phosphorus-31 Hyperfine Coupling in Tetraphenylporphyrincobalt(π) Complexes of Trivalent Phosphorus Ligands and Dioxygen Complexes: Substituent Effects on the Phosphorus σ-Donor Orbital
 - Bradford B. Wayland and Mervat E. Abd-Elmageed
- 63 Biosynthesis of Hirsutic Acid C using ¹³C Nuclear Magnetic Resonance Spectroscopy

 Timothy C. Feline, Graham Mellows, Robert B. Jones, and Lawrence Phillips
- 64 Applications and Limitations of Second-order Effects in Off-resonance Proton-decoupled ¹³C Nuclear Magnetic Resonance Spectra

 John B. Grutzner
- 65 Three New Cyclized C₉-C₁-C₉ Compounds from Alnus japonica Steud.

Masayasu Nomura, Takashi Tokoroyama, and Takashi Kubota

66 Synthesis and Catalytic Properties of Carbonyldiphenylacetylenebiscyclopentadienyltitanium

Giuseppe Fachinetti and Carlo Floriani

67 Bonding of Benzo[a]pyrene to Nitrogen Heterocycles by Anodic Oxidation

G. Michael Blackburn and James P. Will

- 8 Tris(dithiocarbamato)metal(IV) Complexes Lawrence R. Gahan and Maxwell J. O'Connor
- 69 Stereoselective Synthesis of Derivatives with the manno-Configuration from a Nitro-sugar

Tohru Sakakibara and Rokuro Sudoh

71 Pulse Radiolysis of Hexamethylphosphortriamide

A. M. Koulkes-Pujo, L. Gilles, B. Lesigne, J. Sutton, and J. Y. Gal

- 72 Aminomethylenetetracarbonyls of Manganese: X-Ray Crystal Structure of Aziridinylmethyltetracarbonylmanganese

 Edward W. Abel, Roger J. Rowley, Ronald Mason, and K. Mark Thomas
- 73 Homo-1,4-elimination

r-enmination Terukiyo Hanafusa, Shinobu Imai, Katsuo Ohkata, Hitomi Suzuki, and Yoshiko Suzuki

- 74 Interactions of Aromatic Hydrocarbons with Heavy-metal Halides in the Solid State Studied by Electron Spin Resonance N. M. D. Brown and D. J. Cowley
- 75 Rates of Protonation and Dissociation of Cyanoglycycinamidonickelate(n)

Vincent T. Brice and Gordon K. Pagenkopf