

# Journal of The Chemical Society

## Chemical Communications

7 DECEMBER 1977

JCCCAT (23) 829-900 (1977)

### CONTENTS

- Page
- 829 Electrophilic Substitution in Verdins: Deuteration and Nitration of 2,3,7,8,12,13,17,18-Octaethylbilin-1,19-(21*H*,24*H*)-dione (Octaethylbilatriene-*abc*): X-Ray Crystal Structure of the 5-Nitro-derivative  
**Joseph V. Bonfiglio, Raymond Bonnett, Michael B. Hursthouse, K. M. Abdul Malik, and Satish C. Naithani**
- 830 Isomerization of *cis*-But-2-ene Induced by Adsorbed Nitrogen Dioxide  
**Makoto Hattori, Yuji Wada, Akira Morikawa, and Kiyoshi Otsuka**
- 831 Proton-assisted Ring Opening of a 2,3-Dialkyl-4-alkylimino-1,2-oxazetidine  
**Dietrich Moderhack and Michael Lorke**
- 833 Synthesis and X-Ray Crystal Structures of Dimorpholino-di-, -tri-, and -tetra-selane, and Dipiperidinotetraselane  
**Olav Foss and Vitalijus Janickis**
- 834 X-Ray Crystal Structure of a New Red, Monoclinic Form of Cyclo-octaselenium, Se<sub>8</sub>  
**Olav Foss and Vitalijus Janickis**
- 835 Triselenathiafulvalenes: a Novel Sulphur-Selenium Interchange on Trimethyl Phosphite Coupling of Substituted 1,3-Diselenole-2-thiones  
**Edward M. Engler, Vishnu V. Patel, and Robert R. Schumaker**
- 837 Photochemistry of Pyridine *N*-Oxides. Trapping of the Main Primary Product with Base  
**Ole Buchardt, Jørgen J. Christensen, Christian Lohse, James J. Turner, and Ian R. Dunkin**
- 838 Novel Carbanion-induced Type of Ene reaction  
**John H. Edwards and Francis J. McQuillin**
- 839 Stereochemistry of the Conversions *in vivo* of L- and D-Threonine into 2-Oxobutanoic Acid by the L- and D-Threonine Dehydratases of *Serratia marcescens*  
**Saburo Komatsubara, Masahiko Kisumi, Ichiro Chibata, Maria M. V. Gregorio, Urs S. Müller, and David H. G. Crout**
- 841 Magnetic Circular Dichroism Evidence for the Paramagnetism of Tetracarbonyliron(0): Low-temperature Matrix Studies  
**Trevor J. Barton, Roger Grinter, Andrew J. Thomson, Brian Davies, and Martyn Poliakoff**
- 842 Stereochemistry of the Side-chain Dehydrogenation of *N*-Benzoyloxycarbonyl-(*S*)-tryptophan by *Chromobacterium violaceum*  
**Mark E. Gustafson, Delwyn Miller, Patrick J. Davis, John P. Rosazza, Ching-jer Chang, and Heinz G. Floss**
- 843 Photochemistry of Cyclic Azo-compounds: Preparation of Highly Strained Spiro-compounds  
**Heinz Dürr, Stephan Fröhlich, Berthold Schley, and Helmut Weisgerber**
- 845 Evidence for an Anionic Intermediate in the Mechanistic Pathway of the Oxidative Addition Reaction of [(cyclo-octadiene)IrCl(PEtPh<sub>2</sub>)] with Hydrochloric Acid  
**Wynand J. Louw, Dirk J. A. De Waal, and Joy E. Chapman**
- 846 Novel Route to Metallic Polythiazyl Bromides: Direct Bromination of S<sub>4</sub>N<sub>4</sub>  
**Masud Akhtar, Chwan K. Chiang, Alan J. Heeger, and Alan G. MacDiarmid**
- 847 New Biogenetic-type Approach to *Cephalotaxus* Alkaloids (the late)  
**S. Morris Kupchan, Om P. Dhingra, and Chang-Kyu Kim**
- 848 Influence of Mg<sup>2+</sup> Ion on the Reduction of *N*-Methylacridinium Ion with 1,4-Dihydropyridinamide  
**Seiji Shinkai, Toyoko Ide, Hisatake Hamada, Osamu Manabe, and Toyoki Kunitake**
- 849 Synthesis of the Antibiotic Anticapsin  
**Rodney W. Rickards, John L. Rodwell, and Karl J. Schmalzl**
- 850 Synthesis and Characterization of the Tetra-aminotriafulvalene Dication  
**Zen-ichi Yoshida, Hisatoshi Konishi, Shin-ichi Sawada, and Hisanobu Ogoshi**
- 851 1,3-Bis-(4-methyl-5-phenyl-1,2-dithiol-3-ylidene)propane-2-thione, a Five-sulphur Compound Related to 1,6,6aλ<sup>4</sup>-Trithiapentalenes  
**Erik G. Frandsen**
- 852 Stereoselective Synthesis of *E*-Olefins by the Reaction of Alkenylboranes with Palladium Acetate  
**Hidetaka Yatagai, Yoshinori Yamamoto, Kazuhiro Maruyama, Akio Sonoda, and Shun-ichi Murahashi**
- 853 Synthesis, Chemical Reactivity, and X-Ray Molecular Structure of Pentakis(*t*-butyl isocyanide)iron  
**Jean-Marie Bassett, Michael Green, Judith A. K. Howard, and F. Gordon A. Stone**
- 854 Heterocyclic Products from the Oxidation of *N*-Alkylaminofumarates  
**Richard M. Carr, Richard O. C. Norman, and John M. Vernon**
- 855 Thermal Carbenoid Insertion Reactions of Isocyanides  
**Joseph H. Boyer and Jayanti R. Patel**
- 856 Correction to the Structure of the Photo-isomers of Pyridazine 1,2-Dioxides; X-Ray Crystal Structure Analysis  
**Heihachiro Arai, Akio Ohsawa, Katsunori Saiki, Hiroshi Igeta, Akio Tsuji, Toshio Akimoto, and Yoichi Iitaka**
- 857 First Evidence for Hydration of Amides. Hydration of *N*-Trifluoroacetylpyrrole  
**Antonio Cipiciani, Paolo Linda, and Gianfranco Savelli**

Contents—continued overleaf



Contents—continued

Page	
859	Unusual Rearranged Abietanoic Diterpenoids from <i>Solenostemon</i> Species <b>Toshio Miyase, Peter Rüedi, and Conrad H. Eugster</b>
860	Resolution of Presqualene and Prephytoene Alcohols <b>Lawrence J. Altman, Dilip R. Laungani, Hans C. Rilling, and Jelena Vasak</b>
861	Solvolysis of <i>cis</i> -[Pt(NH <sub>3</sub> ) <sub>2</sub> Cl <sub>2</sub> ] in Dimethyl Sulphoxide and Reactions of Glycine with [PtCl <sub>3</sub> (Me <sub>2</sub> SO)] <sup>-</sup> as Probed by <sup>195</sup> Pt Nuclear Magnetic Resonance Shifts and <sup>195</sup> Pt- <sup>15</sup> N Coupling Constants <b>S. John S. Kerrison and Peter J. Sadler</b>
863	Unusual Reaction of a Substituted Benzothiazoline with Sulphuryl Chloride: Formation of a 2,2'-(Ethane-1,2-diylidene)bis-1,4-benzothiazine Dye <b>Francesco Chioccare, Valeria Mangiacapra, Ettore Novellino, and Giuseppe Prota</b>
864	The Metallacyclopentane-Olefin Interchange Reaction <b>Robert H. Grubbs and Akira Miyashita</b>
865	Synthesis and X-Ray Crystal Structure of Hexakis(trimethylphosphine)-tris- $\mu$ -methylene-diruthenium(III) <b>Richard A. Andersen, Richard A. Jones, Geoffrey Wilkinson, Michael B. Hursthouse, and K. M. Abdul Malik</b>
866	Conversion of Vicinal Diols into Olefins <i>via</i> the Derived Bisdithiocarbonates <b>Anthony G. M. Barrett, Derek H. R. Barton, Roman Bielski, and Stuart W. McCombie</b>
868	Nitroaromatic Compounds for Selective Photochemical Hydroxylation <b>Jacqueline Libman</b>
870	Conversion of Ketones into Lactones with Benzeneseleninic Acid and Hydrogen Peroxide (Benzeneperoxyseleninic Acid): a New Reagent for the Baeyer-Villiger Reaction <b>Paul A. Grieco, Yuusaku Yokoyama, Sydney Gilman, and Yasufumi Ohfuné</b>
872	Photo-CIDNP in the Tyrosyl Unit: A New Tool in High Resolution Nuclear Magnetic Resonance Studies of Peptides <b>Karol A. Muszkat</b>
873	Chemical Resolution and Racemization of 1,2- and 3,4-Epoxydihydrophenanthrene <b>Derek R. Boyd, John D. Neill, and Michael E. Stubbs</b>
874	Mechanism of Schiff Base Chemiluminescence: Evidence for an Intermediate Dioxetan <b>Frank McCapra and Alex Burford</b>
876	Electron Spin Resonance Detection of Free Radicals in the Reaction of Titanium(III) Tartrate Complexes with Oxygen in Aqueous Alkaline Solution <b>Paul West and Pavle Premovic</b>
877	Sodium Diphenylketyl Alkylation by Chiral Electrophilic Reagents <b>Eric Herbert, Jean-Paul Mazaleyrat, and Zoltan Welvart</b>
879	Intergrowth Structure of Eu <sub>1-p</sub> Cr <sub>2</sub> Se <sub>4-p</sub> ( $p = 0.29$ ) and Isotypic Compounds. A Novel Type of Crystal Structure with Three Incommensurate Periodicities in One Direction: X-Ray Study <b>Rinze Brouwer and Franz Jellinek</b>
880	Stereoselective Total Synthesis of ( $\pm$ )-Ishwarone <b>Edward Piers and Tse-Wai Hall</b>
882	Oscillations of the Platinum-catalysed Oxidation of Carbon Monoxide Induced by Inhibitors <b>Thomas Lamb, Richard P. Scott, Peter Watts, Bryan Holland, Stephen J. Gentry, and Alan Jones</b>
883	Mechanisms of the Isomerization of Butenes on Titanium Dioxide <b>Jean-Louis Lemberton, Guy Perot, and Michel Guisnet</b>
884	Photoaddition of the Charge-transfer Complexes of Tetracyanoethylene-ether Systems <b>Mamoru Ohashi, Shuji Suwa, and Yasuhsi Osawa</b>
885	Use of Tetrabutylammonium Cyanide for Photocyanation of Aromatic Compounds: Phase Transfer Photochemistry <b>René Beugelmans, Hélène Ginsburg, Alexandra Lecas, Marie-Thérèse Le Goff, Jacques Pusset, and Georges Roussi</b>
886	Photosynthetic Routes to Prostanoids. Synthesis of Alkyl and Trialkylsilyl Derivatives of 9 $\alpha$ -Hydroxy-9-deoxy-prostaglandin-C <sub>2</sub> <b>Noelle M. Crossland, Stanley M. Roberts, and Roger F. Newton</b>
887	Reactions Using Micellar System: Photochemical Dimerization of Acenaphthylene <b>Yushin Nakamura, Yasuhiro Imakura, Takeshi Kato, and Yutaka Morita</b>
888	Intramolecular Cyclisation of Phenolic $\alpha$ -Diazoketones. Novel Synthesis of the Spiro[4.5]decane Carbon Framework <b>Chuzo Iwata, Minoru Yamada, Yasutaka Shinoo, Kazue Kobayashi, and Hideko Okada</b>
889	Stereochemistry of Hydrogen Migration from C-24 to C-25 during Isofucosterol Biosynthesis in <i>Pinus pinea</i> <b>Francesco Nicotra, Fiamma Ronchetti, Giovanni Russo, Giuseppe Lugaro, and Marilena Casellato</b>
890	Synthesis of 1 $\beta$ -Hydroxyvitamin D <sub>3</sub> and 1 $\beta$ ,25-Dihydroxyvitamin D <sub>3</sub> <b>Herbert E. Paaren, Heinrich K. Schones, and Hector F. DeLuca</b>
892	Competition between Cleavage of Alkyl- or Aryl-Transition Metal Bonds by Electrophiles <b>Jaáfar K. Jawad and Richard J. Puddephatt</b>
893	A Thermochemical Cycle for the Heat of Complexing of Na <sup>+</sup> and K <sup>+</sup> Cations with Cryptand 222 in Water and Methanol <b>Michael H. Abraham, Angela F. Danil de Namor, and Walter H. Lee</b>
894	Evidence for the Formation of Tertiary Carbonium Ions from Alkenes on Alumina at <i>ca.</i> 300 K <b>Christopher S. John, Charles Kembell, Robert C. Paterson, and Rajeev A. Rajadhyaksha</b>
896	Selectivities in Brönsted Acid-catalysed Reactions of Alkenes on Ga <sub>2</sub> O <sub>3</sub> <b>Francis B. Carleton, T. Alan Gilmore, D. Theodore Laverty, and John J. Rooney</b>
897	Effects of Substituents on the Reactivity of the Pyridine Nitrogen <b>C. David Johnson, Ian Roberts, and Peter G. Taylor</b>
899	Photochemical and Thermal Addition of Methanol to 2-Phenyl-3,1-benzoxazepine-5-carboxylate: Reverse Stereoselectivities in the Two Reactions <b>Masanori Somei, Teiko Kitamura, Harue Fujii, Kazuhiko Hashiba, Shinji Kawai, and Chikara Kaneko</b>