

## JOURNAL OF THE CHEMICAL SOCIETY

**Perkin Transactions I**

## Organic and Bio-organic Chemistry

---

**CONTENTS**

- 733 Synthetic methods. Part 23. Rearrangement of some hydroxamic acids into amides. A self-condensation leading to disproportionation **Alfred Hassner, Margareta Ruse, Hugo E. Gottlieb, and Miriam Cojocaru**
- 739 Application of a modified Pictet-Spengler reaction to the synthesis of optically active tetrahydro- $\beta$ -carbolines, key intermediates in the preparation of many indole alkaloids **Patrick D. Bailey and Sean P. Hollinshead**
- 747 Biosynthesis of canescin, a metabolite of *Aspergillus malignus*: incorporation of methionine, acetate, succinate, and isocoumarin precursors, labelled with deuterium and carbon-13 **Christopher N. Lewis, James Staunton, and David C. Sunter**
- 755 An investigation of the biosynthesis of citromycetin in *Penicillium frequentans* using  $^{13}\text{C}$ - and  $^{14}\text{C}$ -labelled precursors **Geoffrey E. Evans and James Staunton**
- 763 Isolation and structure elucidation of polivione, a polyketide co-metabolite of citromycetin in *Penicillium frequentans* **Agathi K. Demetriadou, Ernest D. Laue, Finian J. Leeper, and James Staunton**
- 769 A study of biosynthesis of the polyketide polivione in *Penicillium frequentans* using  $^{13}\text{C}$ -,  $^2\text{H}$ -, and  $^{18}\text{O}$ -labelled precursors **Agathi K. Demetriadou, Ernest D. Laue, and James Staunton**
- 773 Biosynthesis of palitantin, a polyketide metabolite of *Penicillium brefeldianum*:  $^{13}\text{C}$  n.m.r. assignment and incorporation of  $^{13}\text{C}$ -,  $^2\text{H}$ -, and  $^{18}\text{O}_2$ -labelled acetates **Agathi K. Demetriadou, Ernest D. Laue, and James Staunton**
- 779 No-carrier-added radiobromination and radioiodination of aromatic rings using *in situ* generated peracetic acid **Stephen M. Moerlein, Werner Beyer, and Gerhard Stöcklin**
- 787 Identification of the absolute stereochemistry of D- and L-oleandroses using a chiral h.p.l.c. column **Sachiko Tsukamoto, Koji Hayashi, Kô Kaneko, and Hiroshi Mitsuhashi**
- 791 Reaction of isoxazoles and isoxazolium salts with organometallic reagents. Synthesis of dihydroisoxazoles **Angel Albertola, Luis Fernando Antolín, Ana González, Miguel Angel Laguna, and Francisco José Pulido**
- 795 A formylation-cyclisation method of synthesis of cycloalkenones from unsaturated ketones. Part 3. Simple synthesis of some functionalised angularly fused cyclopentenone and cyclopentanone derivatives **Brindaban C. Ranu, Ratna Chakraborti, and Usha Ranjan Ghatak**
- 803 Thermally induced rearrangement of thiopheniobis(alkoxycarbonyl)methanides **Timothy Bowles, Roger J. Gillespie, Alexander E. A. Porter, Josef A. Rechka, and Henry S. Rzepa**
- 809 Thermally induced rearrangement of thiopheniobis(alkoxycarbonyl)methanides. A theoretical MNDO SCF-MO study **Alexander E. A. Porter and Henry S. Rzepa**
- 813  $\alpha$ -Thio-substituted ketones as precursors of olefins *via* oxathiolanes:  $\alpha$ -methoxybenzyl as protecting group **Michael D. Brown, Catherine J. Meunier, and Gordon H. Whitham**
- 817  $\alpha$ -Thio-substituted ketones as precursors of olefins *via* oxathiolanes: benzyl as protecting group **Michael D. Brown and Gordon H. Whitham**

- 823 Metabolites of the higher fungi. Part 23. The punctaporonins. Novel bi-, tri-, and tetra-cyclic sesquiterpenes related to caryophyllene, from the fungus *Poronia punctata* (Linnaeus:Fries) Fries **John R. Anderson, Raymond L. Edwards, J. Philip Poyser, and Anthony J. S. Whalley**
- 833 A novel synthesis of pyrrolizidine alkaloids by means of an intramolecular carbенoid displacement (ICD) reaction **Tetsuji Kametani, Hirotaka Yukawa, and Toshio Honda**
- 839 Synthesis of averufin and its role in aflatoxin B<sub>1</sub> biosynthesis **Craig A. Townsend, Siegfried B. Christensen, and Steven G. Davis**
- 863 3-Hydroxypyrrroles and 1*H*-pyrrol-3(2*H*)-ones. Part 2. Scope and limitations of the synthesis of pyrrol-3-ones by pyrolysis of aminomethylene Meldrum's acid derivatives **Hamish McNab and Lilian C. Monahan**
- 869 3-Hydroxypyrrroles and 1*H*-pyrrol-3(2*H*)-ones. Part 3. Pyrrolones from pyrolyses of aminomethylene Meldrum's acid derivatives: loss of chirality at the site of hydrogen transfer **Hamish McNab and Lilian C. Monahan**
- 875 Peracid oxidation of 16-arylidene- and 16-alkylidene-17-oxo-steroids **Lameck S. Chagonda and Brian A. Marples**
- 881 The structure of leudrin, and the nucleophilic substitution of its primary hydroxy group by bromine **Guido W. Perold, Laurence Carlton, Arthur S. Howard, and Joseph P. Michael**
- 885 A novel route to the des-*A* corticosteroids **Hideo Nemoto, Mari Moizumi, Mitsuo Nagai, Keiichiro Fukumoto, and Tetsuji Kametani**
- 889 N.m.r. and conformational studies of some 1,4-linked disaccharides **Irene Backman, Bertil Erbring, Per-Erik Jansson, and Lennart Kenne**
- 899 The synthesis and properties of some novel 5-amino-1,4,2-dithiazolium salts and the X-ray molecular structure of 5-morpholino-3-(4-nitrophenyl)-1,4,2-dithiazolium fluoroborate **Florence S. Y. Chan, Michael P. Sammes, and Richard L. Harlow**
- 907 Studies on fungal products. Part 15. Isolation and structure determination of arugosin E from *Aspergillus silvaticus* and cycloisoemericellin from *Emericella striata* **Nobuo Kawahara, Koohei Nozawa, Shoichi Nakajima, and Ken-ichi Kawai**
- 913 Chemistry of biotin: access to 2,3- and 5,6-didehydrobiotin derivatives **Robert L. Baxter and Andrew Coutts**
- 917 1,3-Dipolar character of six-membered aromatic rings. Part 56. The cycloadditions of acetylenes and 3-oxidopyridinium betaines **Christina Y. Ishag, Keith J. Fisher, Badr Eldin Ibrahim, George M. Iskander, and Alan R. Katritzky**
- 921 Sodium perfluoroalkane carboxylates as sources of perfluoroalkyl groups **Gillian E. Carr, Richard D. Chambers, Thomas F. Holmes, and David G. Parker**
- 927 Stereoselective addition of lithium amides to activated triple bonds **Ben-Ami Feit, Shulamit Dickerman, Djamal Mrawe, and Ariela Fishman**
- 931 Total synthesis of ( $\pm$ )-pisiferic acid **Ajoy Kumar Banerjee, Héctor Hurtado S., Manuel Laya M., Julio C. Acevedo, and Jaime Alvarez G.**
- 939 Vinyllogous Wolff rearrangement of cyclic  $\beta,\gamma$ -unsaturated diazomethyl ketones: a new synthetic method for angularly functionalised polycyclic systems **Bijali Saha, Gopa Bhattacharjee, and Usha Ranjan Ghatak**
- 945 Reaction of silylimines with ester enolates. Synthesis of *N*-unsubstituted azetidinones starting from nitriles **Patrizia Andreoli, Gianfranco Cainelli, Michele Contento, Daria Giacomini, Giorgio Martelli, and Mauro Panunzio**
- 949 X=Y-ZH systems as potential 1,3-dipoles. Part 10. The decarboxylative route to azomethine ylides. Background and relevance to pyridoxal decarboxylases **Moustafa F. Aly, Ronald Grigg, Sunit Thianpatanagul, and Visuvanathar Sridharan**
- 957 Photochemistry of pyrimidin-2(1*H*)-ones: intermolecular hydrogen abstraction by an imino group nitrogen **Takehiko Nishio and Yoshimori Omote**
- 961 Cyclobutarenes. Part 3. Synthesis of bromodicyclobutarenes and some new derivatives of the benzocyclobutabiphenylenes **Michael K. Shepherd**
- 971 Indolization by phosphorus trichloride of functionalized ketone arylhydrazones: synthesis of pharmacological interesting indoles **Grazieno Baccolini, Renato Dalpozzo, and Paolo E. Todesco**
- 975 Allenes. Part 47. Pyrido[1,2-*a*]pyrimidines and their hydrolysis products from allenic and acetylenic nitriles **Stephen R. Landor, Phyllis D. Landor, Andrew Johnson, Z. Tanee Fomum, J. Tanyi Mbafor, and A. Ephraim Nkengfack**

## Corrigendum

- 981 The allyl group for protection in carbohydrate chemistry. Part 21. ( $\pm$ )-1,2:5,6- and ( $\pm$ )-1,2:3,4-di-*O*-isopropylidene-*myo*-inositol. The unusual behaviour of crystals of ( $\pm$ )-3,4-di-*O*-acetyl-1,2,5,6-tetra-*O*-benzyl-*myo*-inositol on heating and cooling; a 'thermosalient solid' **Jill Gigg, Roy Gigg, Sheila Payne, and Robert Conant**
- 981 Synthesis of allyl and dienyl sulphones via iodosulphonylation of conjugated dienes **José Barluenga, José M. Martínez-Gallo, Carmen Nájera, Francisco J. Fañanás, and Miguel Yus**

## AUTHOR INDEX

- Acevedo, Julio C., 931  
Albertola, Angel, 791  
Alvárez G., Jaime, 931  
Aly, Moustafa F., 949  
Anderson, John R., 823  
Andreoli, Patrizia, 945  
Antolin, Luis Fernando, 791  
Baccolini, Grazieno, 971  
Backman, Irene, 889  
Bailey, Patrick D., 739  
Banerjee, Ajay Kumar, 931  
Barluenga, José, 981  
Baxter, Robert L., 913  
Beyer, Werner, 779  
Bhattacharjee, Gopa, 939  
Bowles, Timothy, 803  
Brown, Michael D., 813, 817  
Cainelli, Gianfranco, 945  
Carlton, Laurence, 881  
Carr, Gillian E., 921  
Chagonda, Lameck S., 875  
Chakraborti, Ratna, 795  
Chambers, Richard D., 921  
Chan, Florence S. Y., 899  
Christensen, Siegfried B., 839  
Cojocaru, Miriam, 733  
Conant, Robert, 981  
Contento, Michele, 945  
Coutts, Andrew, 913  
Dalpozzo, Renato, 971  
Davis, Steven G., 839
- Demetriadou, Agathi K., 763, 769, 773  
Dickerman, Shulamit, 927  
Edwards, Raymond L., 823  
Erbing, Bertil, 889  
Evans, Geoffrey E., 755  
Fañanás, Francisco J., 981  
Feit, Ben-Ami, 927  
Fisher, Keith J., 917  
Fishman, Ariela, 927  
Fomum, Z. Tanee, 975  
Fukumoto, Keiichiro, 885  
Ghatak, Usha Ranjan, 795, 939  
Giacomini, Daria, 945  
Gigg, Jill, 981  
Gigg, Roy, 981  
Gillespie, Roger J., 803  
González, Ana, 791  
Gottlieb, Hugo E., 733  
Grigg, Ronald, 949  
Harlow, Richard L., 899  
Hassner, Alfred, 733  
Hayashi, Koji, 787  
Hollinshead, Sean P., 739  
Holmes, Thomas F., 921  
Honda, Toshio, 833  
Howard, Arthur S., 881  
Hurtado S., Héctor, 931  
Ibrahim, Badr Eldin, 917  
Ishag, Christina Y., 917  
Iskander, George M., 917
- Jansson, Per-Erik, 889  
Johnson, Andrew, 975  
Kametani, Tetsuji, 833, 885  
Kaneko, Kō, 787  
Katritzky, Alan R., 917  
Kawahara, Nobuo, 907  
Kawai, Ken-ichi, 907  
Kenne, Lennart, 889  
Laguna, Miguel Angel, 791  
Landor, Phyllis D., 975  
Landor, Stephen R., 975  
Laue, Ernest D., 763, 769, 773  
Laya M., Manuel, 931  
Leeper, Finian J., 763  
Lewis, Christopher N., 747  
Marples, Brian A., 875  
Martelli, Giorgio, 945  
Martinez-Gallo, José M., 981  
Masrawe, Djamal, 927  
Mbafor, J. Tanyi, 975  
McNab, Hamish, 863, 869  
Meunier, Catherine J., 813  
Michael, Joseph P., 881  
Mitsuhashi, Hiroshi, 787  
Moerlein, Stephen M., 779  
Moizumi, Mari, 885  
Monahan, Lilian C., 863, 869  
Nájera, Carmen, 981  
Nagai, Mitsuo, 885  
Nakajima, Shoichi, 907  
Nemoto, Hideo, 885
- Nishio, Takehiko, 957  
Nkengfack, A. Ephraim, 975  
Nozawa, Koohei, 907  
Omote, Yoshimori, 957  
Panunzio, Mauro, 945  
Parker, David G., 921  
Payne, Sheila, 981  
Perold, Guido W., 881  
Porter, Alexander E. A., 803, 809  
Poyser, J. Philip, 823  
Pulido, Francisco José, 791  
Ranu, Brindaban C., 795  
Rechka, Josef A., 803  
Ruse, Margareta, 733  
Rzepa, Henry S., 803, 809  
Saha, Bijali, 939  
Sammes, Michael P., 899  
Shepherd, Michael K., 961  
Sridharan, Visuvanathar, 949  
Staunton, James, 747, 755, 763, 769, 773  
Stöcklin, Gerhard, 779  
Sunter, David C., 747  
Thianpatanagul, Sunit, 949  
Todesco, Paolo E., 971  
Townsend, Craig A., 839  
Tsukamoto, Sachiko, 787  
Whalley, Anthony J. S., 823  
Whitham, Gordon H., 813, 817  
Yukawa, Hirotaka, 833  
Yus, Miguel, 981

---

NOTE: An asterisk in the heading of each paper indicates the author who is to receive any correspondence

