

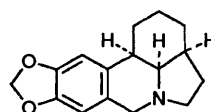
JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 1

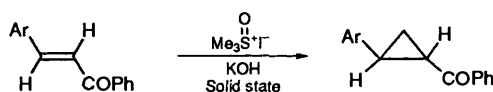
Organic and Bio-organic Chemistry

CONTENTS

Perkin Communications

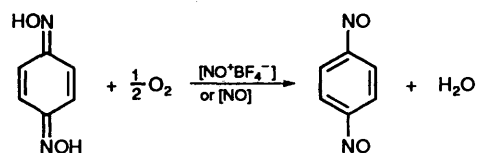
2671 **A stereoselective total synthesis of (\pm)- γ -lycorane**

Martin G. Banwell and Angela W. Wu

2673 **Ylide reactions in the solid state: a simple procedure for the synthesis of cyclopropanes, oxiranes and aziridines**

Fumio Toda and Nobuhiro Imai

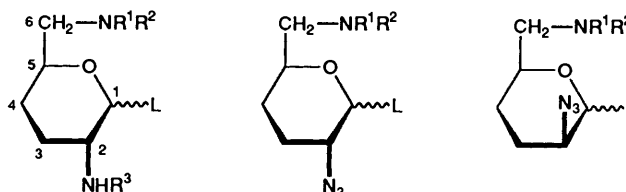
Articles

2675 **Catalytic autoxidation of benzoquinone dioximes with nitrogen oxides: steric effects on the preparation of monomeric dinitroso-benzenes**

R. Rathore, J. S. Kim and J. K. Kochi

2685 **Total syntheses of enantiomerically pure D- and L-glycosyl donors as components of sannamycin-type aminoglycoside antibiotics**

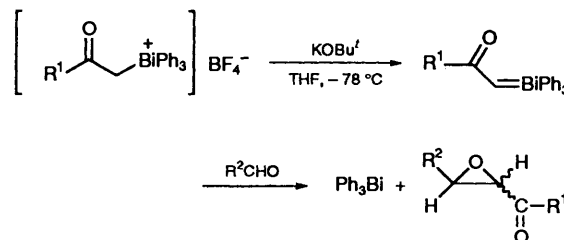
Christian Ludin, Berit Schwesinger, Reinhard Schwesinger, Walter Meier, Bernhard Seitz, Thomas Weller, Christoph Hoenke, Stephan Haitz, Silke Erbeck and Horst Prinzbach



From 'resolved' 3,4-dihydro-2*H*-pyran-2-carbaldehyde purpurosamine-type glycosyl donors are prepared in both enantiomeric forms

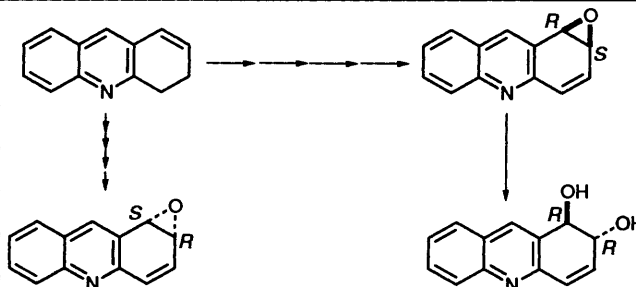
2703 **Triphenylbismuthonium 2-oxoalkylide, a moderately stabilized bismuthonium ylide: generation and reactions with some electrophiles**

Yoshihiro Matano



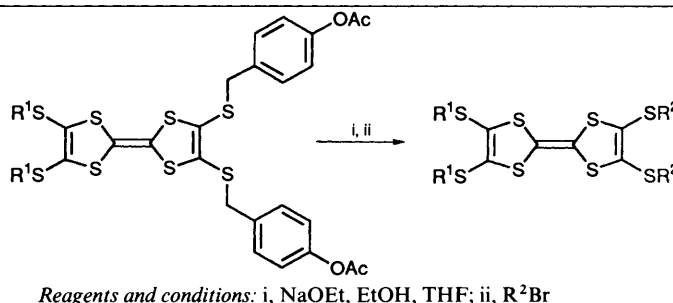
2711 **Chemical synthesis of the (1*R*,2*S*) and (1*S*,2*R*) arene oxide metabolites of acridine**

Derek R. Boyd, Michael R. J. Dorrity, Lynne Hamilton, John F. Malone and Allison Smith



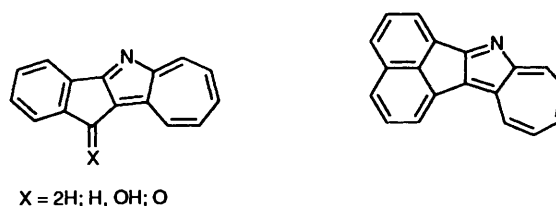
2715 **Synthesis of unsymmetrical tetrakis(alkylsulfanyl)tetrathiafulvalene derivatives**

Colin Gemmell, Gerardo C. Janairo, Jeremy D. Kilburn, Henning Ueck and Allan E. Underhill



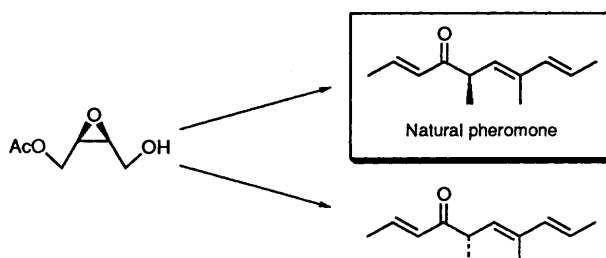
2721 **Reactions of (vinylimino)-λ⁵-phosphanes and related compounds. Part 29. Synthesis and chemical and structural properties of 11*H*-cyclohepta[*b*]indeno[2,1-*d*]pyrrole and acenaphtho[1,2-*b*]cyclohepta[*d*]pyrrole**

Makoto Nitta, Yukio Iino and Kaoru Kamata



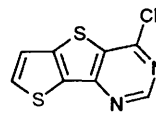
2727 **Pheromone synthesis. Part 166. Synthesis of (2*E*,5*R*,6*E*,8*E*)-5,7-dimethyldeca-2,6,8-trien-4-one, the major pheromone of the Israeli pine bast scale, and its antipode**

Kenji Mori and Masayasu Amaike



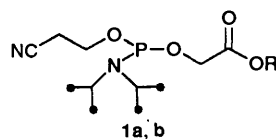
2735 **Synthesis of thieno-[2,3-*b*]-, -[3,2-*b*]-, and -[3,4-*b*]-thiophenes and thieno-[3',2':4,5]-, -[2',3':4,5]- and -[3',4':4,5]-thieno[3,2-*d*]-pyrimidin-7(6*H*)-ones starting from thiophene**

David W. Hawkins, Brian Iddon, Darren S. Longthorne and Peter J. Roysk



2745 **Novel non-nucleosidic phosphoramidite building blocks for versatile functionalization of oligonucleotides at primary hydroxy groups**

Jari Hovinen, Andrei Guzaev, Alex Azhayev and Harri Lönnberg

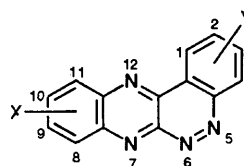


1a R = CH₂CH₂Cl
1b R = CH₂CF₃

Synthesis of two non-nucleosidic phosphoramidites **1a, b** that enable attachment of carboxy-, amino- or sulfanyl-alkyl spacer arms to oligonucleotides is described

2751 **Polyaza heterocycles. Part 2. Nucleophilic substitution of halogens in halogeno-quinoxalino[2,3-*c*]cinnolines**

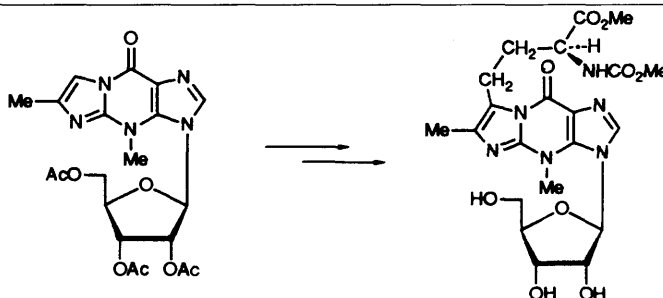
Arshad Ahmad, Linda J. Dunbar, Iain G. Green, Ian W. Harvey, Thomas Shepherd, David M. Smith and Robert K. C. Wong



Halogeno substituents are displaceable from position 10, and sometimes from position 9, in the title compounds, but those at positions 1–4 are unreactive

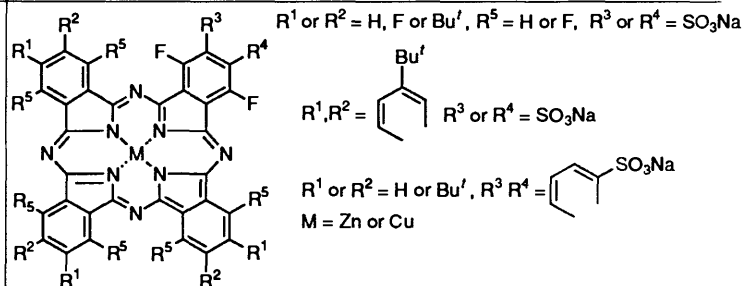
2759 **Synthesis of 3-β-D-ribofuranosylwybutine, the most probable structure for the hypermodified nucleoside isolated from yeast phenylalanine transfer ribonucleic acids**

Taisuke Itaya, Masatoshi Morisue, Manabu Shimomichi, Masako Ozasa, Shigeyuki Shimizu and Satoshi Nakagawa



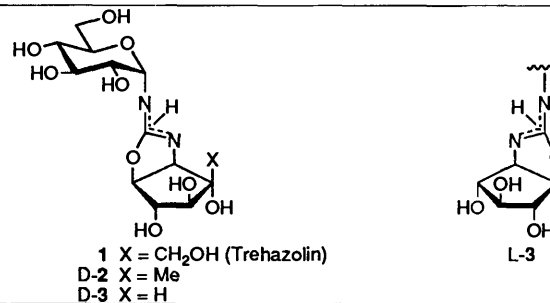
2767 **Syntheses of monosulfonated phthalocyanines, benzonaphthoporphyrines and porphyrins via the Meerwein reaction**

Svetlana V. Kudrevich, Hasrat Ali and Johan E. van Lier



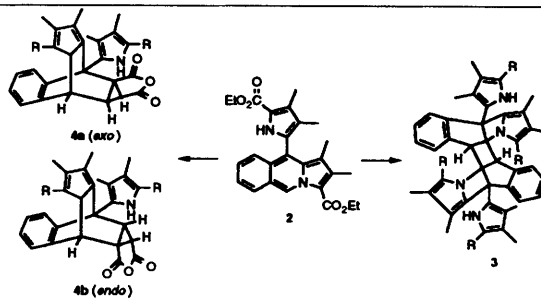
2775 **Synthesis of trehazolin analogues containing modified aminocyclitol moieties**

Chikara Uchida, Hideo Kitahashi, Tatsuya Yamagishi, Yoko Iwaisaki and Seiichiro Ogawa



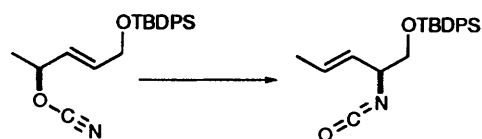
2787 **One-step synthesis and some reactions of ethyl 10-(ethoxycarbonyl-3,4-dimethylpyrrol-2-yl)-1,2-dimethylpyrrolo[1,2-*b*]isoquinoline-3-carboxylate**

Ming Li, Yiming Yao, Yu Chen, Zheng Xu, Xiaozeng You and Xiaoying Huang



2791 **Stereochemistry of an allyl cyanate-to-isocyanate rearrangement**

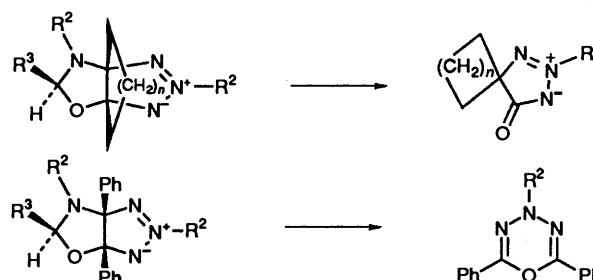
Yoshiyasu Ichikawa, Katsunori Tsuboi and Minoru Isobe



An allyl cyanate-to-isocyanate rearrangement proceeds with highly selective transfer of chirality

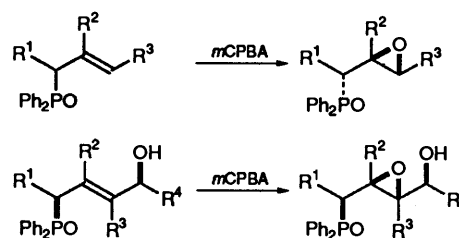
2797 **Substituted bicyclic and tricyclic oxazolo-[4,5-*d*]-1,2,3-triazole systems: ring expansions to 1,3,4,5-oxatriazines and ring contractions to 1,2,3-triazaspiroalkane derivatives**

Richard N. Butler and Donal F. O'Shea



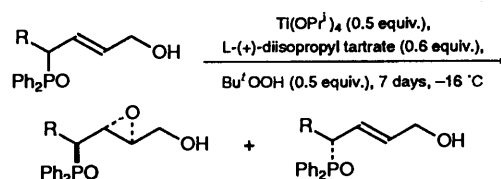
2801 **Diastereoselective epoxidation of allylic phosphine oxides**

Jonathan Clayden, Eric W. Collington, Ernst Egert, Andrew B. McElroy and Stuart Warren



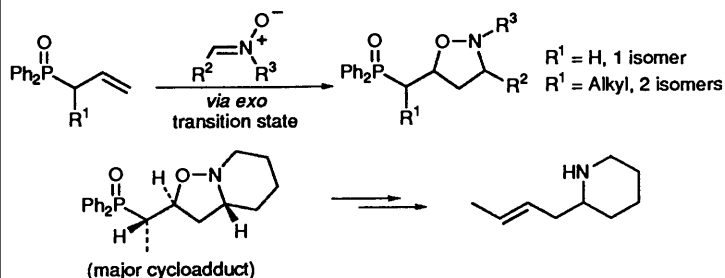
2811 **Asymmetric epoxidation and kinetic resolution of allylic phosphine oxides**

Jonathan Clayden and Stuart Warren



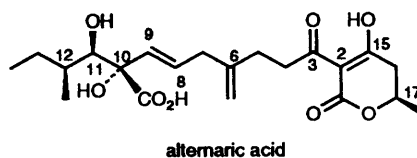
2825 **On the stereoselectivity of nitron addition to α -diphenylphosphinoylalkenes**

Susan K. Armstrong, Eric W. Collington, Jon Stonehouse and Stuart Warren



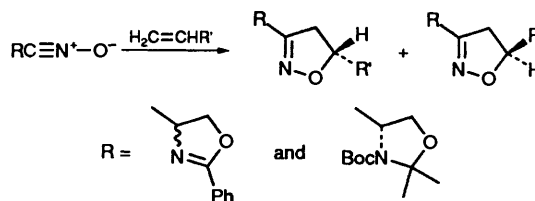
- 2833 **Biosynthetic study of alternaric acid: isolation of plausible biosynthetic intermediates and origins of the hydrogen and oxygen atoms**

Hiroyasu Tabuchi, Hideaki Oikawa and Akitami Ichihara



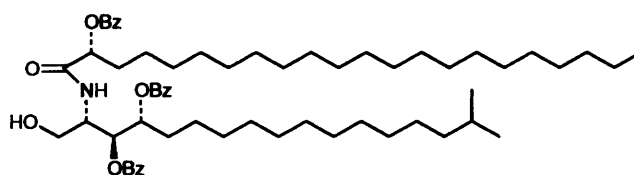
- 2841 **Generation and cycloadditions of 4,5-dihydrooxazole- and oxazolidine-4-carbonitrile N-oxides**

Alexander J. Blake, Ewan C. Boyd, Robert O. Gould and R. Michael Paton



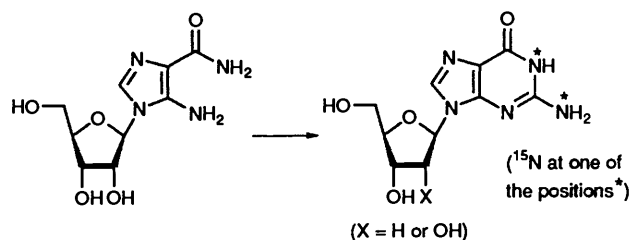
- 2849 **Total synthesis of (2*S*,3*S*,4*R*)-2-[(2'*R*)-2-benzoyloxydocosanoylamino]-16-methylheptadecane-1,3,4-triol 3,4-dibenzoate, a partially protected ceramide part of sponge cerebrosides**

Hideki Nakashima, Norihiko Hirata, Takeru Iwamura, Yoshiro Yamagiwa and Tadao Kamikawa



- 2859 **Synthesis of [¹⁵N]guanosines and deoxy[¹⁵N]guanosines from 5-amino-1-(β-D-ribofuranosyl)imidazole-4-carboxamide ('AICA-ribose')**

Christine Bleasdale, Simon B. Ellwood, Bernard T. Golding, Pritpal K. Slaich, Oonah J. Taylor and William P. Watson



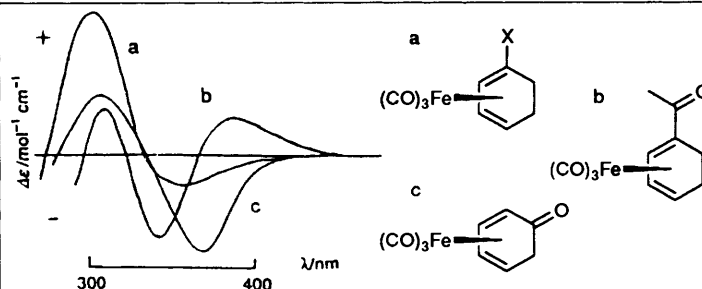
- 2867 **Reactions of the chloro(diisopropylamino)-phosphanylium cation with unsaturated alcohols**

Tatsuji Kasaka, Ayao Matsumura, Makoto Kyoda, Tetsuya Fujimoto, Kazuchika Ohta, Iwao Yamamoto and Akikazu Kakehi



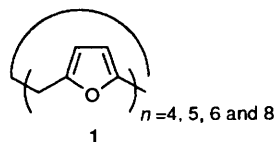
- 2873 **Circular dichroism spectra of tricarbonyliron π-complexes**

G. Richard Stephenson and Philip W. Howard



2881 **Synthesis of calixfuran macrocycles and evidence for gas-phase ammonium ion complexation**

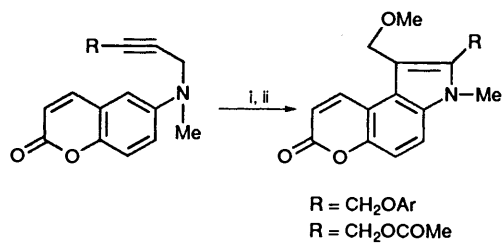
Richard M. Musau and Andrew Whiting



The preparation of calixarenes **1** is reported

2889 **Studies on amine oxide rearrangements: regioselective synthesis of pyrano[3,2-*e*]indol-7-one**

Krishna C. Majumdar and Santosh K. Ghosh



Reagents and conditions: i, MCPBA, CH_2Cl_2 , room temp.;
ii, MeOH, heat

AUTHOR INDEX

- Ahmad, Arshad, 2751
Ali, Hasrat, 2767
Amaike, Masayasu, 2727
Armstrong, Susan K., 2825
Azhayev, Alex, 2745
Banwell, Martin G., 2671
Blake, Alexander J., 2841
Bleasdale, Christine, 2859
Boyd, Derek R., 2711
Boyd, Ewan C., 2841
Butler, Richard N., 2797
Chen, Yu, 2787
Clayden, Jonathan, 2801, 2811
Collington, Eric W., 2801, 2825
Dorrity, Michael R. J., 2711
Dunbar, Linda J., 2751
Egert, Ernst, 2801
Ellwood, Simon B., 2859
Erbeck, Silke, 2685
Fujimoto, Tetsuya, 2867
Gemmell, Colin, 2715
Ghosh, Santosh K., 2889
Golding, Bernard T., 2859
Gould, Robert O., 2841
Green, Iain G., 2751
Guzaev, Andrei, 2745
Haitz, Stephan, 2685
Hamilton, Lynne, 2711
Harvey, Ian W., 2751
Hawkins, David W., 2735
Hirata, Norihiko, 2849
Hoenke, Christoph, 2685
Hovinen, Jari, 2745
Howard, Philip W., 2873
Huang, Xiaoying, 2787
Ichihara, Akitami, 2833
Ichikawa, Yoshiyasu, 2791
Iddon, Brian, 2735
Iino, Yukio, 2721
Imai, Nobuhiro, 2673
Isobe, Minoru, 2791
Itaya, Taisuke, 2759
Iwaisaki, Yoko, 2775
Iwamura, Takeru, 2849
Janairo, Gerardo C., 2715
Kakehi, Akikazu, 2867
Kamata, Kaoru, 2721
Kamikawa, Tadao, 2849
Kasaka, Tatsuji, 2867
Kilburn, Jeremy D., 2715
Kim, J. S., 2675
Kitahashi, Hideo, 2775
Kochi, J. K., 2675
Kudrevich, Svetlana V., 2767
Kyoda, Makoto, 2867
Li, Ming, 2787
Longthorne, Darren S., 2735
Lönnerberg, Harri, 2745
Ludin, Christian, 2685
Majumdar, Krishna C., 2889
Malone, John F., 2711
Matano, Yoshihiro, 2703
Matsumura, Ayao, 2867
McElroy, Andrew B., 2801
Meier, Walter, 2685
Mori, Kenji, 2727
Morisue, Masatoshi, 2759
Musau, Richard M., 2881
Nakagawa, Satoshi, 2759
Nakashima, Hideki, 2849
Nitta, Makoto, 2721
Ogawa, Seiichiro, 2775
Ohta, Kazuchika, 2867
Oikawa, Hideaki, 2833
O'Shea, Donal F., 2797
Ozasa, Masako, 2759
Paton, R. Michael, 2841
Prinzbach, Horst, 2685
Rathore, R., 2675
Roys, Peter J., 2735
Schwesinger, Berit, 2685
Schwesinger, Reinhard, 2685
Seitz, Bernhard, 2685
Shepherd, Thomas, 2751
Shimizu, Shigeyuki, 2759
Shimomichi, Manabu, 2759
Slaich, Pritpal K., 2859
Smith, Allison, 2711
Smith, David M., 2751
Stephenson, G. Richard, 2873
Stonehouse, Jon, 2825
Tabuchi, Hiroyasu, 2833
Taylor, Oonah J., 2859
Toda, Fumio, 2673
Tsuboi, Katsunori, 2791
Uchida, Chikara, 2775
Ueck, Henning, 2715
Underhill, Allan E., 2715
van Lier, Johan E., 2767
Warren, Stuart, 2801, 2811, 2825
Watson, William P., 2859
Weller, Thomas, 2685
Whiting, Andrew, 2881
Wong, Robert K. C., 2751
Wu, Angela W., 2671
Xu, Zheng, 2787
Yamagishi, Tatsuya, 2775
Yamagiwa, Yoshiro, 2849
Yamamoto, Iwao, 2867
Yao, Yiming, 2787
You, Xiaozeng, 2787

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

Forthcoming Articles in *Perkin Transactions 1*

Maxikdiol: a Novel Dihydroxyisoprimane as an Agonist of Maxi-K Channels **S.B. Singh, M.A. Goetz, D.L. Zink, A.W. Dombrowski, J.D. Polishook, M.L. Garcia, W. Schmalhofer, O.B. McManus and G.J. Kaczorowski**

Simple Synthesis of L- and D-Vinylglycine (2-Aminobut-3-enoic Acid) and Related Amino Acids
K.O. Hallinan, D.H.G. Crout and W. Errington

Stereoselective Radical Addition Reactions of γ -Oxy- α,β -Unsaturated Ester Derivatives; 1,2-Asymmetric Induction in Acyclic and Cyclisation Systems

T. Taguchi, T. Morikawa, Y. Washio, S. Harada, R. Hanai, T. Kayashita, H. Nemoto and M. Shiro

Photoinduced Molecular Transformations. Part 152. Ring Expansion based on a Sensitized (2+2) Photoaddition of Enol Ethers of Cyclic Ketones with Olefins, followed by a β -Scission of Alkoxy Radicals generated from the Resulting Cyclobutanols. Two-carbon Ring Expansion of β -Indanone, β -Tetralone and β -Suberone

H. Suginome, T. Takeda, M. Itoh, Y. Nakayama and K. Kobayashi

Photoinduced Molecular Transformations. Part 153. A Long-range Intramolecular Hydroxylation of C(25) of the Cholestane Side Chain **H. Suginome, S. Sato and K. Orito**

Photoinduced Molecular Transformations. Part 155. General Synthesis of Macrocyclic Ketones based on a Ring Expansion involving a Selective β -Scission of Alkoxy Radicals, its Application to a New Synthesis of (+)-Isocaryophyllene and (+)-Caryophyllene and a Conformational Analysis of the Two Sesquiterpenes and Radical Intermediate in the Synthesis by an MM3 Calculation

H. Suginome, T. Kondoh, C. Gogonea, V. Singh and E. Osawa

[3 + 2] Cycloaddition Reactions of Carbonyl Oxides to Imines: an Alternative Approach to the Synthesis of 1,2,4-Dioxazolines **K.J. McCullough, M. Mori, T. Tabuchi, H. Yamakoshi, S. Kusabayashi and M. Nojima**

Carotenoids and Related Polyenes. Part 2. Photoisomerization of an Allenic Carotenoid, Peridinin and Allenic Model Compounds **M. Ito, S. Sumiya and Y. Yamano**

Pigments of Fungi. Part 38. Synthesis of Austrocorticinic Acid and (*S*)-(-)-Austrocorticin; Absolute Stereochemistry of Natural Austrocorticin **M. Gill, A.S. Cotterill, A. Gimenez and N.M. Milanovic**

A New and Convenient Protection System for Pseudouridine, Highly Suitable for Solid Phase Oligoribonucleotide Synthesis **B.S. Sproat, U. Pieleas, B. Beijer, K. Bohmann, S. Weston, S.O'Loughlin and V. Adam**

New Synthetic Methodology for the Synthesis of 7-Substituted Tetrahydroazepin-2-ones

A.B. Holmes, P.A. Evans and K. Russell

Concise Racemic and Highly Enantioselective Approaches to Key Intermediates for the Syntheses of Carbocyclic Nucleosides and pseudo-Ribofuranoses: Formal Syntheses of Carbovir

D.M. Hodgson, J. Witherington and B.A. Moloney

Synthesis of 4-Substituted 8-Amino-4,5-dihydro-3*H*-pyrrolo[3,4-*f*][1,3,5]triazepin-6-ones and 5-Amino-2-aryl-4-(1'-aryl-5'-arylideneaminoimidazol-4'-yl)-1,3-oxazoles

B.L. Booth, M.J. Alves, O.Kh. Al-Duaij, A. Carbalho, P.R. Eastwood and M.F.J.R.P. Proenca

Enantiospecific Synthesis of a Spirolactonic Sesquiterpene, Curcumanolide A **T. Honda and M. Ishige**

Cycloadditions of Ketene Acetals under Microwave Irradiation in Solvent-free Conditions

A. Diaz-Ortiz, E. Diez-Barra, A. De La Hoz, P. Prieto and A. Moreno

Reactions of Nitrile Oxides and Nitrile Imines with Derivatives of 4,5-Dihydrooxazole and 4,5-Dihydrothiazole and with Related Compounds **R.M. Scrowston, P.D. Kennewell, D.J. Miller and R. Westwood**

Rearrangement of Alkyl Phenyl Ethers to Alkylphenols in the Presence of Cation-exchanged Montmorillonite (Mn^{2+} -Mont) **S. Oemura, H. Horiuchi, T. Nishimura and J.-I. Teteiwa**

The Preparation of Diorganolead Dicarboxylates from Aryllead Triacetates. An Investigation of Ligand Coupling in some Diorganolead(IV) Compounds **J.T. Pinhey, C.J. Parkinson and J. Morgan**