

JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 1

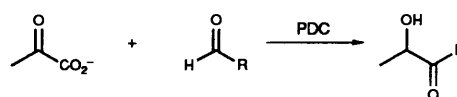
Organic and Bio-organic Chemistry

CONTENTS

Perkin Communications

- 309 **Stereochemistry of the formation of lactaldehyde and acetoin produced by the pyruvate decarboxylases of yeast (*Saccharomyces* sp.) and *Zymomonas mobilis*: different Boltzmann distributions between bound forms of the electrophile, acetaldehyde, in the two enzymatic reactions**

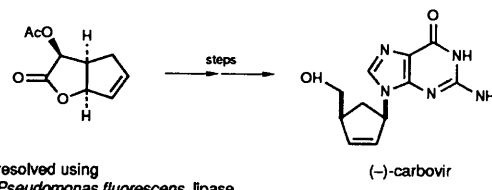
S. Bornemann, D. H. G. Crout, H. Dalton, D. W. Hutchinson, G. Dean, N. Thomson and M. M. Turner



Pyruvate decarboxylase (PDC) from brewer's yeast gives predominantly *R*-acetoin (R = Me, 45% ee) and *R*-lactaldehyde (R = H, ~20% ee) from pyruvate and the corresponding aldehyde. The homologous PDC from *Zymomonas mobilis* gives predominantly *S*-acetoin (~25% ee) and *S*-lactaldehyde (~56% ee) from the same precursors

- 313 **Conversion of (-)-4-hydroxy-2-oxabicyclo-[3.3.0]oct-7-en-3-one into the anti-HIV agent carbovir**

Rosemary A. MacKeith, Ray McCague, Horacio F. Olivo, Christopher F. Palmer and Stanley M. Roberts



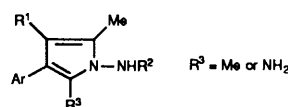
resolved using *Pseudomonas fluorescens* lipase

(-)-carbovir

Articles

- 315 **Conjugated azoalkenes. Part 14. Synthesis of new 1-amino- and 1,2-diamino-pyrrole derivatives by reaction of some conjugated azoalkenes with activated methylene compounds RCH₂Ac and RCH₂CN (R = aryl, heteroaryl)**

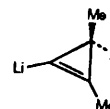
Orazio A. Attanasi, Zhiyuan Liao, Alexander McKillop, Stefania Santeusano and Franco Serra-Zanetti



Condensation of azoalkenes R¹CH=C(Me)N=NR² with selected ketones ArCH₂Ac and cyanides ArCH₂CN gives 1-amino- and 1,2-diamino-pyrroles in high yield

- 321 (*R*)-1,3-Dimethylcyclopropene—one isomer of the smallest chiral hydrocarbon

Mark S. Baird, Helen L. Fitton, William Clegg and Andrew McCamley



1-Lithio-2,3-dimethylcyclopropene has been obtained in optically active form and trapped with electrophiles to produce, among others, optically active 1,3-dimethylcyclopropene

- 327 Addition of diethyl bromodifluoromethylphosphonate to various alkenes initiated by Co(III)/Zn bimetal redox system

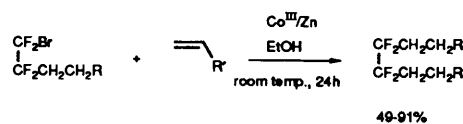
Chang-Ming Hu and Jian Chen



R' = H, alkyl; R'' = H, alkyl, Cl
R = CO₂R, Ac, CN, OEt, Cl, etc.

- 331 Synthesis of functionalized organic molecules containing a tetrafluoroethylene fragment by cobaloxime-promoted fluoroalkylation with substituted tetrafluoroethyl bromides

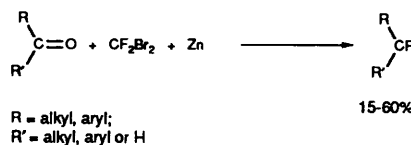
Chang-Ming Hu and Yao-Ling Qiu



R, R' = alkyl, *c*-alkyl, alkoxy, etc.

- 335 Transformation of carbonyl compounds into *gem*-difluoro compounds with dibromodifluoromethane/zinc reagent

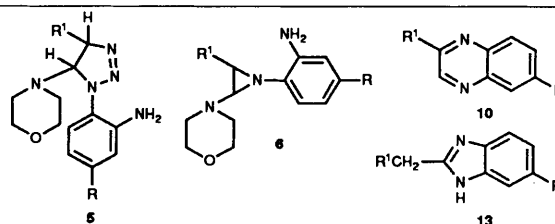
Chang-Ming Hu, Feng-Ling Qing and Cun-Xi Shen



R = alkyl, aryl;
R' = alkyl, aryl or H

- 339 *ν*-Triazolines. Part 34. Thermal behaviour of 1-(2-aminophenyl)-4,5-dihydro-5-morpholino-1,2,3-triazoles: new synthesis of 2-alkylquinoxalines

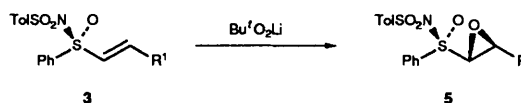
Maurizio Battistini, Emanuela Erba and Donato Pocar



Thermal rearrangement of 1-(2-aminophenyl)-4,5-dihydro-5-morpholino-1,2,3-triazoles followed by oxidation produces 2-alkylquinoxalines

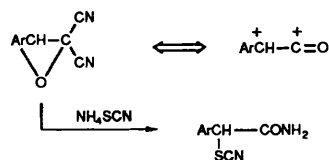
- 343 Synthesis and highly diastereoselective nucleophilic epoxidation of *N*-(*p*-tolylsulfonyl)vinylsulfoximines

Peter L. Bailey, William Clegg, Richard F. W. Jackson and Otto Meth-Cohn



- 351 **Reaction of dicyano epoxides with thiocyanate ion: route to α -thiocyanato derivatives or to 2-acetylimino-1,3-oxathioles and X-ray crystal structure of 2-acetylimino-4-(4-tolyl)-1,3-oxathiole-5-carbonitrile**

Alenka Majcen Le Maréchal, Albert Robert and Ivan Leban



- 357 **Fungal metabolites. Part 5. Rapid structure elucidation of antibiotic peptides, minor components of trichosporin Bs from *Trichoderma polysporum*. Application of linked-scan and continuous-flow fast-atom bombardment mass spectrometry**

Junko Iida, Akira Iida, Yoshiko Takahashi, Yoshihisa Takaishi, Yasuo Nagaoka and Tetsuro Fujita

Trichosporin B-a-1:

Ac-Aib-Ala-Gly-Aib-Ala-Aib-Gln-Aib-Lxx-Ala-Ala-Vxx-Ala-Pro-Val-Aib-Vxx-Gln-Gln-Pheol
(Lxx = Leu or Ile, Vxx = Val or Iva, Aib: α -aminoisobutyric acid, Iva: isovaline, Pheol: phenylalaninol)

Ten components of trichosporin-Bs were rapidly identified by the combination of both LC-MS and MS-MS

- 367 **Fungal metabolites. Part 6. Nuclear magnetic resonance study of antibiotic peptides, trichosporin Bs, from *Trichoderma polysporum***

Akira Iida, Shinichi Uesato, Tetsuro Shingu, Masahiro Okuda, Yasuo Nagaoka, Yoshihiro Kuroda and Tetsuro Fujita

Trichosporin B-V:

Ac-Aib-Ala-Ala-Ala-Aib-Aib-Gln-Aib-Ile-Aib-Gly-Leu-Aib-Pro-Val-Aib-Aib-Gln-Gln-Pheol
(Aib: α -aminoisobutyric acid, Pheol: phenylalaninol)

Sequence-specific ^1H and ^{13}C NMR assignments of an antibiotic peptide, trichosporin B-V were achieved in methanol by using two-dimensional NMR techniques

- 375 **Fungal metabolites. Part 7. Solution structure of an antibiotic peptide, trichosporin B-V, from *Trichoderma polysporum***

Akira Iida, Shinichi Uesato, Tetsuro Shingu, Yasuo Nagaoka, Yoshihiro Kuroda and Tetsuro Fujita

Trichosporin B-V:

Ac-Aib-Ala-Ala-Ala-Aib-Aib-Gln-Aib-Ile-Aib-Gly-Leu-Aib-Pro-Val-Aib-Aib-Gln-Gln-Pheol
(Aib: α -aminoisobutyric acid, Pheol: phenylalaninol)

The secondary structure of peptaibol, trichosporin B-V in methanol was investigated in detail by 600 MHz NMR spectroscopy

- 381 **Fungal metabolites. Part 8. Primary structures of antibiotic peptides, hypelcin A-I, A-II, A-III, A-IV, A-V, A-VI, A-VII, A-VIII and A-IX from *Hypocrea peltata***

Kouji Matsuura, Akgül Yesilada, Akira Iida, Yoshihisa Takaishi, Michiko Kanai and Tetsuro Fujita

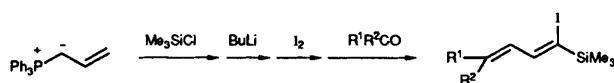
Hypelcin A-III:

Ac-Aib-Pro-Aib-Ala-Aib-Aib-Gln-Aib-Leu-Aib-Gly-Aib-Aib-Pro-Val-Aib-Iva-Gln-Gln-Lol
(Aib: α -aminoisobutyric acid, Iva: isovaline, Lol: leucinol)

The peptides hypelcin A-I-A-IX all contain a similar amino acid sequence with some differences at positions 6, 9, 17 and 20, Aib or Ala, Leu or Ile, Aib or Iva, and Lol or Iol (isoleucinol), respectively

- 389 **Novel one-pot synthesis of 1-iodo-1-trimethylsilyl 1,3-dienes**

Yanchang Shen, Tielin Wang and Wei Xia



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