

## JOURNAL OF THE CHEMICAL SOCIETY

## Perkin Transactions 1

## Organic and Bio-organic Chemistry

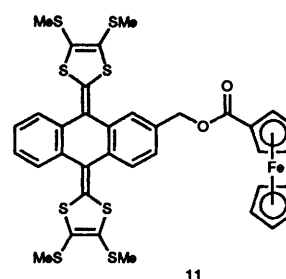
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## Perkin Communications

- 537 **Highly functionalised analogues of tetrathiafulvalene: new 9,10-bis(1,3-dithiol-2-ylidene)-9,10-dihydroanthracene donors**

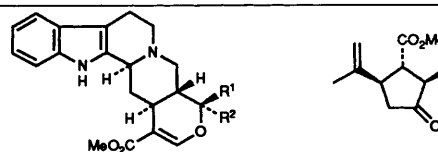
Elena Cerrada, Martin R. Bryce and Adrian J. Moore

The efficient synthesis and solution redox chemistry of the highly functionalised  $\pi$ -electron donor **11** are described



- 539 **Concise enantiospecific synthesis of the key intermediate for heteroyohimbine alkaloids: formal synthesis of ajmalicine and 19-*epi*-ajmalicine**

Toshio Honda, Naoko Haze, Hirohide Ishige, Keiko Masuda, Koichi Naito and Yukio Suzuki



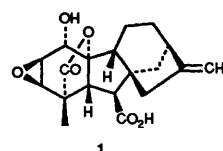
1 Ajmalicine: R<sup>1</sup> = H, R<sup>2</sup> = Me  
2 19-*epi*-Ajmalicine: R<sup>1</sup> = Me, R<sup>2</sup> = H

Ajmalicine **1** and 19-*epi*-ajmalicine **2** have been synthesised enantiospecifically from a cyclopentanone derivative **3** derived from carvone

## Articles

- 541 **Novel gibberellin ring A epoxy alcohols: synthesis and X-ray molecular structure**

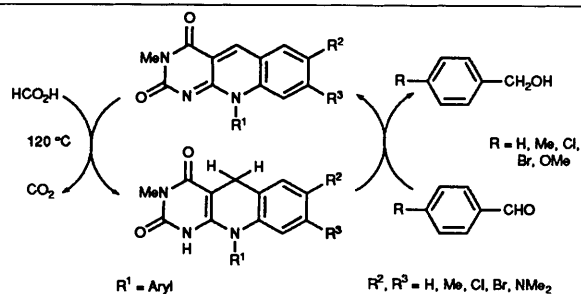
Martin Penny, Christine L. Willis, Andrei S. Batsanov and Judith A. K. Howard



Synthesis of four new gibberellin vicinal epoxy alcohols are described and structure **1** confirmed by X-ray crystallography

- 547 **Autorecycling system for reduction of carbonyl compounds to alcohols by 1,5-dihydro-5-deazaflavins**

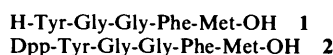
Kazunori Kuroda, Tomohisa Nagamatsu, Reiko Yanada and Fumio Yoneda



- 551 **Phosphorus-based reagents in peptide synthesis: synthesis of methionine-enkephalin and the solution conformation of its *N*-diphenylphosphinoyl derivative**

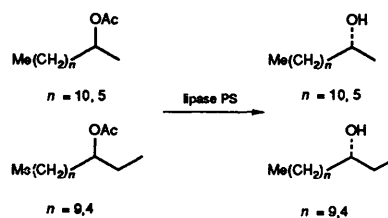
D. David Smith, Kenneth G. Boyd, David Hopton, Robert L. Baxter and Robert Ramage

The diphenylphosphinoyl (Dpp) amine-protecting group and diphenylphosphinoyl-carboxylic acid mixed anhydride coupling methods have been applied to the synthesis of Met<sup>5</sup>-enkephalin **1**; <sup>1</sup>H NMR studies on the derivative **2** in [<sup>2</sup>H<sub>6</sub>]DMSO indicates a major conformation having a Gly<sup>2</sup>-Gly<sup>3</sup> type I β bend.



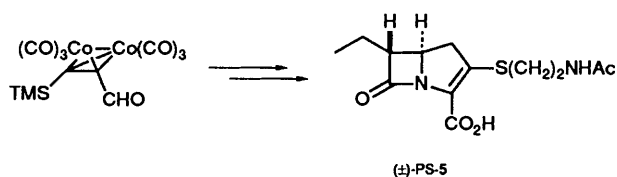
- 557 **Enzymatic preparation of enantiomerically pure alkan-2- and -3-ols by lipase-catalysed hydrolysis with *Pseudomonas cepacia* in the presence of organic media**

Yoshinobu Naoshima, Makoto Kamezawa, Hojun Tachibana, Yoshihito Munakata, Tomoki Fujita, Kohei Kihara and Takao Raku



- 563 **Highly diastereoselective aldol reactions of cobalt-complexed and -uncomplexed propynals with *O*-silyl ketene *O,S*-ketals: highly stereoselective divergent formal syntheses of the β-lactam antibiotics (±)-PS-5 and (±)-*epi*-PS-5**

Chisato Mukai, Osamu Kataoka and Miyoji Hanaoka



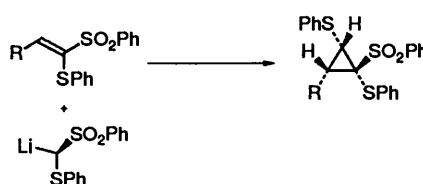
- 573 **Peptides from Australian frogs. Structures of the caeridins from *Litoria caerulea***

Russell J. Waugh, David J. M. Stone, John H. Bowie, John C. Wallace and Michael J. Tyler

Six members of the Caeridin family of peptides have been isolated from the parotoid gland secretion of *Litoria caerulea*. *e.g.* Caeridin **1** has structure Gly-Leu-Leu-Asp-Gly-Leu-heu-Gly-Thr-Leu-Gly-Leu(NH<sub>2</sub>)

- 577 **Diastereoselective synthesis of cyclopropanes with multiple sulfur substitution. X-Ray molecular structures of phenylsulfonyl-substituted cyclopropanes**

Peter L. Bailey, Cheryl T. Hewkin, William Clegg and Richard F. W. Jackson



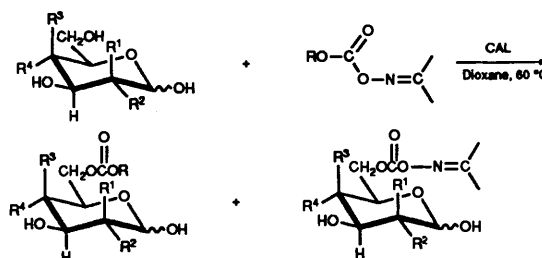
- 585 **Novel rearrangement of 2- $\alpha$ -isopropyl-8-oxabicyclo[3.2.1]oct-6-ene producing the monoterpene 3-hydroxyphellandral**

Luiz Claudio de Almeida Barbosa, Antonio J. Demuner, John Mann and Dorila P. Veloso



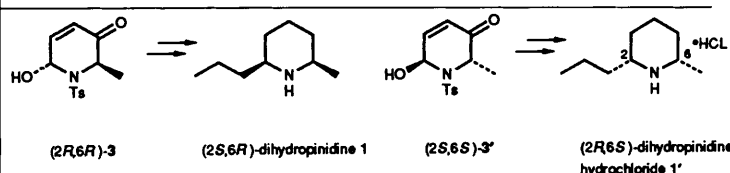
- 589 **Enzymatic regioselective alkoxycarbonylation of hexoses and pentoses with carbonate oxime esters**

Rosalino Pulido and Vicente Gotor



- 593 **A new approach to piperidine alkaloids: an enantioselective total synthesis of (2*S*,6*R*)- and (2*R*,6*S*)-dihydropinidine**

Zhi-Hui Lu and Wei-Shen Zhou



An enantioselective total synthesis of (2*S*,6*R*)- and (2*R*,6*S*)-dihydropinidine, utilizing the piperidone **3** and its enantiomer **3'** obtained from kinetic resolution of  $\alpha$ -furfuryl amide by modified Sharpless asymmetric epoxidation as starting material, is described

- 597 **Approaches to chemically modified enzymes as synthetic catalysts**

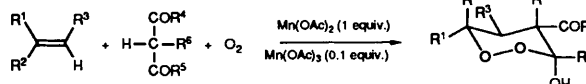
David J. Aitken, Renate Alijah, Samuel O. Onyiriuka, Colin J. Suckling, Hamish C. S. Wood and Limin Zhu



Modified derivatives of carboxypeptidase A (metal exchanged) and the above derivatives of papain together with horse liver alcohol dehydrogenase have been investigated for their ability to catalyse non-natural reactions

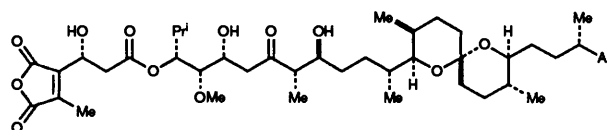
- 609 **Manganese-(II) and (III)-mediated free-radical cyclisation of alkenes,  $\beta$ -keto esters and molecular oxygen**

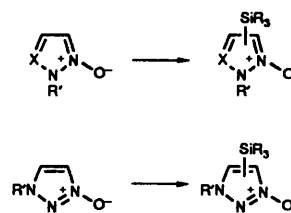
Takashi Yamada, Yoko Iwahara, Hiroshi Nishino and Kazu Kurosawa



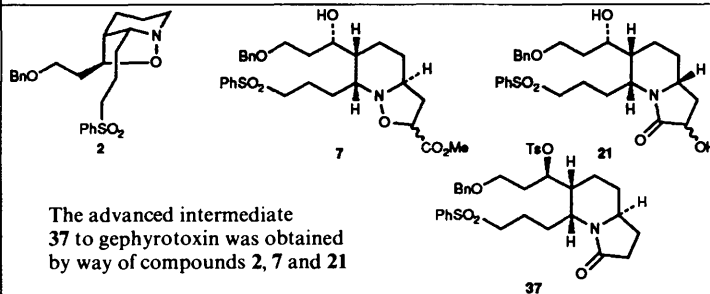
- 617 **Absolute configuration of tautomycin, a protein phosphatase inhibitor from a streptomycete**

Makoto Ubukata, Xing-Chun Cheng, Minoru Isobe and Kiyoshi Isono



625 Silylation of azole *N*-oxides

Mikael Begtrup and Per Vedsø

633 *N*-Alkenyl nitron dipolar cycloaddition routes to piperidines and indolizidines. Part 5. Preparation of a gephyrotoxin precursor

Andrew B. Holmes, Andrew B. Hughes and Adrian L. Smith

The advanced intermediate 37 to gephyrotoxin was obtained by way of compounds 2, 7 and 21

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

