

JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 1

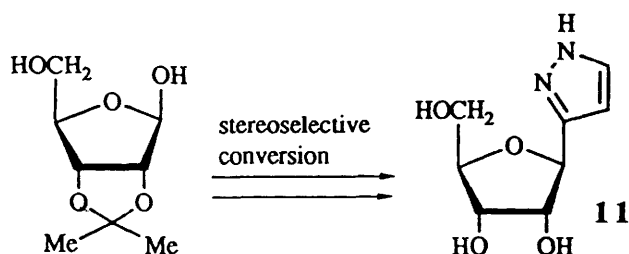
Organic and Bio-organic Chemistry

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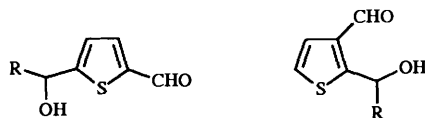
- 2667 **Stereoselective synthesis of 3- β -D-ribofuranosylpyrazole from 2,3-O-isopropylidene-D-ribose; a new route to pyrazole C-nucleosides**

Anthony D. Rycroft, Gurdial Singh and Richard H. Wightman



- 2669 **Samarium diiodide promoted coupling of thiophenecarbaldehydes**

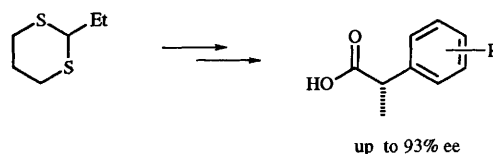
Shyh-Ming Yang and Jim-Min Fang



Thiophene-2-carbaldehyde or thiophene-3-carbaldehyde add to aromatic or aliphatic aldehydes with the mediation of SmI_2 -HMPA

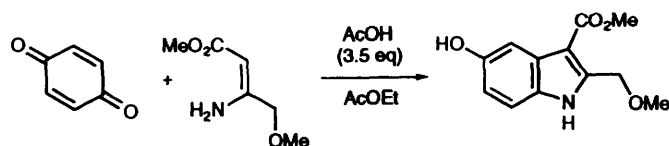
- 2673 **Enantioselective synthesis of α -arylpropanoic acids**

Philip C. Bulman Page, Michael J. McKenzie and Derek R. Buckle



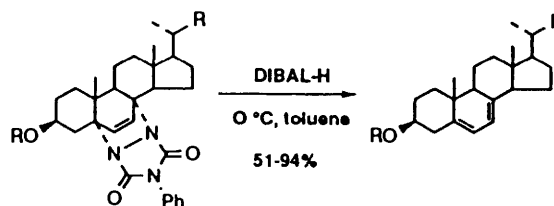
- 2677 **Facile synthesis of the key intermediate of EO 9 via the formation of the indole skeleton using the Nenitzescu reaction**

Masahiko Kinugawa, Hitoshi Arai, Hiroshi Nishikawa, Akihiko Sakaguchi, Takehiro Ogasa, Shinji Tomioka and Masaji Kasai



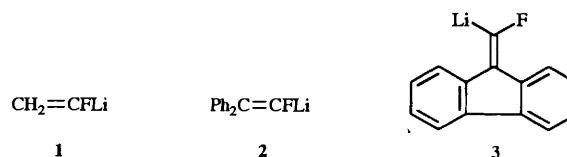
- 2679 Facile retro-cycloaddition of adducts derived from steroidal 5,7-diene and 4-phenyl-1,2,4-triazoline-3,5-dione by diisobutylaluminium hydride

Fumihiro Kondo, Misako Miyashita, Katsuhiko Konno and Hiroaki Takayama



- 2681 Preparation and direct observation by ^{19}F NMR spectroscopy of 1-fluoro-1-lithioalkenes

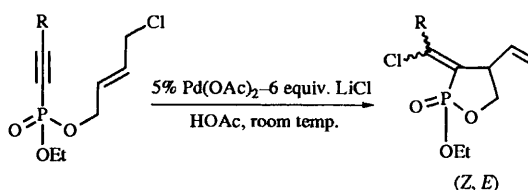
Andrew Pelter, Jaroslav Kvicala and David E. Parry



Ab initio calculations on 1 and ^{19}F NMR spectroscopic studies to establish the half lives of 2 and 3 are given

- 2683 Novel synthesis of 3-chloromethylidene-2-ethoxy-1,2 λ^5 -oxaphospholan-2-ones catalysed by palladium(II)

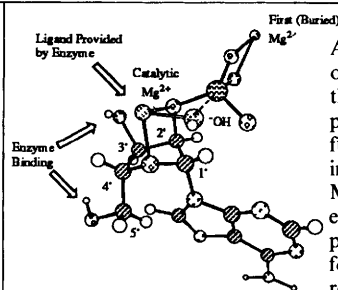
Chunlin Ma, Xiyang Lu and Yongxiang Ma



Articles

- 2685 'Active' conformation of the inositol monophosphatase substrate, adenosine 2'-phosphate: role of the ribofuranosyl O-atoms in chelating a second Mg^{2+} ion

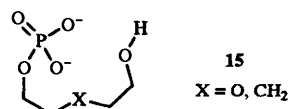
Andrew G. Cole and David Gani



Adenosine 2'-phosphate and a range of analogues have been used to study the mechanism of inositol monophosphatase. The 2'-O atom and the ribofuranosyl ring O-atom are involved in interacting with a second catalytic Mg^{2+} ion at the active site of the enzyme. This second metal ion may position and activate a water molecule for the phosphate ester hydrolysis reaction

- 2695 Probes for the position and mechanistic role of the second 'catalytic' magnesium ion in the inositol monophosphatase reaction

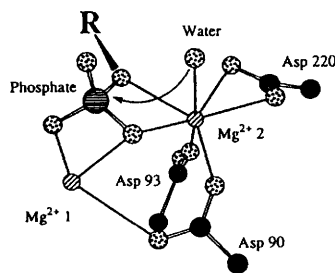
Andrew G. Cole, John Wilkie and David Gani



A range of substrate and inhibitor analogues for inositol monophosphatase have been prepared and used to probe the position of the second catalytic metal ion cofactor; compound 15 appears to prevent phosphate ester hydrolysis by providing a hydroxy group that displaces the nucleophilic water molecule on the second Mg^{2+} ion

2709 3-Dimensional interactions between inositol monophosphatase and its substrates, inhibitors and metal ion cofactors

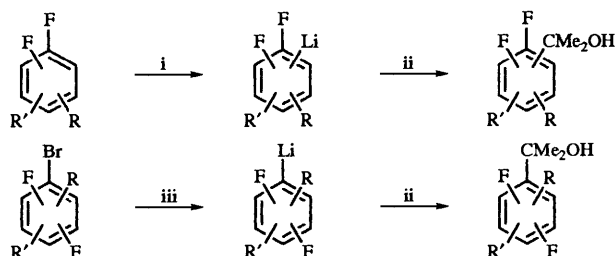
John Wilkie, Andrew G. Cole and David Gani



The structures of inositol monophosphatase complexed with both metal ion cofactors and various substrates and inhibitors are presented. The second Mg^{2+} ion serves to align and activate a water molecule to attack the phosphate P-atom. The structure of an Li^+ inhibited form of the enzyme that may be important in the treatment of manic depression is also presented

2729 The lithiation of fluorinated benzenes and its dependence on solvent and temperature

Paul Leslie Coe, Anthony John Waring and Thomas David Yarwood

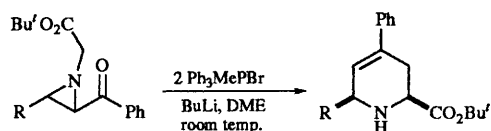


(R = H, Br or F, R' = H or Br)

Reagents and conditions: i, LDA, THF, $-78\text{ }^\circ\text{C}$; ii, Acetone, $-78\text{ }^\circ\text{C}$; iii, BuLi, Et₂O, hexane, $-78\text{ }^\circ\text{C}$. Autometallation occurs under different conditions

2739 Synthesis of 4-phenylpiperidines by tandem Wittig olefination–aza-Wittig rearrangement of 2-benzoylaziridines

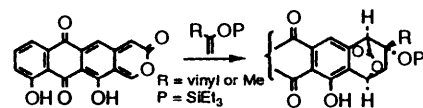
Iain Coldham, Alan J. Collis, Roger J. Mould and Richard E. Rathmell



Olefination of 2-benzoylaziridines leads to piperidine products by aza-Wittig rearrangement of the intermediate vinylaziridines

2747 Synthesis of (\pm)-aklavinone and (\pm)-auramycinone via electron-deficient *o*-quinonoid pyrones

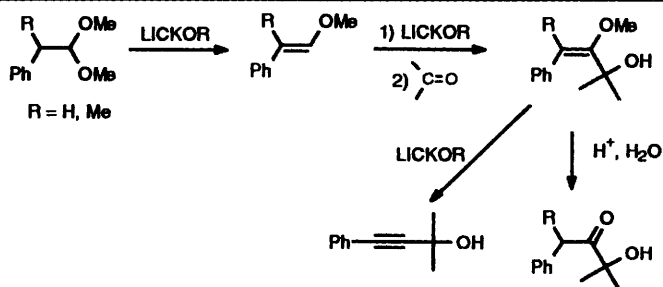
David W. Jones and Christopher J. Lock



generated *in situ* adducts converted into aklavinone and auramycinone

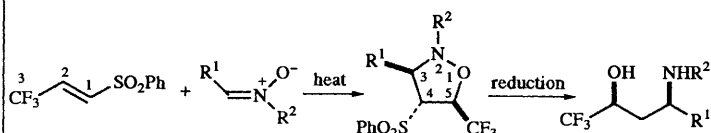
2757 LICKOR-Promoted 1,2-elimination in 1,1-dimethoxy-2-phenylethane and 1,1-dimethoxy-2-phenylpropane: synthesis of substituted enol ethers and alkynes

Annamaria Deagostino, Mariella Mella, Cristina Prandi and Paolo Venturello



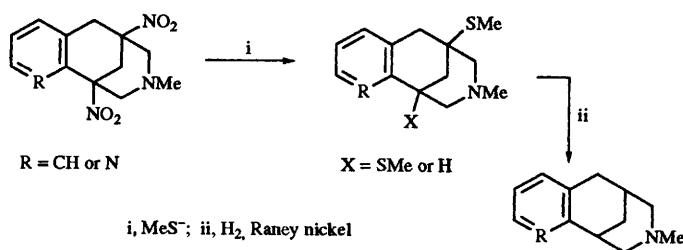
- 2761 **Regio- and stereo-selective synthesis of trifluoromethylated isoxazolidines by 1,3-dipolar cycloaddition of 1,1,1-trifluoro-3-phenylsulfonylpropene with nitrones, and their conversion into trifluoromethylated *syn*-3-amino alcohols**

Hiroyasu Tsuge, Takashi Okano and Shoji Eguchi



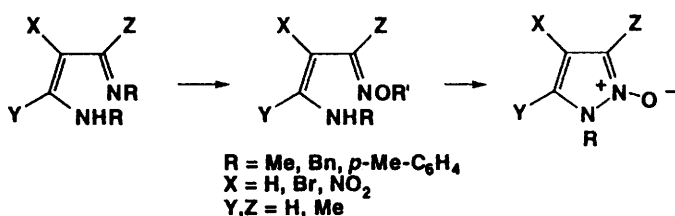
- 2767 **Synthesis of some analogues of cytosine: unusual reduction pathways for tertiary nitro groups in sterically constrained molecules**

Kristina J. Blackall, David Hendry, Robert J. Pryce and Stanley M. Roberts



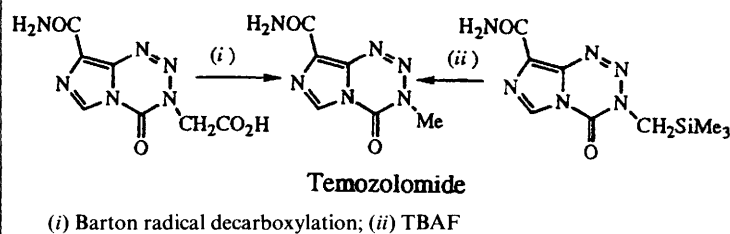
- 2773 **Synthesis of 4-hydroxylamino-1-azabuta-1,3-dienes and their cyclization to 2-substituted pyrazole 1-oxides**

Jesús Alcazar, Inés Almena, Mikael Begtrup and Antonio de la Hoz



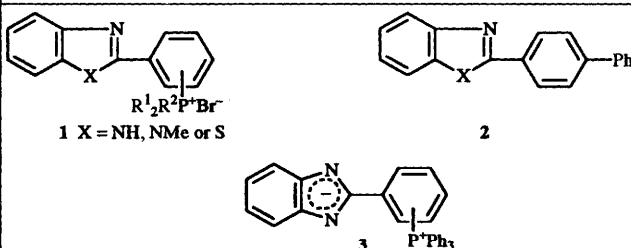
- 2783 **Antitumour imidazotetrazines. Part 33. New syntheses of the antitumour drug temozolomide using 'masked' methyl isocyanates**

Yongfeng Wang, Malcolm F. G. Stevens, William T. Thomson and Bruce P. Shutts



- 2789 **Ligand coupling and neighbouring-group effects in the alkaline hydrolysis of arylphosphonium salts: new stable tetraarylphosphonium benzimidazolate betaines**

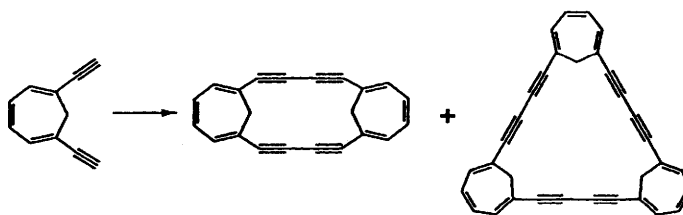
David W. Allen and Peter Benke



Hydrolysis of the arylphosphonium salts **1** has revealed (a) evidence of neighbouring-group interactions between the azole N and the phosphonium centre in the *ortho*-isomers and (b) formation of abnormal biaryl coupling products **2** and the stable betaines **3**

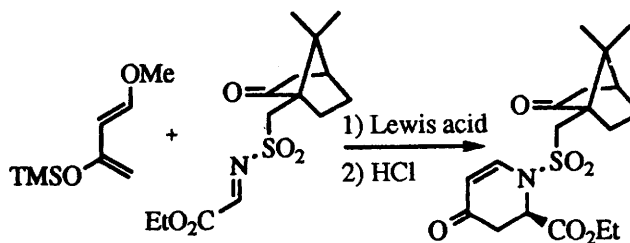
2795 **Synthesis of 1,6-diethynylcyclohepta-1,3,5-triene and its oxidative coupling to dimethano-bridged octadecahydro[20]annulene and trimethano-bridged dodecadehydro[30]-annulene**

Jūro Ojima, Tomoyo Daimon, Naoki Hiraiwa, Hiroyuki Higuchi, Masako Ueno and Gaku Yamamoto



2803 **Diastereoselectivity and assignment of absolute stereochemistry in the aza-Diels–Alder reaction of a sulfonylimino acetate with 1-methoxy-3-trimethylsilyloxybuta-1,3-diene**

Andrew K. McFarlane, Gareth Thomas and Andrew Whiting



Corrigendum

2809 **Parasite glycoconjugates. Part 4. Chemical synthesis of disaccharide and phosphorylated oligosaccharide fragments of *Leishmania donovani* antigenic lipophosphoglycan** A. V. Nikolaev, T. J. Rutherford, M. A. J. Ferguson and J. S. Brimacombe

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Forthcoming Articles in *Perkin Transactions 1*

Synthesis and stereochemistry of the epoxides of 2-arylidene-1-tetralones

A. Levai, W. Adam, J. Halasz, Z. Jambor, C. Nemes, T. Patonay and G. Toth

Synthesis and characterisation of bis[1.1]orthocyclophano-18-crown-6 compounds

H. Hara, S. Watanabe and O. Hoshino

Stereocontrolled synthesis of *E*-homoallylic sulfides with 1,4,5 related chiral centres using the [2,3]sigmatropic rearrangement of sulfonium ylides **R.C. Hartley, I.C. Richards and S. Warren**

Novel reductase participating in the *syn*-addition of hydrogen to the C=C bond of enones in the cultured cells of *Nicotiana tabacum* **K. Shimoda, D.I. Ito, S. Izumi and T. Hirata**

Highly enantioselective route to *trans*-5-substituted-2-hydroxymethylpyrrolidine derivatives by radical cyclisation

Y. Yuasa, J. Ando and S. Shibuya

Condensed heteroaromatic ring systems. Part 14. Synthesis of rigidin, a pyrrolo[2,3-*d*]pyrimidine marine alkaloid

T. Sakamoto, Y. Kondo, S. Sato and H. Yamanaka

Synthesis of 1-amino-2,3,4,14b-tetrahydro-1*H*-dibenzo[*b,f*]pyrido[1,2-*d*][1,4]oxazepine and related compounds

D.R. Rac, W.L. Caulfield and S. Gibson

Synthesis of C-D-ring analogues of the azasteroid A25822 **J.K. Sutherland, A.J. Sutherland and P.J. Crowley**

Synthesis of the key component for preparation of 6-keto-prostaglandins by the two-component coupling process. Synthesis of 6-keto-prostaglandin E1, Ornoprostil and Δ^2 -*trans*-6-keto-prostaglandin E1

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Reactions of α -trialkylsilylvinyl carbanions with carboxylic acid derivatives: the relationship between product distribution and substrate reactivity **P.G. Taylor, A.R. Bassindale, I. Katampe and P.A. Kyle**

Stereospecific formation of *R*-aromatic acylolins by *Zymomonas mobilis* pyruvate decarboxylase

D.H.G. Crout, S. Bornemann, H. Dalton, V. Kren, M. Lobell, G. Dean, N. Thomson and M.M. Turner

Synthesis of enantiopure α -deuteriated Boc-L-amino acids **U. Ragnarsson and Y. Elemes**

Enzymatic synthesis of hemithiocellose **H. Driguez and V. Moreau**

Photoinduced skeletal rearrangement of 1,1-diarylspiropentanes

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The potential of sulfimides as chiral acyl anion equivalents **P.C. Taylor, G. Smith and T.J. Sparey**

Enantioselective total synthesis of the di-*O*-methyl ethers of (-)-agatharesinol, (+)-hinokiresinol and (-)-sugiresinol, characteristic norlignans of *Coniferae* **O. Muraoka, B. Zheng, N. Fujiwara and G. Tanabe**

Synthesis of dendritic polypyridines with ethoxycarbonyl groups as surface functionality **G. Chessa and A. Scrivanti**

Thermolysis and photolysis of 1-substituted triptycenes. Divergent fragmentation pathways of the triptycyl skeleton

H. Tomioka and J. Nakajima

Reinvestigation of reactions of thiazolium and benzothiazolium *N*-phenacylides with electron-deficient acetylenes

T. Kataoka, T. Iwamura, M. Kobayashi and H. Shimizu

Synthesis of 2-deoxy- α - and - β -D-arabino-hexopyranosyl phosphonic acids and related compounds: analogues of early intermediates in the Shikimate pathway **R.H. Wightman, N.J. Barnes and M.A. Probert**

Detection of 2-substituted cyclobutanones as irradiation products of lipid-containing foods: synthesis and applications of *cis*- and *trans*-2-(tetradec-5-enyl)cyclobutanones and 11-(2'-oxocyclobutyl)undecanoic acid

D.R. Boyd, L. Hamilton, M.H. Stevenson, I.N. Brannigan, A.B. Treacy, J.T.G. Hamilton, W.C. McRoberts and C.T. Elliott

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