

JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 1

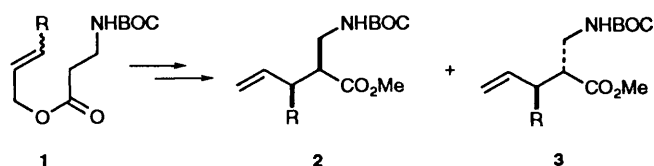
Organic and Bio-organic Chemistry

CONTENTS

Articles

- 341 **A diastereoselective approach to α -allyl- β -amino acids using the Ireland enolate Claisen rearrangement**

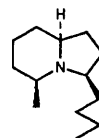
Colin P. Dell, Khalid M. Khan and David W. Knight



Claisen rearrangement of *O*-silyl enolates derived from the β -amino ester derivatives **1** leads stereoselectively to the *syn*- or *anti*-products **2** or **3** in good to excellent yields

- 351 **Asymmetric synthesis of (+)-monomorine I by way of a diastereoselective reaction of 1,3-oxazolidine with a Grignard reagent**

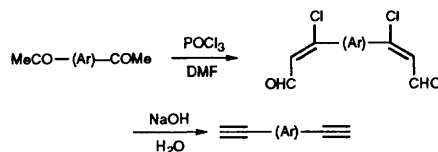
Kimio Higashiyama, Keiji Nakahata and Hiroshi Takahashi



The title compound has been synthesized *via* a diastereoselective reaction of a 1,3-oxazolidine with a Grignard reagent

- 355 **The 'inverse electron-demand' Diels-Alder reaction in polymer synthesis. Part 1. A convenient synthetic route to diethynyl aromatic compounds**

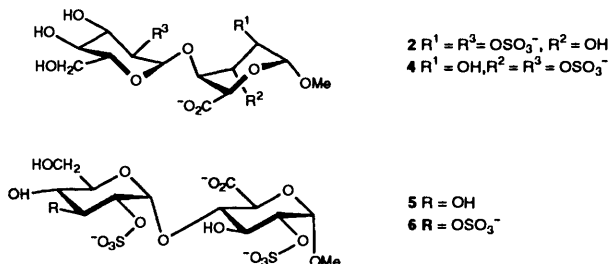
Brodyck J. L. Royles and David M. Smith



Reaction of diacetyl-aromatic compounds (8 examples) with the Vilsmeier reagent, followed by treatment of the crude products with aqueous alkali, gives the title compounds in acceptable yields

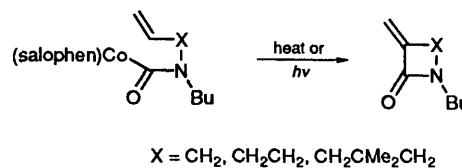
- 359 **Chemical synthesis of disaccharides which are partial structures of the glycosaminoglycan heparan sulfate**

Nicola J. Davis and Sabine L. Flitsch



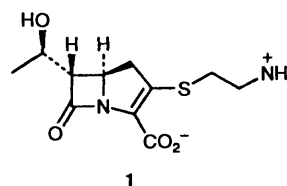
369 Cobalt-mediated reactions: inter- and intra-molecular additions of carbamoyl radicals to alkenes in the synthesis of amides and lactams

G. Bryon Gill, Gerald Pattenden and Stephen J. Reynolds



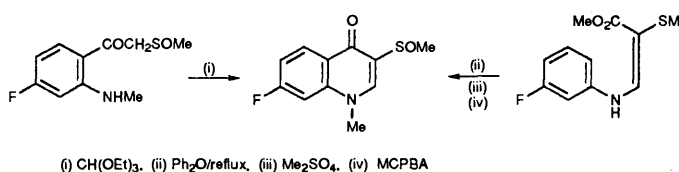
379 Synthesis of (\pm)-thienamycin based on a new approach to β -lactams via 4-*exo-trig* cyclisation of carbamoylcobalt salophens

Gerald Pattenden and Stephen J. Reynolds



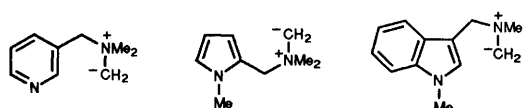
387 Syntheses of flosequinan: a novel 4-quinolone shown to be useful in congestive heart failure

Alan M. Birch, Roy V. Davies, (the late) Lachlan Maclean and Keith Robinson



393 Chemical behaviour of trimethylammonium *N*-methylides substituted with nitrogen-containing heteroaromatic rings. Rearrangement of *N,N*-dimethyl(pyridylmethyl)ammonium, *N,N*-dimethyl-(1-methylpyrrolylmethyl)ammonium and *N,N*-dimethyl-(1-methylindolylmethyl)ammonium *N*-methylides

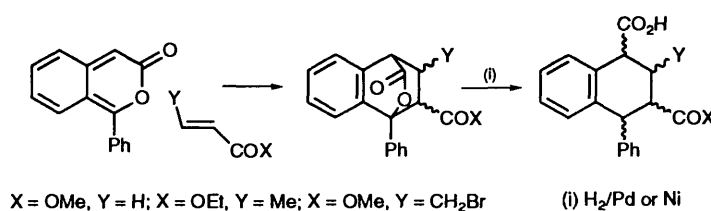
Yasuhiro Maeda, Naohiro Shirai and Yoshiro Sato



Rearrangement of pyridylmethyl-, pyrrolylmethyl- and indolylmethyl-ammonium methylides

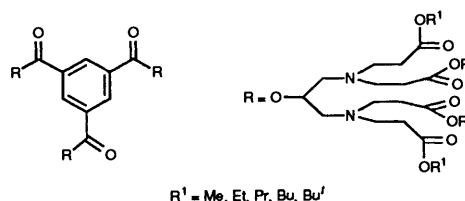
399 Diels-Alder additions to 1-phenyl-2-benzopyran-3-one and transformations of the adducts: model experiments for podophyllotoxin synthesis

David W. Jones



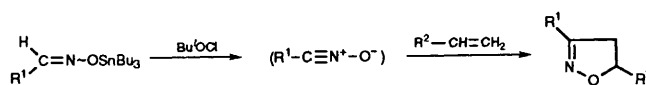
407 An approach for the rapid synthesis of moderately sized dendritic macromolecules

Lance J. Twyman, Anthony E. Beezer and John C. Mitchell



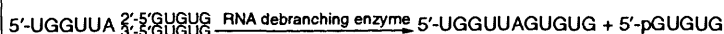
413 **Generation of nitrile oxides via *O*-tributylstannyl aldoximes; application to the synthesis of isoxazolines and isoxazoles**

Osamu Moriya, Hideo Takenaka, Masaichi Iyoda, Yoshikiyo Urata and Takeshi Endo



419 **Novel solid-phase synthesis of branched oligoribonucleotides, including a substrate for the RNA debranching enzyme**

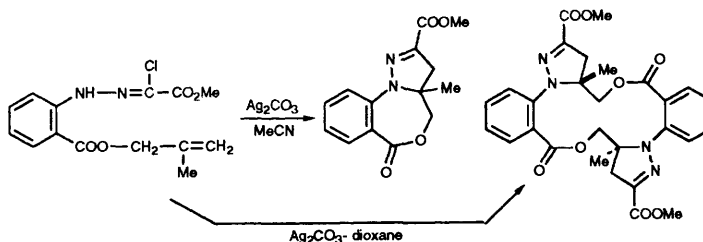
Brian S. Sproat, Barbro Beijer, Morten Grøtli, Ursula Ryder, Kenneth L. Morand and Angus I. Lamond



Branched oligoribonucleotides have been assembled on a solid phase by a new procedure using 2'-*O*-Fpmp-3'-*O*-pixylribonucleoside 5'-*O*-phosphoramidites and special branch point ribonucleoside 5'-*O*-phosphoramidites bearing 2,3'-*O*-bis(pixyl) protection

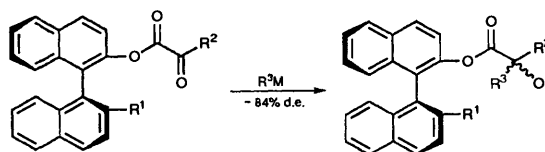
433 **Medium- and large-ring heterocyclic systems by intramolecular nitrile imine cycloadditions**

Gianluigi Broggin, Luca Bruché, Luisa Garanti and Gaetano Zecchi



439 **Investigation of the diastereoselectivity in the addition of organometallics to the α -keto esters of axially chiral 1,1'-binaphthalen-2-ol derivatives**

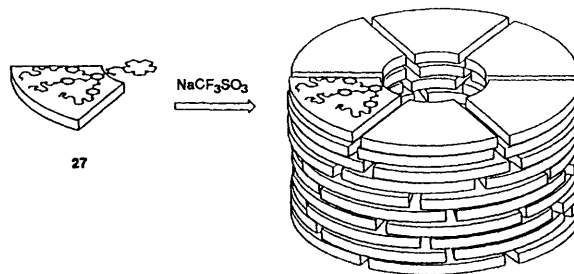
Yasufumi Tamai, Tomoyuki Nakano and Sotaro Miyano



The preferred diastereoisomer depended on the size of R¹, and thus could not solely be determined by the helicity of the 1,1'-binaphthalene framework

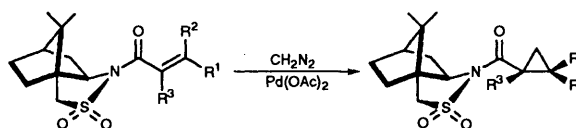
447 **Molecular recognition directed self-assembly of tubular liquid crystalline and crystalline supramolecular architectures from taper shaped (15-crown-5) methyl 3,4,5-tris(*p*-alkoxybenzyloxy)benzoates and (15-crown-5) methyl 3,4,5-tris(*p*-dodecyloxy)benzoate**

Gary Johansson, Virgil Percec, Goran Ungar and Darija Abramic



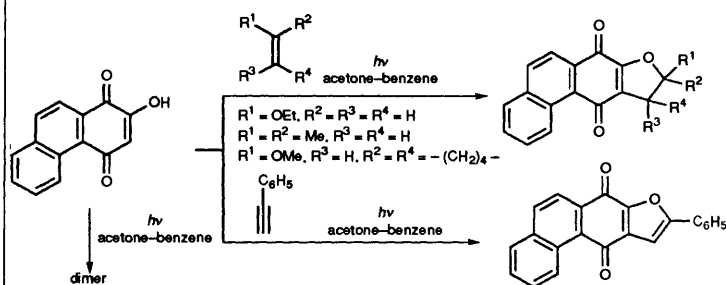
461 **Stereoselectivity and generality of the palladium-catalysed cyclopropanation of α,β -unsaturated carboxylic acids derivatized with Oppolzer's sultam**

Jerk Vallgård, Ulf Appelberg, Ingeborg Csöreg and Uli Hacksell



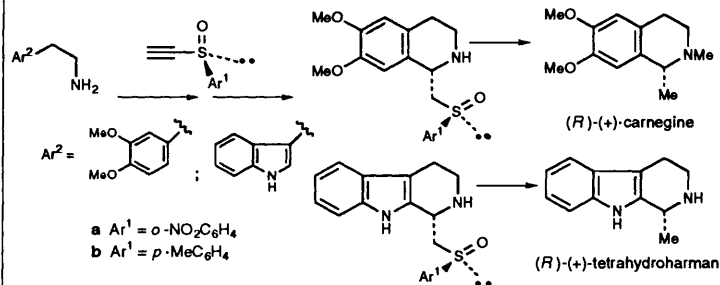
- 471 **Photoinduced molecular transformations. Part 145. Regioselective [3 + 2] photoadditions of 2-hydroxyphenanthrene-1,4-dione with electron-rich alkenes and phenylacetylene: new one-step synthesis of 9,10-dihydrophenanthro[2,3-*b*]furan-7,11-diones and 2-phenylphenanthro[2,3-*b*]furan-7,11-dione**

Hiroshi Suginome, Hisato Kamekawa, Hideo Sakurai, Atsushi Konishi, Hisanori Senboku and Kazuhiro Kobayashi



- 477 **Chiral acetylenic sulfoxide in enantioselective synthesis of tetrahydroisoquinoline and tetrahydro- β -carboline alkaloids. Total synthesis of (*R*)-(+)-carnegine and (*R*)-(+)-tetrahydroharman**

Albert W. M. Lee, Wing Hong Chan, Yi Tao and Yu Kai Lee



Corrigendum

- 483 **Studies of phthalazine-5,8-quinone, a ring contraction, and some novel and potentially useful phthalimides** John Parrick and Ramanarajinie Ragunathan

AUTHOR INDEX

- Abramic, Darija, 447
Appelberg, Ulf, 461
Beezer, Anthony E., 407
Beijer, Barbro, 419
Birch, Alan M., 387
Broggini, Gianluigi, 433
Bruché, Luca, 433
Chan, Wing Hong, 477
Csöreg, Ingeborg, 461
Davies, Roy V., 387
Davis, Nicola J., 359
Dell, Colin P., 341
Endo, Takeshi, 413
Flitsch, Sabine L., 359
Garanti, Luisa, 433
Gill, G. Bryon, 369
- Grøtli, Morten, 419
Hacksell, Uli, 461
Higashiyama, Kimio, 351
Iyoda, Masaichi, 413
Johansson, Gary, 447
Jones, David W., 399
Kamekawa, Hisato, 471
Khan, Khalid M., 341
Knight, David W., 341
Kobayashi, Kazuhiro, 471
Konishi, Atsushi, 471
Lamond, Angus I., 419
Lee, Albert W. M., 477
Lee, Yu Kai, 477
Maclean, Lachlan, 387
Maeda, Yasuhiro, 393
- Mitchell, John C., 407
Miyano, Sotaro, 439
Morand, Kenneth L., 419
Moriya, Osamu, 413
Nakahata, Keiji, 351
Nakano, Tomoyuki, 439
Parrick, John, 483
Pattenden, Gerald, 369, 379
Percec, Virgil, 447
Ragunathan, Ramanaranjanie,
483
Reynolds, Stephen J., 369,
379
Robinson, Keith, 387
Royles, Brodyck J. L., 355
Ryder, Ursula, 419
- Sakurai, Hideo, 471
Sato, Yoshiro, 393
Senboku, Hisanori, 471
Shirai, Naohiro, 393
Smith, David M., 355
Sproat, Brian S., 419
Suginome, Hiroshi, 471
Takahashi, Hiroshi, 351
Takenaka, Hideo, 413
Tamai, Yasufumi, 439
Tao, Yi, 477
Twyman, Lance J., 407
Ungar, Goran, 447
Urata, Yoshikiyo, 413
Vallgård, Jerk, 461
Zecchi, Gaetano, 433

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

Forthcoming Articles in *Perkin Transactions 1*

The Synthesis of 1,6-Methano[10]annulenopyridines by Tandem Aza-Wittig Reaction/Electrocyclisation
T. Bohn, W. Kramer, R. Neidlein and H. Suschitzky

New Syntheses of Biliverdins, Corroles and Azaporphyrins from 1,19-Dibromo-a,c-biladiene Salts
R.K. Pandey, K.R. Gerzevske, H. Zou and K.M. Smith

Photochemical Synthesis of Bithienyl Acetic Acid Derivatives
M. D'Auria and A. D'Agostini

Porphyrin-Crown Ether Macrotricyclic Co-receptors for Bipyridinium Cations
M.J. Gunter and M.R. Johnston

Porphyrin-Crown Ether Based Macrocyclic Receptors for Bipyridinium Cations
M.J. Gunter, M.R. Johnston, B.W. Skelton and A.H. White

Stereocontrolled Homologation of 1,2:3,4-Di-*O*-isopropylidene- α -D-*galacto*-hexodialdo-1,5-pyranose to 7-Deoxy-nonulose Epimers *via* Thiazole-Aldehyde Synthesis
A. Dondoni, S. Ianelli, L. Kniezo, P. Merino and M. Nardelli

Nucleoside Analogues. Synthesis of 2',3'-Dideoxy and 2',3'-Unsaturated Ribofuranonucleosides of 2-Mercapto-5,6-dichlorobenzimidazole as Potential Antiviral Agents
C. Mathé, C. Périgaud, G. Gosselin and J.-L. Imbach

Cyclic Esters of Calixarenes with Phthalic Acid and Pyromellitic Acid, Synthesis and X-Ray Structures
V. Bohmer, D. Kraft, W. Vogt, G. Ferguson and J.F. Gallagher

Cyclobutarenes. Part 4. Biphenyleno[2,1-*a*]biphenylene
M.K. Shepherd

Reaction of *O*-Silyl Selenocarboxylates and IR and NMR Spectra of Heteroatom-substituted Selenocarboxylates
H. Kageyama, K. Kido, S. Kato and T. Murai

Regioselectivity Control by Chelating Substrates in Some Rhodium(I) and Rhodium(III)-catalysed Reactions of Butadiene
M. Costa, M. Michelotti, G.P. Chiusoli and G. Bocelli

Benzoporphyrin Derivatives: Synthesis, Structure and Preliminary Biological Activity
K.M. Smith, T.J. Dougherty, M.O. Senge, R.K. Pandey and I. Meunier

Preparation and Intramolecular Radical Cyclization of Some Cyclic *N*-Sulfonylenamines
J. Åhman and P. Somfai

An Efficient General Route to Benzo[*c*]-, furo, pyrido and thieno,-[*e*]azepines *via* Palladium(0)-catalysed Cross-coupling Reactions and Nitrile Ylide Cyclisations
J.T. Sharp, D.H. Reece and H. Finch

Palladium(0)-catalysed Cross-coupling Reactions of α -Alkoxyalkenylstannanes and α -Alkoxyalkenylzincs
S. Casson and P. Kocienski

A Short Chemo-Enzymatic Route to Glycosphingolipids Using Soluble Glycosyl Transferases
B. Guilbert and S.L. Flitsch

A Facile Synthesis of Trifluoromethylated α -Hydroxyphosphonates
Y. Shen and M. Qi

A Concise and Practical Approach to Chiral Des-A,B-trienic Corticosteroids
K. Fukumoto, A. Satoh and H. Nemoto

Annelated Dehydroannulenes Fused with Azulene. Synthesis and Properties of Tetradehydro[14]- and [16]Annuleno[*a*]azulenes
J. Ojima, H. Higuchi, M. Yasunami, K. Fujimori, M. Ueno, M. Yoshifuji and G. Yamamoto