

## JOURNAL OF THE CHEMICAL SOCIETY

## Perkin Transactions 1

## Organic and Bio-organic Chemistry

## CONTENTS

- 1239 Photoinduced molecular transformations. Part 106. The formation of cyclic anhydrides *via* regioselective  $\beta$ -scission of alkoxy radicals generated from 5- and 6-membered  $\alpha$ -hydroxy cyclic ketones **Hiroshi Suginome, Gen Satoh, Jian Bo Wang, Shinji Yamada, and Kazuhiro Kobayashi**
- 1247 Photoinduced molecular transformations. Part 109. Conformational dependence of the stereochemistry of photochemical 1,3-acyl shifts of  $\beta,\gamma$ -unsaturated cyclic ketones: conformation-specific photorearrangements of steroidal  $\beta,\gamma$ -unsaturated cyclic ketones, 7 $\alpha$ -homocholest-5-en-7 $\alpha$ -one and 4 $\alpha$ -homo-5 $\alpha$ -cholest-1-en-4-one **Hiroshi Suginome, Toshiharu Ohtsuka, Yoshimasa Yamamoto, Kazuhiko Orito, Carlos Jaime, and Eiji Ōsawa**
- 1255 Melanin biosynthesis: a study of polyphenol deoxygenation **Fabrice Viviani, Michel Gaudry, and Andrée Marquet**
- 1261 Biotransformation of *ent*-13-*epi*- and *ent*-manoyl oxides by *Rhizopus nigricans* cultures **Andrés García-Granados, Antonio Martínez, Juan P. Martínez, M. Esther Onorato, and J. M. Arias**
- 1267 Unexpected products of the reaction of cycloalkylidene(cyano)thioacetamides with arylmethylenemalononitriles: a different novel synthetic route to condensed pyridine-2(1*H*)-thiones and condensed carbocyclic nitriles **Galal Eldin Hamza Elgemeie, Hassan Abdla Regaila, and Nadia Shehata**
- 1271 Photocyclisation of enamides. Part 29. A general strategy for the synthesis of ipecac and heteroyohimbine alkaloids **Takeaki Naito, Noriko Kojima, Okiko Miyata, Ichiya Ninomiya, Masatoshi Inoue, and Mitsunobu Doi**
- 1281 Stereospecific synthesis of racemic *cis*- and *trans*-6-trifluoromethylshikimic acids **Jacques Leroy, Nathalie Fischer, and Claude Wakselman**
- 1289 The 'off-template' problem: towards a general solution **Abdul Rashid, G. Mark Taylor, William W. Wood, and David Alker**
- 1297 Studies on aloe. Part 6. Conformation and absolute configuration of aloins A and B and related 10-C-glucosyl-9-anthrones **Paolo Manitto, Diego Monti, and Giovanna Speranza**
- 1301 Design and synthesis of new 1,4-diaminocyclitol aminoglycosides: use of maltose as the key starting material **Nobuo Sakairi, Mitsuo Hayashida, Akihiro Amano, and Hiroyoshi Kuzuhara**
- 1315 Oxygen-bridged tetrahydropyridines, hexahydropyridines, and dihydropyridones *via* a Hantzsch-like synthesis with 4-(2-hydroxyphenyl)but-3-en-2-one **Jan Světlík, Igor Goljer, and František Tureček**
- 1319 Synthetic studies of indoles and related compounds. Part 22. The Vilsmeier-Haack reaction of *N*-benzyl-1,2,3,4-tetrahydrocarbazoles and its synthetic application to olivacine and ellipticine **Yuusaku Yokoyama, Naomi Okuyama, Shinji Iwadate, Tokuko Momoi, and Yasuoki Murakami**
- 1331 New formal synthesis of ( $\pm$ )-estrone **Nurani M. Sunder, Prakash A. Patil, and Nurani S. Narasimhan**
- 1335 Photoinduced substitution of 1,3,5-tricyanobenzene by toluene **Mamoru Ohashi, Nobuyuki Aoyagi, and Shuzo Yamada**
- 1339 Asymmetric Diels-Alder reactions. Part 4. Influence of anomeric configuration and 2'- and 6'-*O*-benzyl substitution on the diastereofacial reactivity of (*E*)-3-(*t*-butyldimethylsiloxy)-1-(2',3',4',6'-tetra-*O*-acetyl- $\beta$ -D-glucopyranosyloxy)buta-1,3-dien **David S. Larsen and Richard J. Stoodley**
- 1353 Preparation and some reactions of tricyclo[3.3.0.0<sup>1,4</sup>]octan-2-ones and tricyclo[3.2.0.0<sup>1,4</sup>]heptane-2-ones **Ian C. Cotterill, Harry Finch, Rona M. Highcock, Robert A. Holt, Mary F. Mahon, Kieran C. Molloy, J. Gareth Morris, Stanley M. Roberts, Kevin M. Short, and Vladimir Sik**

- 1367 Absolute configuration of the product of the acetolactate synthase reaction by a novel method of analysis using acetolactate decarboxylase **David H. G. Crout, Edward R. Lee, and Daniel L. Rathbone**
- 1371 The synthesis of pacharin: a dibenzoxepine from the heartwood of *Bauhinia racemosa* Lamk. **Mark F. Comber and Melvyn V. Sargent**
- 1375 Isomer selectivity in stereocontrolled Payne rearrangement–epoxide cleavage of 2,3-epoxy alcohols in aprotic solvents: application to an enantioselective total synthesis of (+)-*exo*-brevicomine **Philip C. Bulman Page, Christopher M. Rayner, and Ian O. Sutherland**
- 1383 Synthesis, NMR and conformational studies of some 1,4-linked disaccharides **Irene Backman, Per-Erik Jansson, and Lennart Kenne**
- 1389 Synthesis of 4,4-disubstituted cyclohexenones. Part 2. Cycloaddition of 2-chloroacrylonitrile to 5-substituted 1,3-dimethoxycyclohexa-1,4-dienes **Richard S. J. Clark, Andrew B. Holmes, and Victor G. Matassa**
- 1401 Synthesis of 4,4-disubstituted cyclohexenones. Part 3. The reaction of 1,3-bis(trimethylsilyloxy)cyclohexa-1,3-dienes with dienophiles. An unexpected rearrangement of the adducts from the reaction with 2-chloroacrylonitrile **Richard S. J. Clark, Andrew B. Holmes, and Victor G. Matassa**
- 1409 The chemistry of erythromycin. Reactions of erythromycin A imine and its 6-methyl ether with aldehydes and hydrazines **J. Sydney Davies, Eric Hunt, and Iskander I. Zomaya**
- 1415 Synthesis of talaromycins A, B, C, and E **Raymond Baker, Alastair L. Boyes, and Christopher J. Swain**
- 1423 Strategies of synthesis based on cyclohexadienes: Part 3. A novel route to macrolide aromatic polyketides **Arthur J. Birch, Neelakandha S. Mani, and G. S. R. Subba Rao**
- 1429 The synthesis of the first natural host germination stimulant for *Striga asiatica* (Witchweed) **Melvyn V. Sargent and Sirichai Wangchareontrakul**
- 1435 Stereochemistry of oxygenation of organic sulphides with pig liver microsomal FAD-containing mono-oxygenase: comparison with cytochrome P-450<sub>PB</sub> oxidations **Ken Fujimori, Takaharu Matsuura, Akihiro Mikami, Yoshihito Watanabe, Shigeru Oae, and Takashi Iyanagi**
- 1441 Asymmetric synthesis of (*R*)- and (*S*)-4-(substituted benzyl)dihydrofuran-2(3*H*)-ones: an application of the ruthenium-binap complex-catalysed asymmetric hydrogenation of alkylidenesuccinic acids **Liming Shao, Shiro Miyata, Hitoshi Muramatsu, Hiroyuki Kawano, Youichi Ishii, Masahiko Saburi, and Yasuzo Uchida**
- 1447 Migration of a benzyl group in the Lossen-like rearrangement of an *N*-phosphinoyl-*O*-sulphonylhydroxylamine **Martin J. P. Harger and Adrian Smith**
- 1453 Synthetic studies towards complex diterpenoids. Part 18. Total synthesis of (±)-isopisiferin and the related compounds **Soumitra Deb, Gopa Bhattacharjee, and Usha Ranjan Ghatak**
- 1459 Syntheses of 3-methylpyrrole *via* methyl 4-methylpyrrole-2-carboxylate. A thermal oxazolone–pyrone rearrangement **Sir John Cornforth and Du Ming-hui**
- 1463 Pyrrolo[1,2-*b*]isoquinoline-5,10-diones and indolizine-5,8-diones **Sir John Cornforth and Du Ming-hui**
- 1469 Asymmetric total synthesis of (–)-protoemetinol, (–)-protoemetine, (–)-emetine, and (–)-tubulosine by highly stereocontrolled radical cyclisations **Masataka Ihara, Ken Yasui, Nobuaki Taniguchi, and Keichiro Fukumoto**
- 1477 Synthetic investigation on isothiazolo-[5,5-*b*]- and -[4,5-*c*]-pyridines **Stefano Chimichi, Rodolfo Nesi, Fabio Ponticelli, and Piero Tedeschi**

## Perkin Communications

- 
- 1481 Iodonium-induced cyclisations of 5-silylalk-4-enols **Ernst Schaumann and Andreas Kirschning**
- 1483 One-pot construction of the oxapropellane skeleton **Chenglin Fang, Kyoko Suganuma, Hiroshi Suemune, and Kiyoshi Sakai**
- 1484 Multiple reductive cleavage of calixarene diethyl phosphate esters: a route to [1<sup>n</sup>]metacyclophanes **Zafir Goren and Silvio E. Biali**
- 1487 Functionalisation of unsaturated amides: synthesis of chiral α- or β-hydroxy acids **Giuliana Cardillo, Md. Abul Hashem, and Claudia Tomasini**
- 1489 Novel products in the reaction of 6-cyanotricyclo[5.5.0.0<sup>2,5</sup>]dodeca-3,6,9,12-tetraene with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone **Shigeharu Wakabayashi, Yoshikazu Sugihara, Yoshihiro Hayakawa, and Ichiro Murata**
- 1490 Stereoselective reaction of methyl α- and β-D-glycopyranosides with acetic anhydride in the presence of trimethylsilyl trifluoromethanesulphonate **Pierre Angibeaud and Jean-Pierre Utile**
- 1492 Replacement of aryl by alkyl in 1-substituted 1*H*-1,2,3-triazole-4-carbaldehydes **Gerrit L'abbé and Maria Bruynseels**
- 1493 Some reactions of 2-azabicyclo[2.2.1]hept-5-enes with diphenylketene: preparation of polysubstituted piperidin-2-ones **Stanley M. Roberts, Colin Smith, and Russell J. Thomas**

## AUTHOR INDEX

- Alker, David, 1289  
Amano, Akihiro, 1301  
Angibeaud, Pierre, 1490  
Aoyagi, Nobuyuki, 1335  
Arias, J. M., 1261  
Backman, Irene, 1383  
Baker, Raymond, 1415  
Bhattacharjee, Gopa, 1453  
Biali, Silvio E., 1484  
Birch, Arthur J., 1423  
Boyes, Alastair L., 1415  
Bruynseels, Maria, 1492  
Cardillo, Giuliana, 1487  
Chimichi, Stefano, 1477  
Clark, Richard S. J., 1389, 1401  
Comber, Mark F., 1371  
Cornforth, Sir John, 1459, 1463  
Cotterill, Ian C., 1353  
Crout, David H. G., 1367  
Davies, J. Sydney, 1409  
Deb, Soumitra, 1453  
Doi, Mitsunobu, 1271  
Du, Ming-hui, 1459, 1463  
Elgemeie, Galal Eldin Hamza, 1267  
Fang, Chenglin, 1483  
Finch, Harry, 1353  
Fischer, Nathalie, 1281  
Fujimori, Ken, 1435  
Fukumoto, Keiichiro, 1469  
Garcia-Granados, Andrés, 1261  
Gaudry, Michel, 1255  
Ghatak, Usha Ranjan, 1453  
Goljer, Igor, 1315  
Goren, Zafir, 1484  
Harger, Martin J. P., 1447  
Hashem, Md. Abul, 1487  
Hayakawa, Yoshihiro, 1489  
Hayashida, Mitsuo, 1301  
Highcock, Rona M., 1353  
Holmes, Andrew B., 1389, 1401  
Holt, Robert A., 1353  
Hunt, Eric, 1409  
Ihara, Masataka, 1469  
Inoue, Masatoshi, 1271  
Ishii, Youichi, 1441  
Iwadate, Shinji, 1319  
Iyanagi, Takashi, 1435  
Jaime, Carlos, 1247  
Jansson, Per-Erik, 1383  
Kawano, Hiroyuki, 1441  
Kenne, Lennart, 1383  
Kirschning, Andreas, 1481  
Kobayashi, Kazuhiro, 1239  
Kojima, Noriko, 1271  
Kuzuhara, Hiroyoshi, 1301  
L'abbé, Gerrit, 1492  
Larsen, David S., 1339  
Lee, Edward R., 1367  
Leroy, Jacques, 1281  
Mahon, Mary F., 1353  
Mani, Neelakandha S., 1423  
Manitto, Paolo, 1297  
Marquet, Andrée, 1255  
Martínez, Antonio, 1261  
Martínez, Juan P., 1261  
Matassa, Victor G., 1389, 1401  
Matsuura, Takaharu, 1435  
Mikami, Akihiro, 1435  
Miyata, Okiko, 1271  
Miyata, Shiro, 1441  
Molloy, Kieran C., 1353  
Momoi, Tokuko, 1319  
Monti, Diego, 1297  
Morris, J. Gareth, 1353  
Murakami, Yasuoki, 1319  
Muramatsu, Hitoshi, 1441  
Murata, Ichiro, 1489  
Naito, Takeaki, 1271  
Narasimhan, Nurani S., 1331  
Nesi, Rodolfo, 1477  
Ninomiya, Ichiya, 1271  
Oae, Shigeru, 1435  
Ohashi, Mamoru, 1335  
Ohtsuka, Toshiharu, 1247  
Okuyama, Naomi, 1319  
Onorato, M. Esther, 1261  
Orito, Kazuhiko, 1247  
Osawa, Eiji, 1247  
Page, Philip C. Bulman, 1375  
Pañil, Prakash A., 1331  
Ponticelli, Fabio, 1477  
Rao, G. S. R. Subba, 1423  
Rashid, Abdul, 1289  
Rathbone, Daniel L., 1367  
Rayner, Christopher M., 1375  
Regaila, Hassan Abdla, 1267  
Roberts, Stanley M., 1353, 1493  
Saburi, Masahiko, 1441  
Sakai, Kiyoshi, 1483  
Sakairi, Nobuo, 1301  
Sargent, Melvyn V., 1371, 1429  
Satoh, Gen, 1239  
Schaumann, Ernst, 1481  
Shao, Liming, 1441  
Shehata, Nadia, 1267  
Short, Kevin M., 1353  
Sik, Vladimir, 1353  
Smith, Adrian, 1447  
Smith, Colin, 1493  
Speranza, Giovanna, 1297  
Stoodley, Richard J., 1339  
Suemune, Hiroshi, 1483  
Suganuma, Kyoko, 1483  
Sugihara, Yoshikazu, 1489  
Suginome, Hiroshi, 1239, 1247  
Sunder, Nurani M., 1331  
Sutherland, Ian O., 1375  
Světlik, Jan, 1315  
Swain, Christopher J., 1415  
Taniguchi, Nobuaki, 1469  
Taylor, G. Mark, 1289  
Tedeschi, Piero, 1477  
Thomas, Russell J., 1493  
Tomasini, Claudia, 1487  
Tureček, František, 1315  
Uchida, Yasuzo, 1441  
Utile, Jean-Pierre, 1490  
Viviani, Fabrice, 1255  
Wakabayashi, Shigeharu, 1489  
Wakselman, Claude, 1281  
Wangchareontrakul, Sirichai, 1429  
Wang, Jian Bo, 1239  
Watanabe, Yoshihito, 1435  
Wood, William W., 1289  
Yamada, Shinji, 1239  
Yamada, Shuzo, 1335  
Yamamoto, Yoshimasa, 1247  
Yasui, Ken, 1469  
Yokoyama, Yuusaku, 1319  
Zomaya, Iskander I., 1409

---

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

