

Organic & Biomolecular Chemistry

FORMERLY PERKIN TRANSACTIONS 1 AND 2

Incorporating Acta Chemica Scandinavica

**Cover**

See Gianluca DiMartino, Michael B. Hursthouse, Mark E. Light, Jonathan M. Percy, Neil S. Spencer and Malcolm Tolley, page 4423.

The cover depicts the overlaid crystal structures of two highly fluorinated cyclodecenones, synthesised using the thermal neutral oxy-Cope rearrangement, superimposed upon a seasonal image of hoarfrost from Lake Kussharo, Japan. The authors thank Professor Kenneth G. Libbrecht (Caltech, USA, www.its.caltech.edu/~atomic/snowcrystals/) for kind permission to use his image.



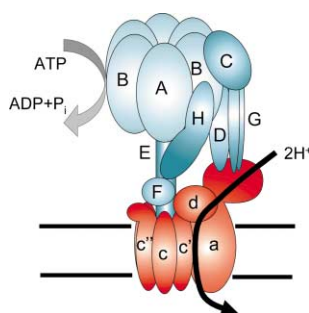
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COMMUNICATIONS



4361 4363



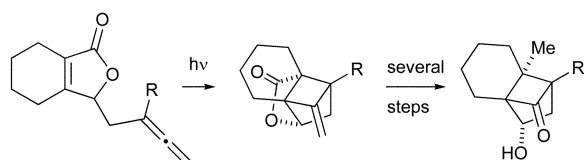
New biophysical probes for structure–activity analyses of vacuolar-H⁺-ATPase enzymes

Neil Dixon, Tibor Pali, Stephen Ball, Michael A. Harrison, Derek Marsh, John B. C. Findlay and Terence P. Kee

We demonstrate the potential of two new, complementary molecular probes for the analysis of inhibitor binding to the vacuolar ATPase enzyme.



4364 4366

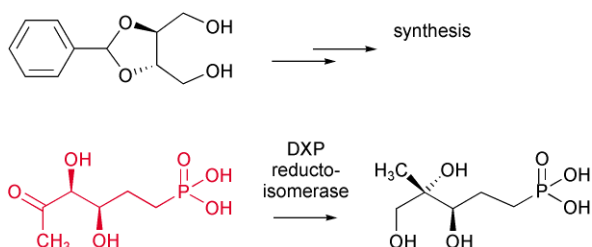


Synthesis of the cyclobutanone core of solanoclepin A via intramolecular allene butenolide photocycloaddition

Bui T. B. Hue, Jan Dijkink, Sanne Kuiper, Kimberly K. Larson, Frank S. Guziec, Jr., Kees Goubitz, Jan Fraanje, Henk Schenk, Jan H. van Maarseveen and Henk Hiemstra

The intramolecular [2 + 2]-photocycloaddition between allene and butenolide CC-double bonds, connected by a two-carbon tether, occurs with high crossed regioselectivity.

4367 4372

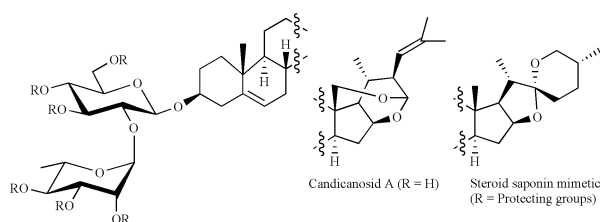


Isoprenoid biosynthesis *via* the MEP pathway. Synthesis of (3*R*,4*S*)-3,4-dihydroxy-5-oxohexylphosphonic acid, an isosteric analogue of 1-deoxy-D-xylulose 5-phosphate, the substrate of the 1-deoxy-D-xylulose 5-phosphate reducto-isomerase

Odile Meyer, Catherine Grosdemange-Billiard, Denis Tritsch and Michel Rohmer

The synthetic isosteric phosphonate analogue of deoxyxylulose phosphate (DXP), the first C₅ intermediate in the MEP pathway for isoprenoid biosynthesis, is a substrate of the DXP reducto-isomerase.

4373 4379

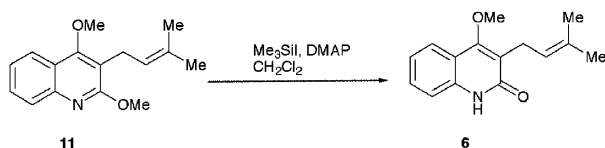


Synthesis of rhamnosylated diosgenyl glucosides as mimetics of cytostatic steroidal saponins from *Ornithogalum saundersiae* and *Galtonia candicans*

René Suhr, Pascal Pfefferkorn, Saskia Weingarten and Joachim Thiem

As novel mimetics of highly cytostatic natural saponins diosgenyl disaccharides could be synthesised.

4380 4383

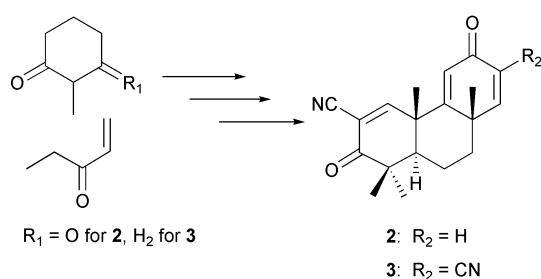


Demethylation of 2,4-dimethoxyquinolines: the synthesis of atanine

Keith Jones, Xavier Roset, Sharon Rossiter and Philip Whitfield

Selective demethylation of 2,4-dimethoxyquinolines using iodotrimethylsilane leads to 2-quinolines.

4384 4391

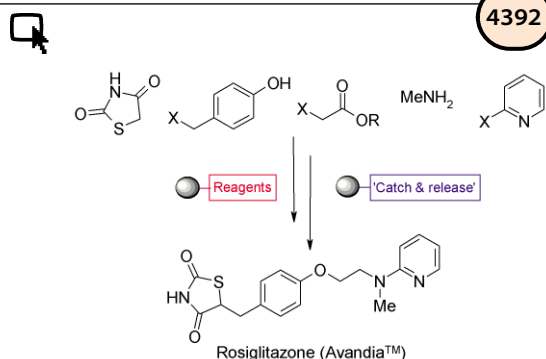


Efficient synthesis of (–)- and (+)-tricyclic compounds with enone functionalities in rings A and C. A novel class of orally active anti-inflammatory and cancer chemopreventive agents

Tadashi Honda, Frank G. Favaloro, Jr., Tomasz Janosik, Yukiko Honda, Nanjoo Suh, Michael B. Sporn and Gordon W. Gribble

The synthesis of both enantiomers of **3** could lead to a new orally active anti-inflammatory and cancer chemopreventive agent.

4392 4395

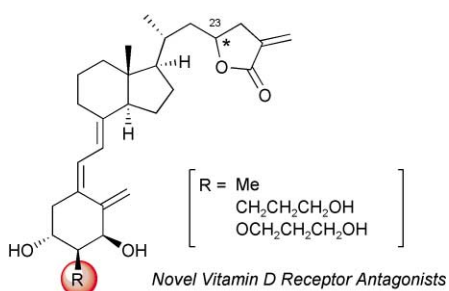


Polymer-assisted solution phase synthesis of the antihyperglycemic agent Rosiglitazone (Avandia™)

Xin Li, Chris Abell, Brian H. Warrington and Mark Ladlow

The preparation of the antihyperglycemic agent Rosiglitazone (Avandia™) in high purity by a multi-step polymer-assisted solution phase synthesis requiring no conventional chromatography is reported.

4396 4402

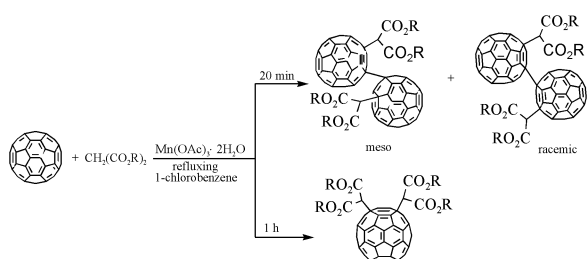


Remarkable effect of 2 α -modification on the VDR antagonistic activity of 1 α -hydroxyvitamin D₃-26,23-lactones

Nozomi Saito, Toshihiro Matsunaga, Toshie Fujishima, Miyuki Anzai, Hiroshi Saito, Kazuya Takenouchi, Daishiro Miura, Seiichi Ishizuka, Hiroaki Takayama and Atsushi Kittaka

Synthesis and biological evaluation of novel vitamin D receptor (VDR) antagonists are reported.

4403 4407

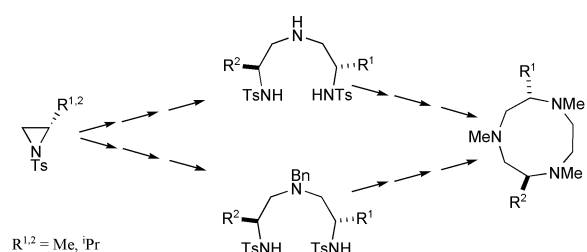


Reaction of [60]fullerene with free radicals generated from active methylene compounds by manganese(III) acetate dihydrate

Ting-Hu Zhang, Ping Lu, Fan Wang and Guan-Wu Wang

Reaction of C₆₀ with dimethyl malonate, diethyl malonate, diethyl bromomalonate, malononitrile and ethyl cyanoacetate in the presence of Mn(OAc)₃ gives singly bonded fullerene dimers, 1,4-adducts, a 1,16-adduct and methanofullerenes.

4408 4417

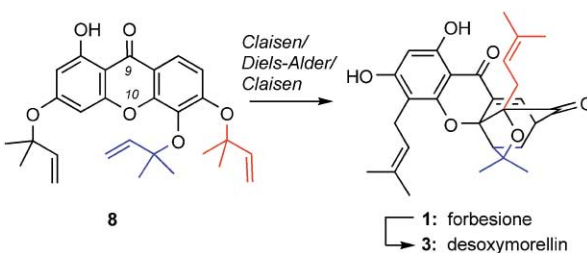


Bifurcated, modular syntheses of chiral annulet triazacyclononanes

Gilles Argouarch, Graham Stones, Colin L. Gibson, Alan R. Kennedy and David C. Sherrington

Three chiral 2,6-disubstituted triazacyclononanes were prepared by modular methods employing two independent routes to the key triazaheptane intermediates.

4418 4422

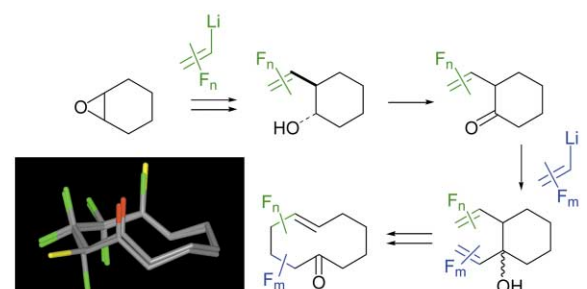


Biomimetic total synthesis of forbesione and desoxymorellin utilizing a tandem Claisen/Diels–Alder/Claisen rearrangement

Eric J. Tisdale, Irina Slobodov and Emmanuel A. Theodorakis

A concise synthesis of forbesione and desoxymorellin based on a regioselective Claisen/Diels–Alder/Claisen reaction cascade is reported.

4423 4434



Syntheses of selectively fluorinated cyclodecenones: the first deployment of the neutral oxy-Cope rearrangement in organofluorine chemistry

Gianluca DiMartino, Michael B. Hursthouse, Mark E. Light, Jonathan M. Percy, Neil S. Spencer and Malcolm Tolley

The thermal, neutral oxy-Cope rearrangement provides a modular method for the construction of selectively fluorinated cyclodecenones.

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Dates, venues and contact details of forthcoming events.

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