Organic & Biomolecular Chemistry

An international journal of synthetic, physical and biomolecular organic chemistry

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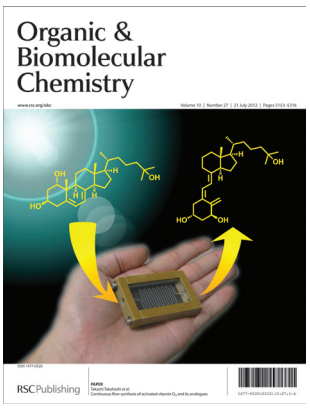
ISSN 1477-0520 CODEN OBCRAK 10(27) 5153–5316 (2012)



Cover
See Takashi Takahashi *et al.*, pp. 5205–5211.

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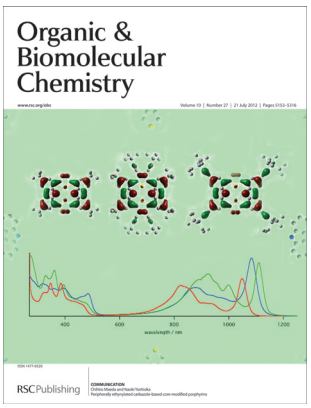

Inside cover
See Chihiro Maeda and Naoki Yoshioka, pp. 5182–5185.

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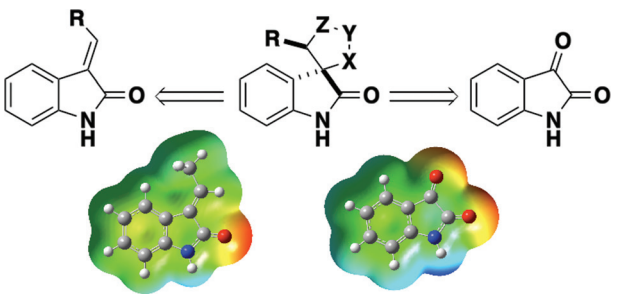
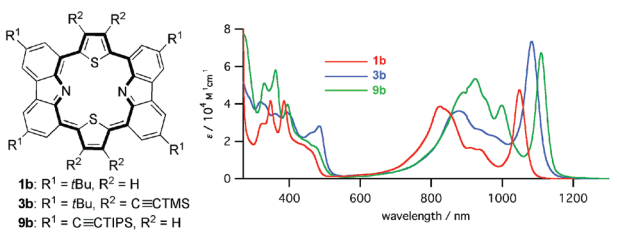
PERSPECTIVE



COMMUNICATIONS



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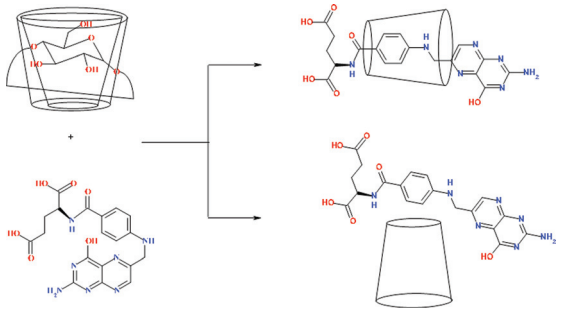
5186

Structural diversity in native cyclodextrins/folic acid complexes – from [2]-rotaxane to exclusion compound

Magdalena Ceborska,* Magdalena Zimnicka, Mariusz Pietrzak, Anna Troć, Małgorzata Koźbiał and Janusz Lipkowski

"Green synthesis" of complexes of folic acid with native cyclodextrins results, depending on the host molecule, in either an exclusion compound or 2-rotaxane.

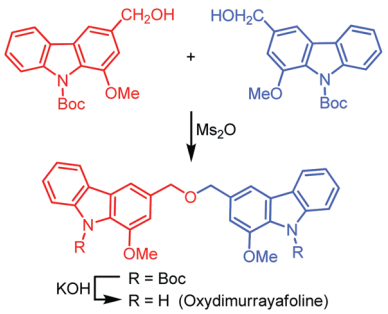


5189

First total synthesis of the biscarbazole alkaloid oxydimurrayafoline

Carsten Börger, Micha P. Krahl, Margit Gruner, Olga Kataeva and Hans-Joachim Knölker*

We report the first total synthesis of oxydimurrayafoline *via* nucleophilic substitution at the benzylic position at C-3 of the carbazole framework.

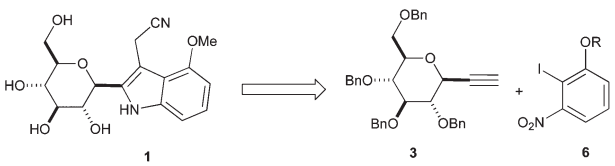


5194

Total synthesis of indole-3-acetonitrile-4-methoxy-2-*C*-β-D-glucopyranoside. Proposal for structural revision of the natural product

Akop Yepremyan and Thomas G. Minehan*

Indole-3-acetonitrile-4-methoxy-2-*C*-β-D-glucopyranoside (**1**), a novel *C*-glycoside from *Isatis indigotica* with important cytotoxic activity, has been prepared in ten steps from ethynyl-β-*C*-glycoside **3** and 2-iodo-3-nitrophenyl acetate **6**. A revised structure for the natural product is proposed.

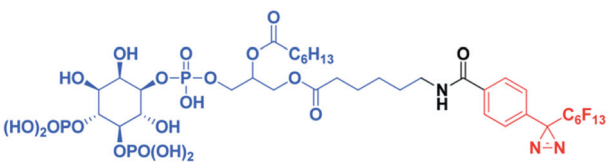


5197

Incorporation of a fluorous diazirine group into phosphatidylinositol 4,5-bisphosphate to illustrate its interaction with ADP-ribosylation factor 1

Weigang Huang, Wei Sun, Zhiquan Song, Yanbao Yu, Xian Chen and Qisheng Zhang*

A fluorous diazirine group has been incorporated into phosphatidylinositol 4,5-bisphosphate (PIP_2) to identify PIP_2-interacting proteins through light-induced crosslinking.



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IKCOC-12

November 12-16, 2012
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Chairman:
Prof. Naoto Chatani (Osaka Univ.)

Deadline of Advanced Registration and Submission of Abstracts:July 31, 2012

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Scientific Program

Opening Lecturer
The IKCOC prize winner will deliver the opening lecture.

Plenary Lecturers
Tamio Hayashi (Kyoto Univ.)
Tobin J. Marks (Northwestern Univ.)
Paul Wender (Stanford Univ.)

Invited Lecturers
Session 1: Efficiency in Organic Synthesis
Varinder K. Aggarwal (Univ. Bristol)
Martin G. Banwell (Australian National Univ.)
Jeffrey W. Bode (ETH Zurich)
Marta Catellani (Univ. Parma)
Sukbok Chang (KAIST)
F. Dean Toste (Univ. California, Berkeley)

Session 2: Organic Synthesis for Materials Science
Eric V. Anslyn (Univ. Texas, Austin)
Shie-Ming Peng (National Taiwan Univ.)
John R. Reynolds (Univ. Florida)
Kazuo Takimiya (Hiroshima Univ.)
Jean-Marie Tarascon (Univ. Picardie Jules Verne)
Frank Wurthner (Univ. Wurzburg)

Session 3: Organic Synthesis for Life Science
Benjamin G. Davis (Univ. Oxford)
Philip Garner (Washington State Univ.)
Arun K. Ghosh (Purdue Univ.)
Stefan Matile (Univ. Geneva)
Hiroaki Suga (Univ. Tokyo)
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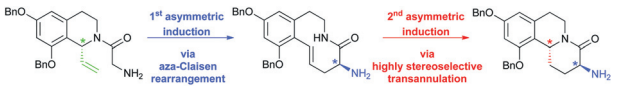
COMMUNICATIONS

5202

Asymmetric formal synthesis of schulzeines A and C

Jaebong Jang, Jong-Wha Jung, Jaeseung Ahn, Jaehoon Sim, Dong-Jo Chang, Dae-Duk Kim and Young-Ger Suh*

Efficient and highly stereoselective formal synthesis of schulzeines A and C has been accomplished *via* the aza-Claisen rearrangement-induced ring expansion and the stereoselective transannulation.



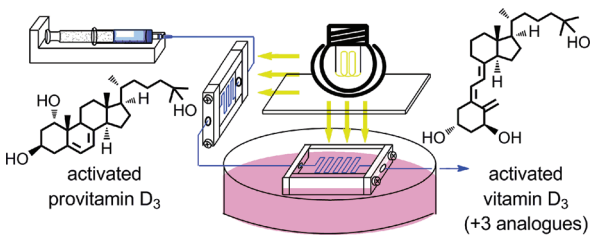
PAPERS

5205

Continuous-flow synthesis of activated vitamin D_3 and its analogues

Shinichiro Fuse, Yuto Mifune, Nobutake Tanabe and Takashi Takahashi*

A highly efficient, two-stage, continuous-flow synthesis of activated vitamin D_3 and its analogues was achieved.

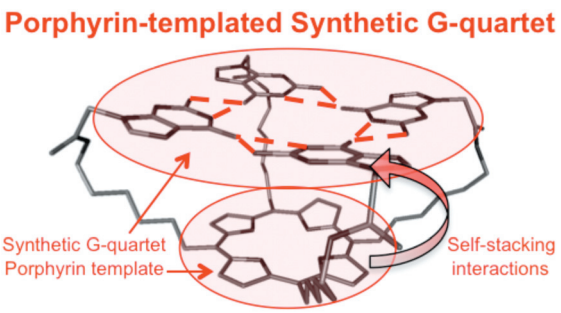


5212

Porphyrin-templated synthetic G-quartet (PorphySQ): a second prototype of G-quartet-based G-quadruplex ligand

Hai-Jun Xu, Loic Stefan, Romain Haudecoeur, Sophie Vuong, Philippe Richard, Franck Denat, Jean-Michel Barbe, Claude P. Gros* and David Monchaud*

A novel template-assembled synthetic G-quartet (TASQ) is reported as an interesting G-quartet-based G-quadruplex ligand, which interacts with quadruplex-DNA *via* an innovative nature-inspired binding mode.

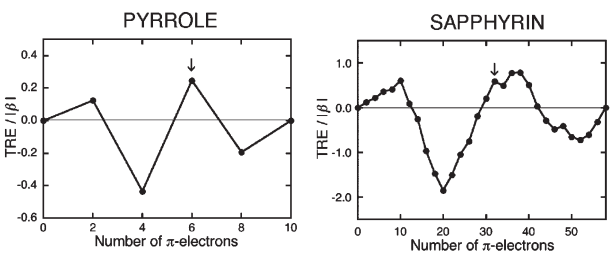


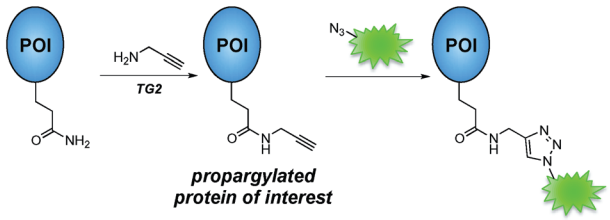
5219

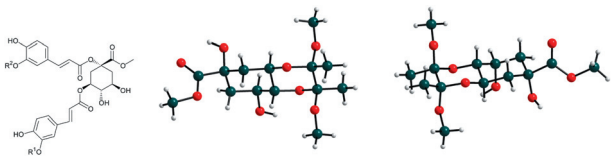
The origin of global and macrocyclic aromaticity in porphyrinoids

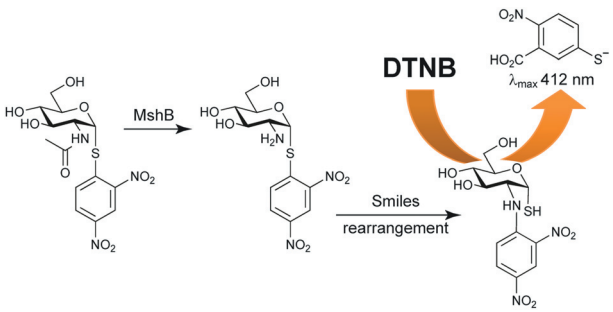
Yuto Nakagami, Rika Sekine and Jun-ichi Aihara*

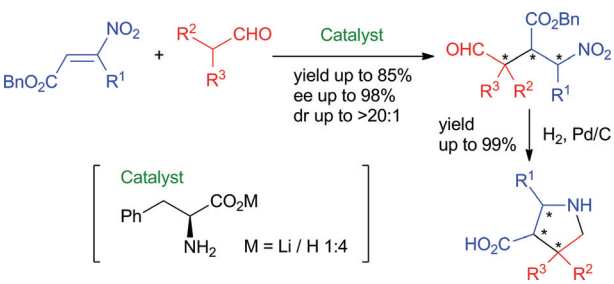
This paper described how to associate the global and macrocyclic aromaticity of porphyrinoids graph-theoretically with their local structures.











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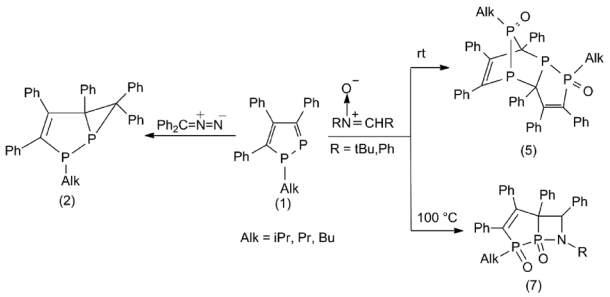
5298

Reactions of 1-alkyl-1,2-diphospholes with 1,3-dipoles: diphenyldiazomethane and nitrones

Almaz Zagidullin, Yulia Ganushevich, Vasili Miluykov,* Dmitry Krivolapov, Olga Kataeva, Oleg Sinyashin and Evamarie Hey-Hawkins

The bicyclic phosphiranes **2** can be obtained in high yield by reaction of 1-alkyl-1,2-diphospholes (**1**) with diphenyldiazomethane. Depending on the temperature, reactions of **1** with nitrones lead to dimers of 1-alkyl-1,2-diphosphole-1-oxide (**5**) or bicyclic compounds with β-lactam moiety (**7**).

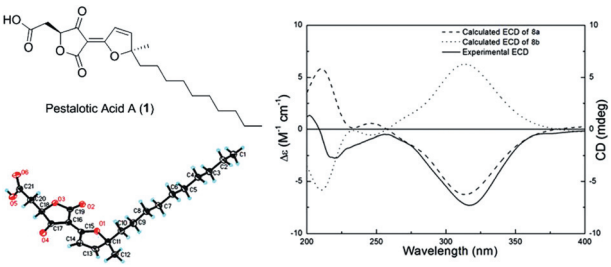


5307

Isolation, antimicrobial activity, and absolute configuration of the furylidene tetronic acid core of pestalotic acids A–G

Fan Zhang, Gang Ding, Li Li, Xiaoyue Cai, Yikang Si, Liangdong Guo and Yongsheng Che*

Isolation of new furylidene tetronic acids (**1**–**7**) from an endophyte and absolute configuration assignment by ECD calculations.



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