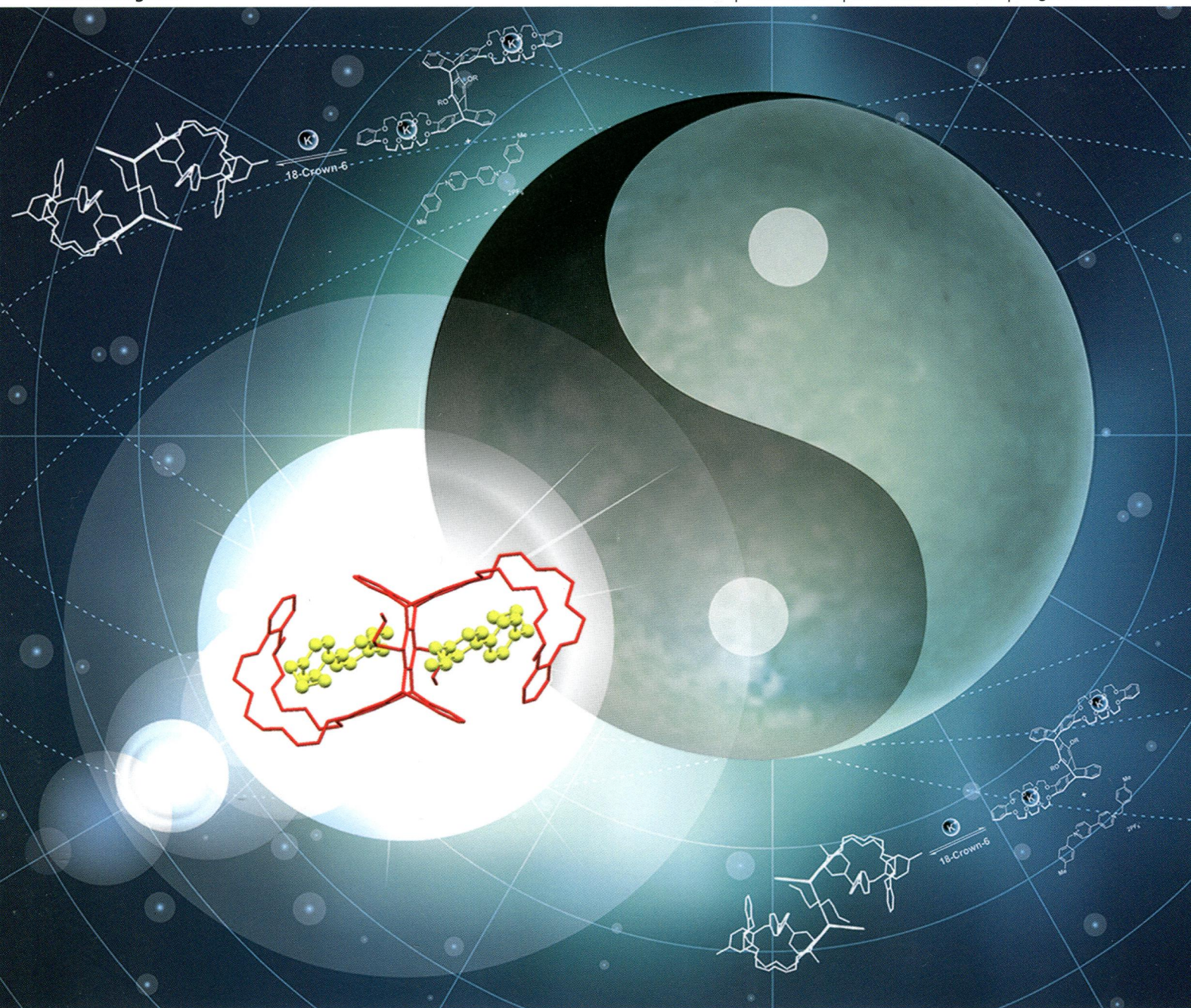


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PAPER

Chuan-Feng Chen *et al.*

Complexation of a pentiptycene-derived *trans*-bis(crown ether) host with different terminally functionalized paraquat derivatives in solution and the solid state: a switchable complexation process controlled by potassium ions



1477-0520(2013)11:47;1-0

Organic & Biomolecular Chemistry

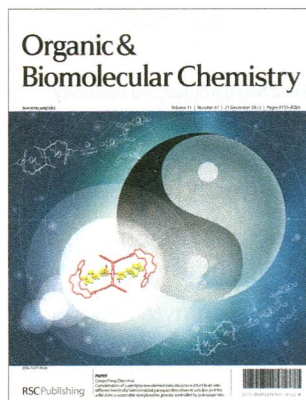
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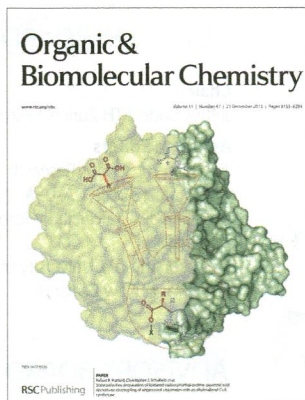
ISSN 1477-0520 CODEN OBCRAK 11(47) 8153–8284 (2013)



Cover

See Chuan-Feng Chen *et al.*, pp. 8183–8190.

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Inside cover

See Refaat B. Hamed, Christopher J. Schofield *et al.*, pp. 8191–8196.

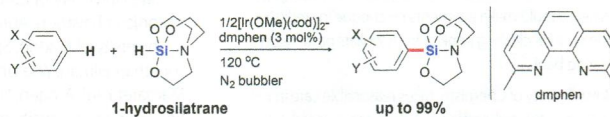
Image reproduced by permission of Refaat B. Hamed from *Org. Biomol. Chem.*, 2013, **11**, 8191.

COMMUNICATIONS

8162

Aromatic C–H silylation of arenes with 1-hydrosilatane catalyzed by an iridium(I)/2,9-dimethylphenanthroline (dmphen) complex

Tatsuo Ishiyama,* Takeaki Saiki, Emi Kishida, Ikuo Sasaki, Hajime Ito and Norio Miyaura*



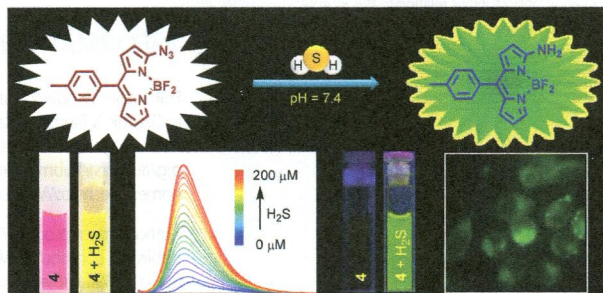
Aromatic C–H silylation of neat arenes with 1-hydrosilatane was found to be efficiently catalyzed by iridium catalysts composed of 1/2[Ir(OMe)(cod)]₂ and 2,9-dimethyl-1,10-phenanthroline at 120 °C to afford the corresponding silylated products in high yields.

8166

A colorimetric and fluorometric BODIPY probe for rapid, selective detection of H₂S and its application in live cell imaging

Tanmoy Saha, Dnyaneshwar Kand and Pinaki Talukdar*

A BODIPY-azide based colorimetric and fluorescence turn-ON probe for rapid, selective and sensitive detection of H₂S is reported. The probe displayed a fast response time of 10 min, 28-fold fluorescence enhancement and low detection limit up to 259 nM. The application of the probe to the estimation of H₂S in live cells was demonstrated.



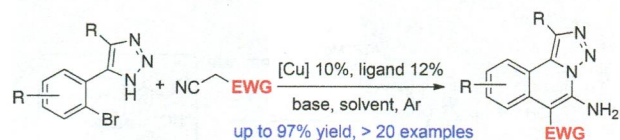
Федеральное государственное бюджетное учреждение науки
Центральная научная библиотека
Уральского отделения
Российской академии наук (ЦНБ УрО РАН)

8171

A facile synthesis of 5-amino-[1,2,3]triazolo[5,1-a]-isoquinoline derivatives through copper-catalyzed cascade reactions

Yunfeng Chen,* Shilei Zhou, Shan Ma, Wenqian Liu, Zhiquan Pan and Xiaodong Shi*

A copper-catalyzed cascade method was developed for the synthesis of [1,2,3]triazolo[5,1-a]isoquinoline derivatives.

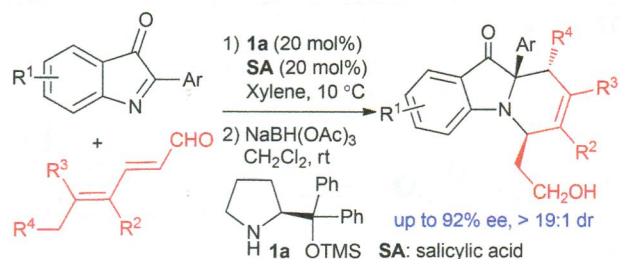


8175

An asymmetric normal-electron-demand aza-Diels–Alder reaction via trienamine catalysis

Jing-Xin Liu, Qing-Qing Zhou, Jin-Gen Deng and Ying-Chun Chen*

An asymmetric aza-Diels–Alder cycloaddition of 2-aryl-3*H*-indol-3-ones and 2,4-dienals was developed to construct chiral tricyclic polyhydropyrido[1,2-*a*]indoles via trienamine catalysis.

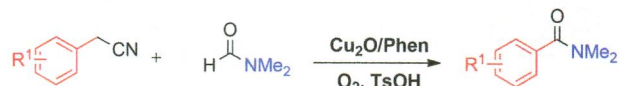


8179

Copper-catalyzed formation of *N,N*-dimethyl benzamide from nitrile and DMF under an O₂ atmosphere

Chenxu Hu, Xufei Yan, Xiangge Zhou and Zhengkai Li*

Amidation of nitrile with *N*-substituted formamide was catalyzed by Cu₂O with 1,10-phenanthroline to give *N*-substituted amides in yields up to 84%.



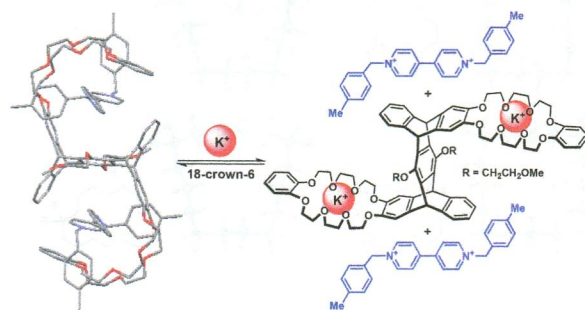
PAPERS

8183

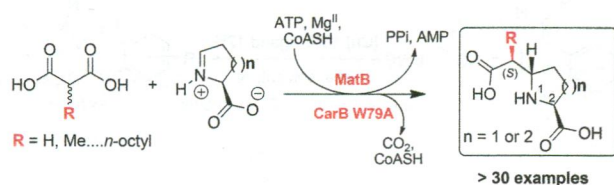
Complexation of a pentiptycene-derived *trans*-bis(crown ether) host with different terminally functionalized paraquat derivatives in solution and the solid state: a switchable complexation process controlled by potassium ions

Ying-Xian Ma, Ying Han, Jing Cao and Chuan-Feng Chen*

The complexation between a pentiptycene-derived bis(crown ether) and a series of paraquat derivatives both in solution and the solid state was investigated in detail.



8191

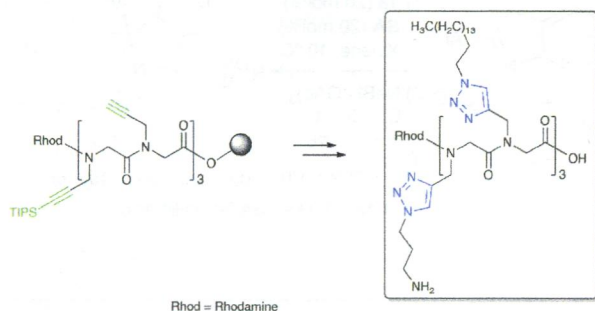


Stereoselective preparation of lipidated carboxymethyl-proline/pipecolic acid derivatives via coupling of engineered crotonases with an alkylmalonyl-CoA synthetase

Refaat B. Hamed,* Luc Henry, J. Ruben Gomez-Castellanos, Amina Asghar, Jürgen Brem, Timothy D. W. Claridge and Christopher J. Schofield*

Coupling of crotonases with alkylmalonyl-CoA forming enzymes enables one-pot stereoselective preparation of functionalised 5- and 6-membered *N*-heterocycles.

8197

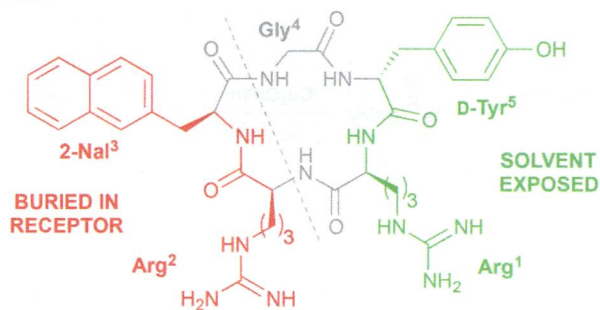


Amphiphilic peptoid transporters – synthesis and evaluation

Sidonie B. L. Vollrath, Daniel Fűrnis, Ute Schepers and Stefan Bräse*

Cell-penetrating peptoids are an important class of peptidomimetics, which can replace highly biodegradable cell penetrating peptides for enhanced drug delivery.

8202

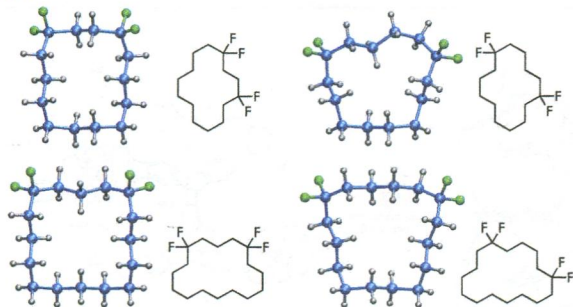


Structure–activity relationship studies of the aromatic positions in cyclopentapeptide CXCRA antagonists

Jignesh Mungalpara, Zack G. Zachariassen, Stefanie Thiele, Mette M. Rosenkilde and Jon Våbenø*

Structure–activity relationship studies of cyclopentapeptide CXCRA antagonists, supported by molecular modelling, suggest that Arg-2-Nal serves as a minimal recognition motif for peptidic CXCRA antagonists.

8209



Synthesis and structure of large difluoromethylene containing alicycles by ring closing metathesis (RCM)

Maciej Skibiński, César A. Urbina-Blanco, Alexandra M. Z. Slawin, Steven P. Nolan* and David O'Hagan*

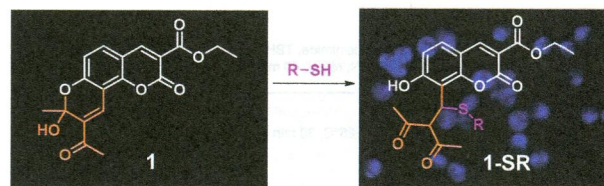
Cyclotetra- and cyclohexa-decane ring systems were prepared with CF₂ groups spaced 1,4- and 1,6- for tetradecanes together with 1,5- and 1,6- for hexadecanes.

8214

A coumarin-based fluorescent probe for biological thiols and its application for living cell imaging

Lingliang Long,* Liping Zhou, Lin Wang, Suci Meng, Aihua Gong, Fengyi Du and Chi Zhang*

A novel fluorescent probe for detection of biological thiols in human blood serum and living cells has been rationally constructed.

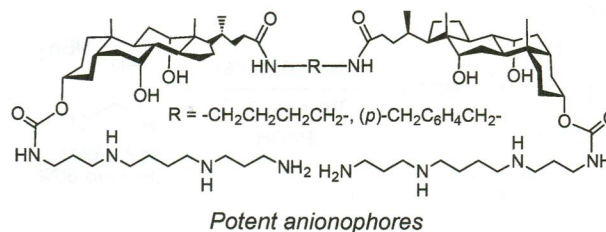


8221

Synthesis and anionophoric activities of dimeric polyamine–sterol conjugates: the impact of rigid vs. flexible linkers

Yong-Ming Lu, Li-Qun Deng, Xi Huang, Jin-Xiang Chen, Bo Wang, Zhong-Zhen Zhou, Guan-Song Hu and Wen-Hua Chen*

Two dimeric spermine–choloyl conjugates were synthesized and found to exhibit potent anionophoric activities across EYPC-based liposomal membranes.

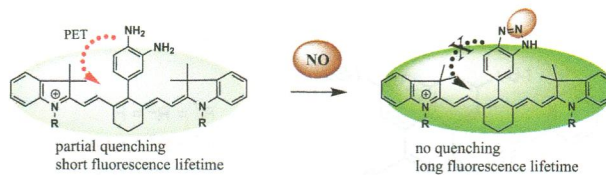


8228

Synthesis of nitric oxide probes with fluorescence lifetime sensitivity

Natalia G. Zhegalova, Garrett Gonzales and Mikhail Y. Berezin*

Fluorescence lifetime can be used to detect NO.

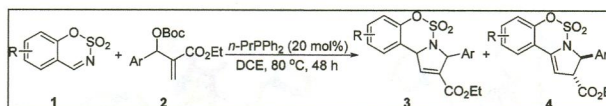


8235

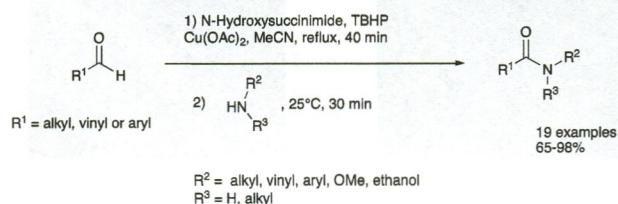
Phosphine-catalyzed [3 + 2] cycloaddition of Morita–Baylis–Hillman carbonates with sulfamate-derived cyclic imines

Lei Zhang, Hao Yu, Zhilin Yang, Honglei Liu, Zhen Li, Junhong Guo, Yumei Xiao and Hongchao Guo*

A novel phosphine-catalyzed [3 + 2] cycloaddition of Morita–Baylis–Hillman carbonates with sulfamate-derived cyclic imines.



8241

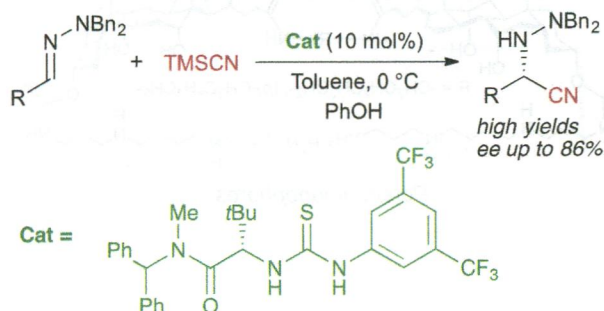


A copper-catalysed amidation of aldehydes via N-hydroxysuccinimide ester formation

Monica Pilo, Andrea Porcheddu and Lidia De Luca*

A copper-catalysed oxidative amidation of aldehydes via N-hydroxysuccinimide ester formation is reported. The methodology employed to prepare amides directly from aldehydes has a very wide scope, is high yielding, and does not need dry conditions. This cross-coupling reaction appears to be simple and makes use of cheap, abundant and easily available reagents.

8247

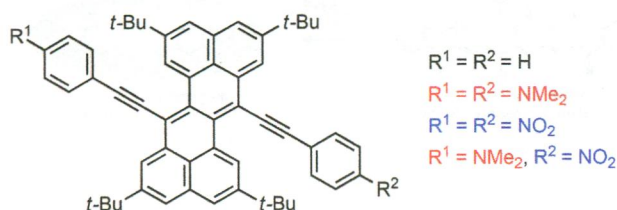


Asymmetric organocatalytic Strecker-type reactions of aliphatic N,N-dialkylhydrazones

Aurora Martínez-Muñoz, David Monge,*
Eloísa Martín-Zamora, Eugenia Marqués-López,
Eleuterio Álvarez, Rosario Fernández* and
José M. Lassaletta*

The enantioselective Strecker-type reaction of aliphatic N,N-dialkylhydrazones with trimethylsilyl cyanide has been developed using a bifunctional amide–thiourea as the organocatalyst.

8256

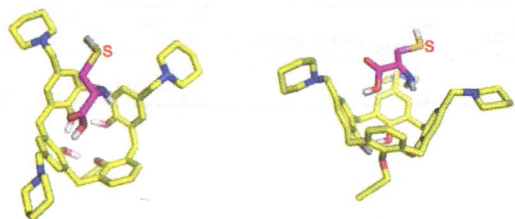


Synthesis and physical properties of zethrene derivatives bearing donor/acceptor substituents at 7,14-positions

Daijiro Hibi, Kenichi Kitabayashi, Akihiro Shimizu,
Rui Umeda and Yoshito Tobe*

Zethrene derivatives bearing donor/acceptor groups at the 7,14-positions were synthesised. Optical and electrochemical measurements revealed that the substituents exerted significant effects on the electric properties of the zethrene backbone.

8262



Hg²⁺ wettability and fluorescence dual-signal responsive switch based on a cysteine complex of piperidine-calix[4]arene

Xiaoyan Zhang, Haiyang Zhao, Xianliang Cao,
Ningmei Feng, Demei Tian and Haibing Li*

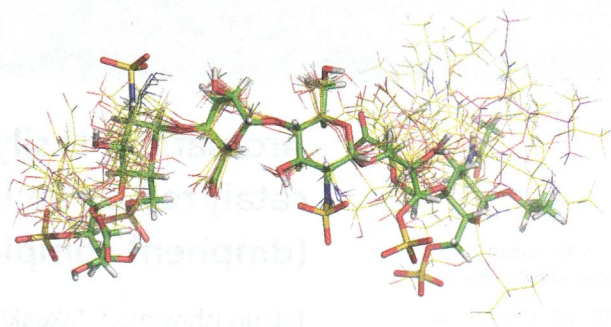
Here we report a novel cysteine (Cys) complex of piperidine-calix[4]arene (**L**) as a convenient and effective dual-signal responsive switch for Hg²⁺.

8269

3D structure of a heparin mimetic analogue of a FGF-1 activator. A NMR and molecular modelling study

Juan C. Muñoz-García, Cristina Solera, Paula Carrero, José L. de Paz, Jesús Angulo* and Pedro M. Nieto*

The elucidation of the 3D structure of a heparin hexasaccharide explains its absence of activity in FGF-1 mitogenic assays.



8276

Modified oligodeoxynucleotide primers for reverse-transcription of target RNAs that can discriminate among length variants at the 3'-terminus

Yoshihiro Iijima, Shun Kojima, Erika Kodama, Sayako Kurohagi, Takashi Kanamori, Yoshiaki Masaki, Akihiro Ohkubo, Mitsuo Sekine* and Kohji Seio*

Modified oligonucleotides containing a cyclohexyl phosphate were applied to a new RT-PCR that allows discrimination of miRNA length variants.

