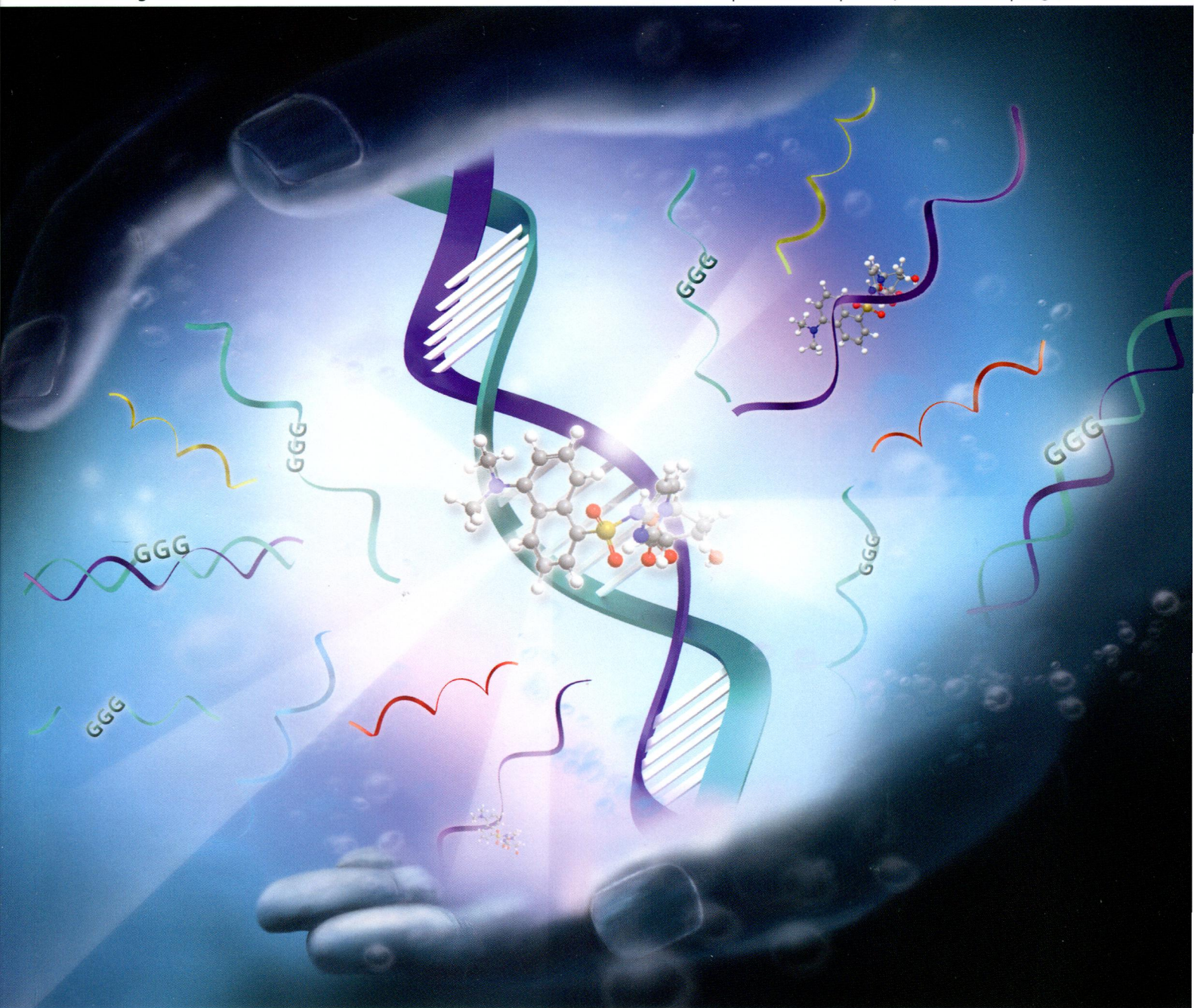


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# Organic & Biomolecular Chemistry

www.rsc.org/obc

Volume 11 | Number 34 | 14 September 2013 | Pages 5549–5736



ISSN 1477-0520

RSC Publishing

**PAPER**

Byeang Hyeon Kim *et al.*

DNSC: a fluorescent, environmentally sensitive cytidine derivative for the direct detection of GGG triad sequences



1477-9226(2013)42:34;1-J





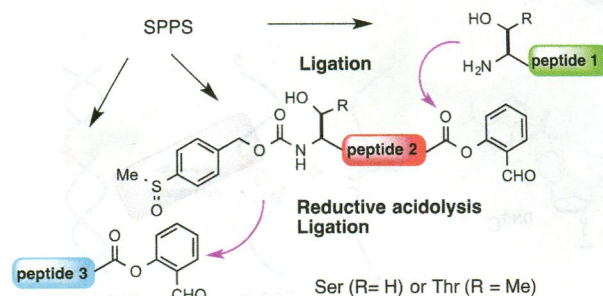


5584

### Synthesis of human growth hormone-releasing hormone *via* three-fragment serine/threonine ligation (STL)

Yinfeng Zhang, Tianlu Li and Xuechen Li\*

A C → N three-fragment serine/threonine ligation is described, in which Msz (*p*-(methylsulfinyl)-benzyloxycarbonyl) is used for protecting the N-terminal serine or threonine.

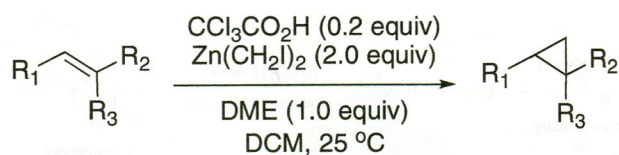


5588

### Synergistic effect of additives on cyclopropanation of olefins

Donghao Cheng, Deshun Huang and Yian Shi\*

An efficient cyclopropanation of olefins with  $\text{Zn}(\text{CH}_2\text{I})_2$ , a catalytic amount of  $\text{CCl}_3\text{CO}_2\text{H}$ , and 1,2-dimethoxyethane at room temperature is described. A wide variety of olefins, including acid-sensitive substrates, can be cyclopropanated in 71–99% yield.

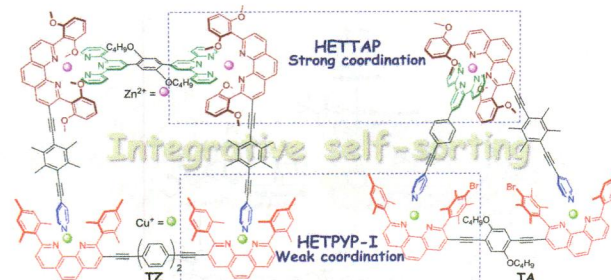


5592

### Merging strong and weak coordination motifs in the integrative self-sorting of a 5-component trapezoid and scalene triangle

Manik Lal Saha, Jan W. Bats and Michael Schmittl\*

In a dynamic six-component library, the formation of the rather weak HETPYP-I complexation can be enforced by exploiting the orthogonality and high stability of its counterpart in the sorting process, a HETTAP complex.



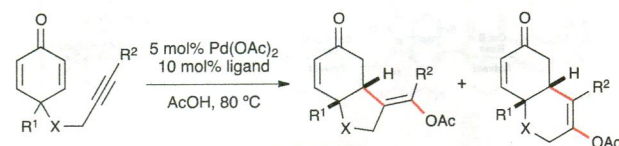
## PAPERS

5596

### Ligand and substrate effects during Pd-catalyzed cyclizations of alkyne-tethered cyclohexadienones

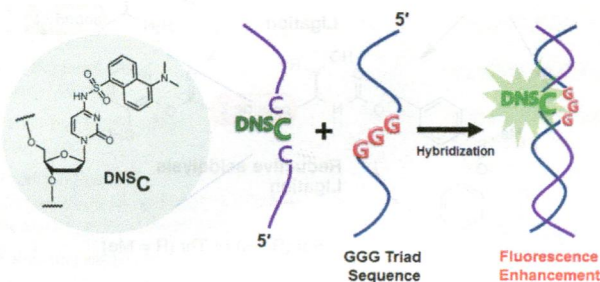
Rodolfo Tello-Aburto, Kyle A. Kalstabakken and Andrew M. Harned\*

Ligand and substrate choice greatly affect the enantio- and regioselectivity of Pd-catalyzed cyclizations of alkyne-tethered cyclohexadienones.



(i) up to 81:19 *er* with chiral ligand  
(ii) X, R<sup>2</sup>, and ligand determine product ratio

5605

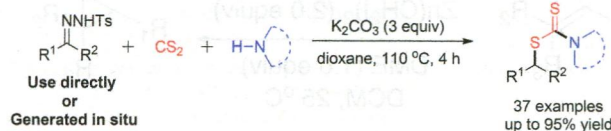


### DNSC: a fluorescent, environmentally sensitive cytidine derivative for the direct detection of GGG triad sequences

Ki Tae Kim, Hyun Woo Kim, Dohyun Moon, Young Min Rhee and Byeang Hyeon Kim\*

An environmentally sensitive fluorescent nucleoside (DNSC), modified 2'-deoxycytidine bearing 5-(dimethylamino)-naphthalene-1-sulfonyl (dansyl) at the N4 position, has been synthesized and exhibits fluorescence enhancement only in fully matched duplex DNA containing a GGG triad sequence.

5615

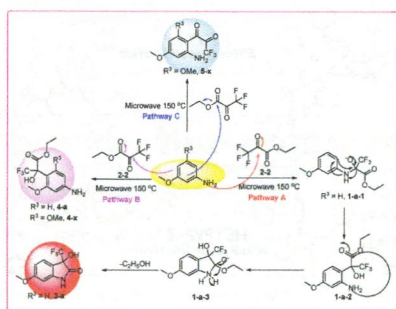


### One-pot synthesis of S-alkyl dithiocarbamates via the reaction of N-tosylhydrazones, carbon disulfide and amines

Qiang Sha and Yun-Yang Wei\*

One-pot synthesis of S-alkyl dithiocarbamates via the reaction of N-tosylhydrazones, carbon disulfide and amines.

5621

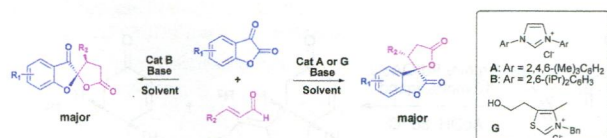


### Diverse reactivity in microwave-promoted catalyst-free coupling of substituted anilines with ethyl trifluoropyruvate and biological evaluation

Chen Zhang,\* Dao-Min Zhuang, Jia Li, Si-Yuan Chen, Xiao-Long Du, Jian-Yong Wang, Jing-Yun Li, Biao Jiang and Jian-Hua Yao\*

Microwave-promoted and catalyst-free diverse reactivity was obtained by coupling of anilines with ethyl trifluoropyruvate and products were evaluated for anti-HIV-1 activities.

5634



### N-heterocyclic carbene catalyzed annulation of benzofuran-2,3-diones and enals: a concise synthesis of spiro-bis-lactone

Ze-Dong Wang, Feng Wang, Xin Li\* and Jin-Pei Cheng\*

The N-heterocyclic carbene catalyzed annulation of benzofuran-2,3-diones and enals via homoenolate intermediates is described.

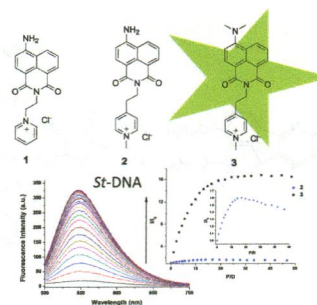


5642

### The effect of the 4-amino functionality on the photophysical and DNA binding properties of alkyl-pyridinium derived 1,8-naphthalimides

Swagata Banerjee, Jonathan A. Kitchen, Thorfinnur Gunnlaugsson\* and John M. Kelly\*

The effect of the nature of the substituent on DNA binding of 1,8-naphthalimide derivatives is investigated using various spectroscopic techniques; the results show strong binding and that *N,N*-dimethyl derivatives give rise to a 'light switch' effect.

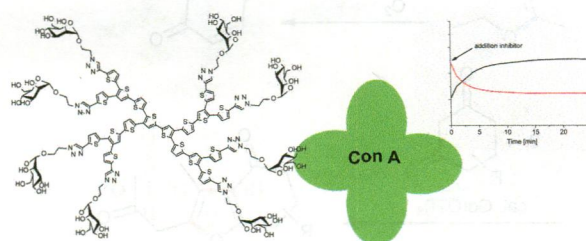


5656

### Mannose-functionalized dendritic oligothiophenes: synthesis, characterizations and studies on their interaction with Concanavalin A

Sylvia Schmid, Amaresh Mishra, Markus Wunderlin and Peter Bäuerle\*

We have synthesized and characterized a series of dendritic oligothiophenes comprising peripheral mannose functionalities by copper-mediated 1,3-dipolar cycloaddition reaction and studied their interaction with Concanavalin-A.

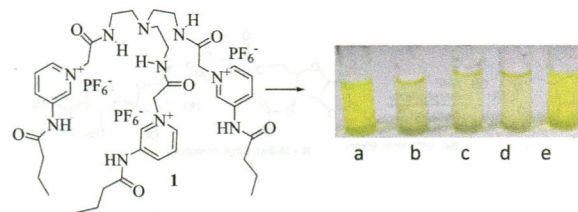


5666

### Pyridinium-based tripodal chemosensor in visual sensing of AMP in water by indicator displacement assay (IDA)

Kumaresh Ghosh,\* Sk Sarfaraj Ali, Avik Ranjan Sarkar, Asmita Samadder, Anisur Rahman Khuda-Bukhsh, Ioannis D. Petsalakis and Giannoula Theodorakopoulos

A simple pyridinium-based tripodal chemosensor, **1**, effectively recognizes AMP over ATP and ADP through indicator displacement assay (IDA) technique in water at pH 6.4.



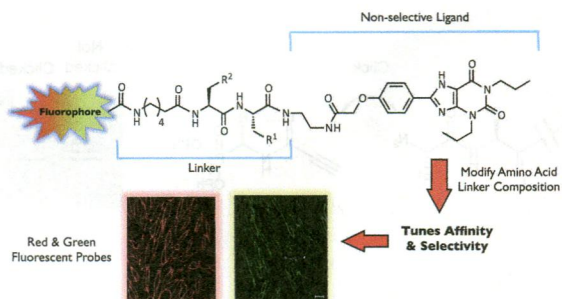
a. Indicator, b. Ensemble, c. ATP, d. ADP, e. AMP

5673

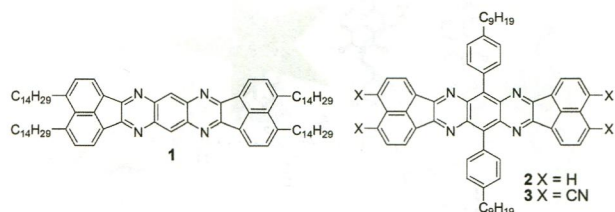
### Conversion of a non-selective adenosine receptor antagonist into $A_3$ -selective high affinity fluorescent probes using peptide-based linkers

Andrea J. Vernall, Leigh A. Stoddart, Stephen J. Briddon, Hui Wen Ng, Charles A. Laughton, Stephen W. Doughty, Stephen J. Hill\* and Barrie Kellam\*

Positioning amino acids within the linker-region of green- and red-shifted fluorescent adenosine receptor probes enhanced receptor affinity and sub-type selectivity.



5683

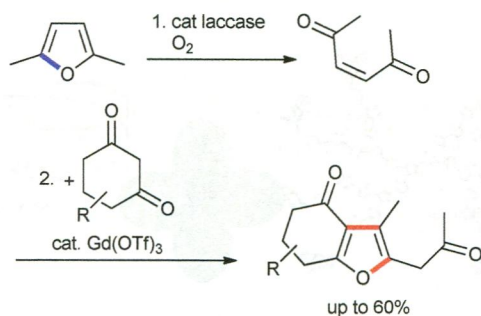


### Bisacenaphthopyrazinoquinoxaline derivatives: synthesis, physical properties and applications as semiconductors for n-channel field effect transistors

Chenhua Tong, Jingjing Chang, Jun Min Tan, Gaole Dai, Kuo-Wei Huang, Hardy Sze On Chan\* and Chunyan Chi\*

Several BAPQ based derivatives **1–3** were synthesized. Compound **3** has a low-lying LUMO energy level and shows n-type FET behaviour.

5692

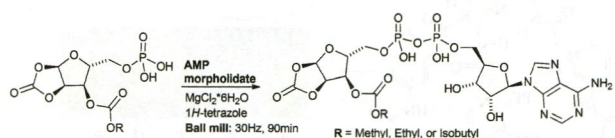


### Combination of enzyme- and Lewis acid-catalyzed reactions: a new method for the synthesis of 6,7-dihydrobenzofuran-4(5H)-ones starting from 2,5-dimethylfuran and 1,3-cyclohexanediones

Chimène Asta, Dietmar Schmidt, Jürgen Conrad, Wolfgang Frey and Uwe Beifuss\*

Lewis acid-catalyzed reaction of (*Z*)-3-hexene-2,5-dione, originating from the laccase-catalyzed oxidative cleavage of 2,5-dimethylfuran, with 1,3-dicarbonyls delivers 6,7-dihydrobenzofuran-4(5H)-ones exclusively.

5702

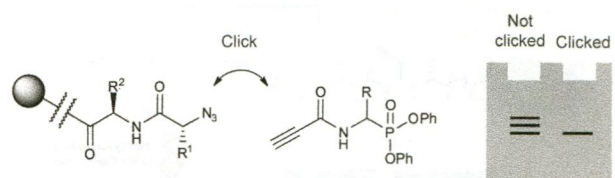


### Synthesis of alkylcarbonate analogs of O-acetyl-ADP-ribose

Marcela Dvorakova, Radim Nencka, Milan Dejmek, Eva Zbornikova, Anna Brezinova, Marie Pribylova, Radek Pohl, Marie E. Migaud and Tomas Vanek\*

Alkylcarbonate analogs of O-acetyl-ADP-ribose were prepared using a ball mill and assessed for their ability to inhibit SIRT1.

5714



### Tuning activity-based probe selectivity for serine proteases by on-resin 'click' construction of peptide diphenyl phosphonates

Sevnur Serim, Susanne V. Mayer and Steven H. L. Verhelst\*

We have developed a solid phase procedure to generate peptide diphenyl phosphonate probes that target serine proteases. The selectivity of these probes can be easily modulated by varying the peptide part. The probes can be used to label endogenous proteases in proteomes.

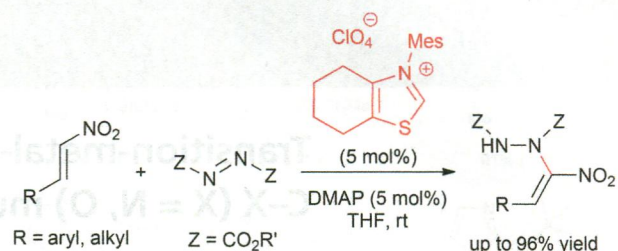


5722

### Catalytic MBH reaction of $\beta$ -substituted nitroalkenes with azodicarboxylates

Xiang-Yu Chen, Fei Xia and Song Ye\*

An unprecedented N-heterocyclic carbene catalyzed Morita–Baylis–Hillman reaction of  $\beta$ -substituted nitroalkenes with azodicarboxylates has been developed, giving the  $\alpha$ -hydrazino- $\alpha,\beta$ -unsaturated nitroalkenes in good yields.



5727

### The relative hydrolytic reactivities of pyrophosphites and pyrophosphates

Dharmit Mistry and Nicholas Powles\*

The pH-rate profiles for the hydrolysis of pyrophosphate (PP(V)) and pyrophosphite (PP(III), pyro-di-H-phosphonate) are a complex function of pH, reflecting the different ionic species and their relative reactivities.

