Contents lists available at ScienceDirect

Chinese Chemical Letters

journal homepage: www.elsevier.com/locate/cclet

Graphical Abstracts/Chin Chem Lett 25 (2014) iii-xiv

Original articles

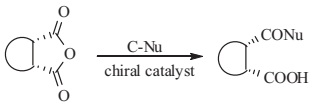
Asymmetric catalytic anhydride openings *via* carbon-based nucleophiles

Chinese Chemical Letters 25 (2014) 1

Chen Zheng, Fen-Er Chen

Department of Chemistry, Fudan University, Shanghai 200433, China

The asymmetric opening of anhydrides with carbon-based nucleophiles has been extensively investigated due to its great potential in the asymmetric synthesis of important chiral intermediates and natural products. This review summarizes the desymmetrizations of anhydrides *via* carbon-based nucleophiles.



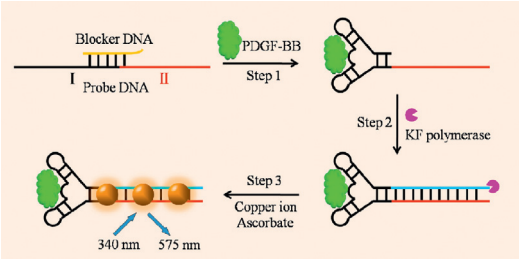
A novel fluorescent detection for PDGF-BB based on dsDNA-templated copper nanoparticles

Chinese Chemical Letters 25 (2014) 9

Xiao-Hai Yang, Shan Sun, Pei Liu, Ke-Min Wang, Qing Wang, Jian-Bo Liu, Jin Huang, Lei-Liang He

State Key Laboratory of Chemo/Biosensing and Chemometrics, College of Chemistry and Chemical Engineering, Hunan University, Key Laboratory for Bio-nanotechnology and Molecular Engineering of Hunan Province, Changsha 410082, China

This assay mainly relies on that the aptamer-based probe undergoing a conformational transition upon binding with target protein, which subsequently triggers the polymerization reaction to generate double strand DNA. Then, the double strand DNA can act as an efficient template for the formation of copper nanoparticles with high fluorescence.



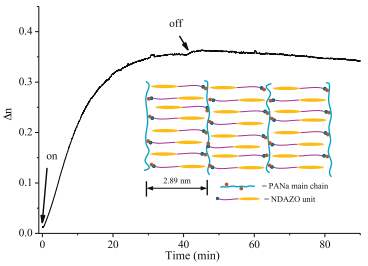
Photoresponding ionic complex containing azobenzene chromophore for use in birefringent film

Chinese Chemical Letters 25 (2014) 15

Jun Wu[a], Xue-Min Lu[a], Feng Shan[a], Jun-Fang Guan[a], Qing-Hua Lu[a,b]

[a]*School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, Shanghai 200240, China*
[b]*The State Key Laboratory of Metal Matrix Composites, Shanghai Jiao Tong University, Shanghai 200240, China*

A novel photoresponding ionic complex bearing azobenzene chromophores is prepared. The photoinduced anisotropic properties of the ionic complex are explored. A high birefringence value (0.365) is obtained in the complex film.



doi:10.1016/S1001-8417(13)00567-6

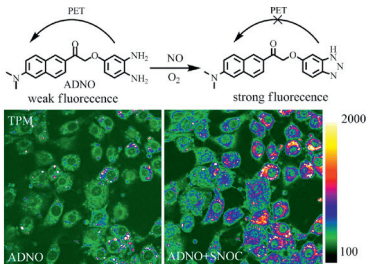
Chinese Chemical Letters 25 (2014) 19

Highly selective two-photon fluorescent probe for imaging of nitric oxide in living cells

Qing Liu[a,c], Lin Xue[a], Dong-Jian Zhu[a,c], Guo-Ping Li[a,c], Hua Jiang[a,b]

[a]*Beijing National Laboratory for Molecular Sciences, CAS Key Laboratory of Photochemistry, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, China*
[b]*College of Chemistry, Beijing Normal University, Beijing 100875, China*
[c]*University of Chinese Academy of Sciences, Beijing 100049, China*

A new two-photon fluorescent probe is capable of monitoring NO through a turn-on fluorescence signal output (Φ/Φ_0 up to 8-fold) both in aqueous media and living cells.



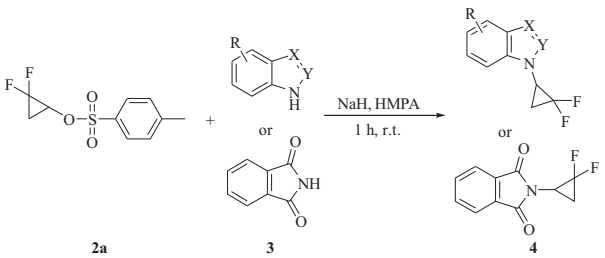
Chinese Chemical Letters 25 (2014) 24

Direct *N*-*gem*-difluorocyclopropylation of nitro-heterocycles by utilizing *gem*-difluorocyclopropyl tosylate

Wei-Peng Gu, Jin-Hong Lin, Ji-Chang Xiao

Key Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China

N-*gem*-Difluorocyclopropylation of *N*-heterocycles with the use of *gem*-difluorocyclopropyl tosylate as building block under mild conditions was described. *gem*-Difluorocyclopropyl tosylates could be easily prepared on a large scale and exhibit great stability.



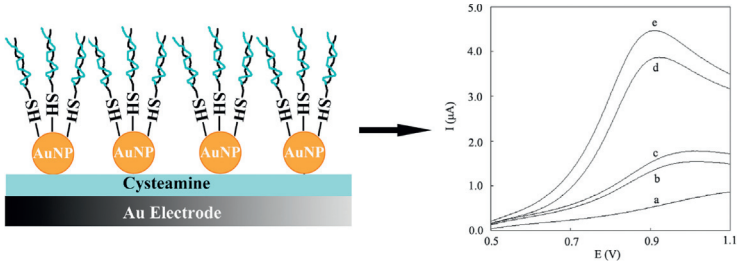
Chinese Chemical Letters 25 (2014) 29

Electrochemical DNA nano-biosensor for the detection of genotoxins in water samples

Hong-Bo Xu[a,b], Ran-Feng Ye[b], Shang-Yue Yang[b], Rui Li[b], Xu Yang[b]

[a]*Wuhan No. 11 High School, Wuhan 430030, China*
[b]*Lab of Environmental Biomedicine, Central China Normal University, Wuhan 430079, China*

An electrochemical DNA nano-biosensor is proposed for the rapid detection of genotoxic compounds and bio-analysis of water pollution. The DNA nano-biosensor was prepared by immobilizing DNA on the Au electrode modified with Au nanoparticles and a self-assembled monolayer of cysteamine.

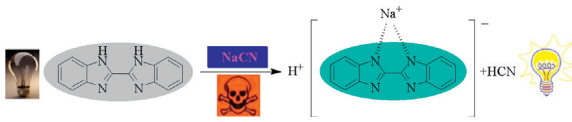


Chinese Chemical Letters 25 (2014) 35

Turn-on fluorescence sensing of cyanide ions in aqueous solution

Jun Liu, Qi Lin, Hong Yao, Miao Wang, You-Ming Zhang, Tai-Bao Wei

Key Laboratory of Eco-Environment-Related Polymer Materials, Ministry of Education of China, Key Laboratory of Polymer Materials of Gansu Province, College of Chemistry and Chemical Engineering, Northwest Normal University, Lanzhou 730070, China



The fluorescent probe 2,2′-bisbenzimidazole (**L**) can be synthesized easily and rapidly, with good selectivity and sensitivity for CN^- in aqueous solution.