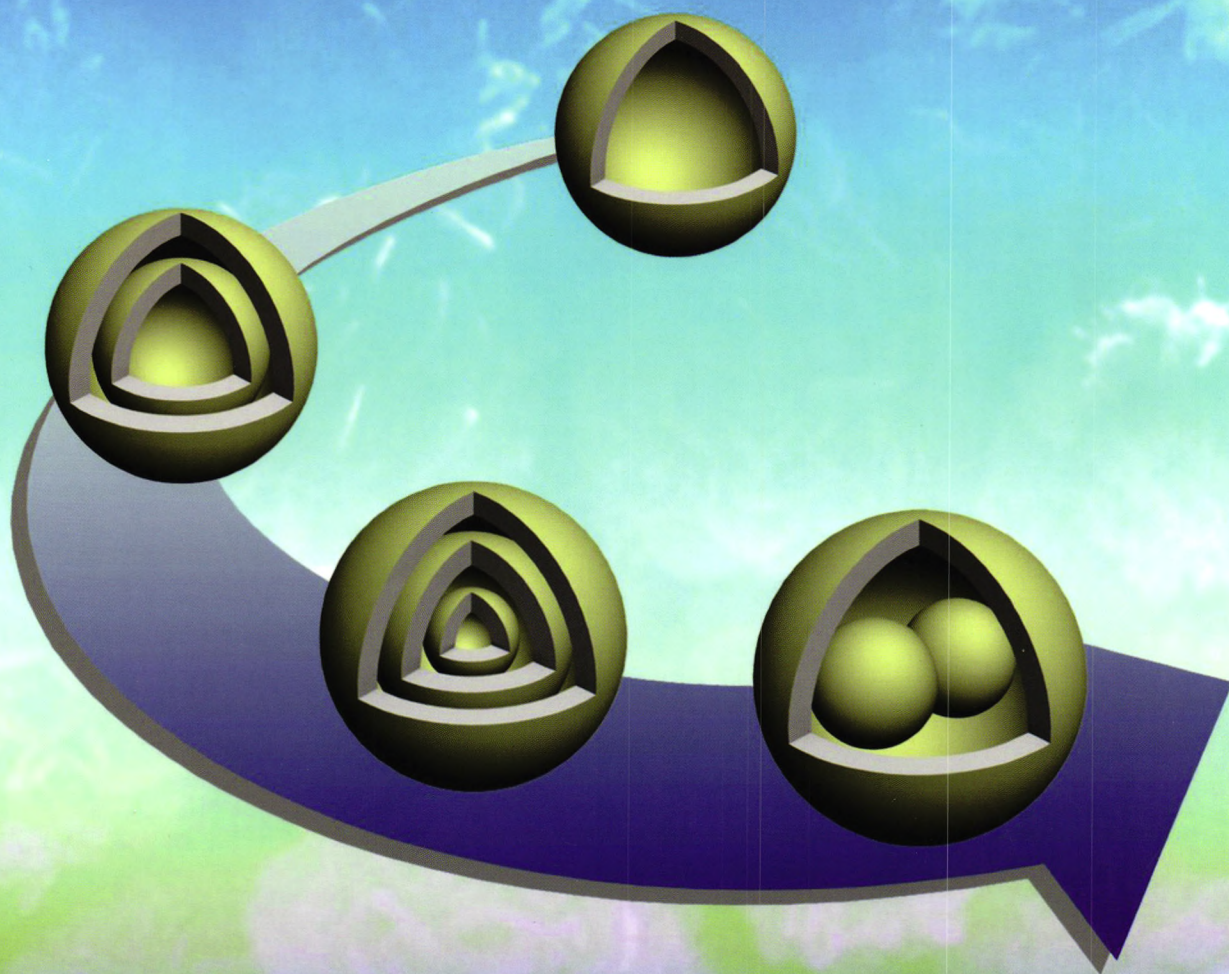


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| Volume 24 | Number 1 | JANUARY 2013 |



REVIEW

Jian-Nian Yao et al.
Controlled synthesis of multi-shelled
transition metal oxide hollow structures
through one-pot solution route

ORIGINAL ARTICLES

Zhong-Ze Gu et al.
Optical monitoring the degradation
of PLGA inverse opal film



1001-8417 (201301)24:1;1-J

Chinese Chemical Society

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Graphical Abstracts/Chin Chem Lett 24 (2013) i–ix

Review

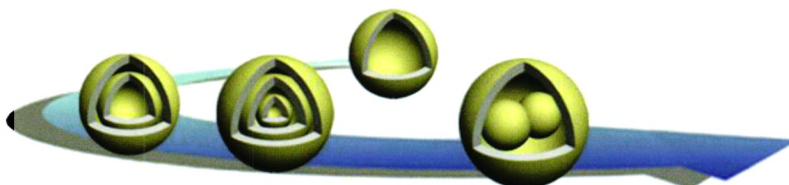
Controlled synthesis of multi-shelled transition metal oxide hollow structures through one-pot solution route

Chinese Chemical Letters, 24 (2013) 1

Xi Wang, Yi-Jun Yang, Ying Ma, Jian-Nian Yao

Beijing National Laboratory for Molecular Sciences (BNLMS), CAS
Key Laboratory of Photochemistry,
Institute of Chemistry, Chinese Academy of Sciences, Beijing
100190, China

Recent advances in one-pot solution synthesis of multi-shelled transition metal oxide hollow structures are highlighted here.



Original articles

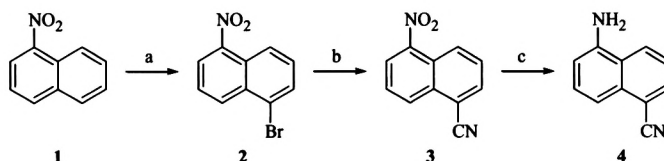
A scalable synthesis of 1-amino-5-cyanonaphthalene, a precursor for a nitric oxide probe (NO550) designed via the “dye assembly” principle

Chinese Chemical Letters, 24 (2013) 7

Yan-Ming Shen, Lin-Lin Song, Xu-Hong Qian, You-Jun Yang

Shanghai Key Laboratory of Chemical Biology, School of Pharmacy, East China
University of Science and Technology, Shanghai 200237, China

A convenient synthesis of 1-amino-5-cyanonaphthalene was reported.



Optical monitoring the degradation of PLGA inverse opal film

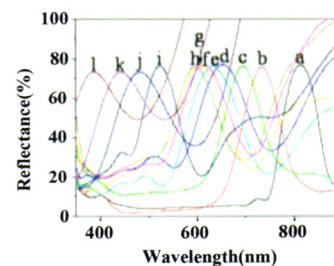
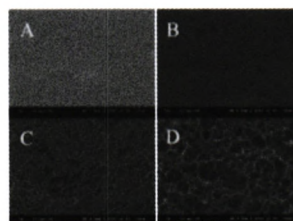
Chinese Chemical Letters, 24 (2013) 9

Li-Guo Sun^{a,b}, Zhuo-Ying Xie^a, Yuan-Jin Zhao^a, Hong-Mei Wei^a, Zhong-Ze Gu^a

^aState Key Laboratory of Bioelectronics, Southeast University, Nanjing 210096,
China

^bSchool of Chemistry and Materials, Heilongjiang University, Harbin 150080, China

PLGA inverse opal films at different degradation stages were monitored with reflection spectrum changes.



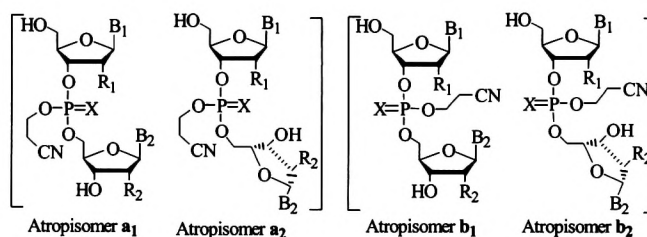
Atropisomerism of diastereomer diribonucleoside phosphotriester

Chinese Chemical Letters, 24 (2013) 13

Lu-Xin Na, Xu-Lin Sun, Meng Wang, Kun-Feng Li, Lei Xing, Zhuo Chen, Zhu Guan, Zhen-Jun Yang

State Key Laboratory of Natural and Biomimetic Drugs, School of Pharmaceutical Sciences, Peking University, Beijing 100191, China

Atropisomerism of diastereomer diribonucleoside phosphotriester due to the large stereospecific blockade around P atom.



A simple and green route to transparent boron nitride/PVA nanocomposites with significantly improved mechanical and thermal properties

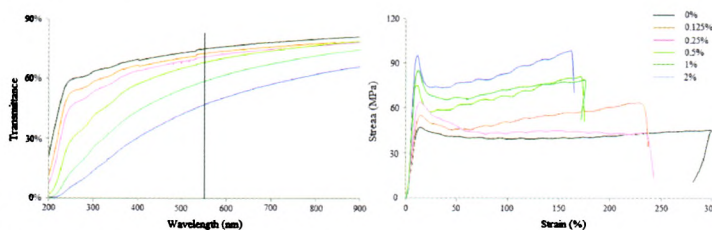
Chinese Chemical Letters, 24 (2013) 17

Zhi-Qiang Duan^a, Yi-Tao Liu^a, Xu-Ming Xie^a, Xiong-Ying Ye^b

^aAdvanced Materials Laboratory, Department of Chemical Engineering, Tsinghua University, Beijing 100084, China

^bDepartment of Precision Instruments and Mechanology, Tsinghua University, Beijing 100084, China

A simple and green method is developed to prepare hexagonal boron nitride (h-BN)/poly(vinyl alcohol) (PVA) nanocomposites by using water as a common solvent of h-BN nanosheets and PVA. The obtained h-BN/PVA nanocomposites are highly transparent, and have significantly improved mechanical and thermal properties.



Metal complex with terpyridine derivative ligand as highly selective colorimetric sensor for iron(III)

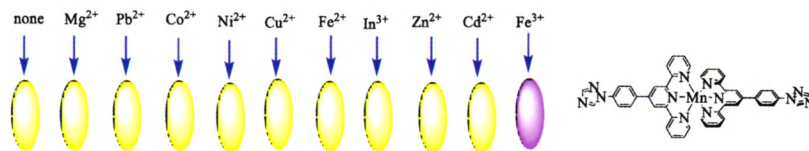
Chinese Chemical Letters, 24 (2013) 20

Peng Wang^a, Taka-aki Okamura^b, Hong-Ping Zhou^c, Wei-Yin Sun^a, Yu-Peng Tian^c

^aCoordination Chemistry Institute, State Key Laboratory of Coordination Chemistry, School of Chemistry and Chemical Engineering, Nanjing National Laboratory of Microstructures, Nanjing University, Nanjing 210093, China

^bDepartment of Macromolecular Science, Graduate School of Science, Osaka University, Toyonaka, Osaka 560-0043, Japan

^cDepartment of Chemistry, Anhui Province Key Laboratory of Functional Inorganic Materials Chemistry, Anhui University, Hefei 230039, China



A terpyridine-based Mn(II) complex shows apparent color change upon addition of Fe(III), which can be detected by naked eye.

Effects of aggregation of poly(3-hexylthiophene) in solution on uniaxial alignment of nanofibers during zone casting

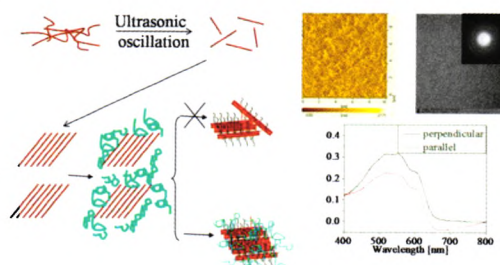
Chinese Chemical Letters, 24 (2013) 23

Xiang Gao^{a,b}, Jian-Gang Liu^{a,b}, Yue Sun^{a,b}, Ru-Bo Xing^{a,b}, Yan-Chun Han^a

^aState Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, China

^bGraduate School of the Chinese Academy of Sciences, Beijing 100049, China

We report on the effects of aggregation of P3HT with ordered conformation in solution on improving the uniaxial alignment of the P3HT nanofibers by zone casting.



Chinese Chemical Letters, 24 (2013) 28

Aza-Michael addition reactions between nitroolefins and benzotriazole catalyzed by MCM-41 immobilized heteropoly acids in water

Shao-Lei Xie, Yong-Hai Hui, Xiang-Ju Long, Chang-Chun Wang, Zheng-Feng Xie

Key Laboratory of Oil & Gas Fine Chemicals, Ministry of Education & Xinjiang Uyghur Autonomous Region, College of Chemistry and Chemical Engineering, Xinjiang University, Urumqi 830046, China

MCM-41 immobilized heteropoly acids (HPAs) catalysts were synthesized, characterized and their catalytic activities were evaluated in the aza-Michael addition reaction of nitroolefins and benzotriazole in water at room temperature.

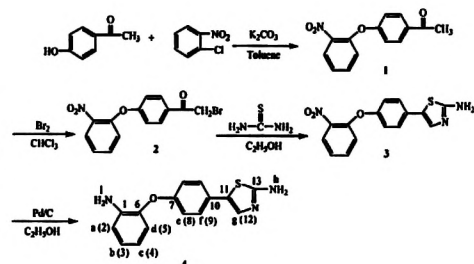


Chinese Chemical Letters, 24 (2013) 31

Synthesis and characterization of novel polyimides derived from unsymmetrical diamine: 2-Amino-5-[4-(2'-aminophenoxy)phenyl]-thiazole

Xin Zhao, Qing-Fen Geng, Tian-Hong Zhou, Xiang-Hu Gao, Gang Liu

Center of Eco-materials and Green Chemistry, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, China

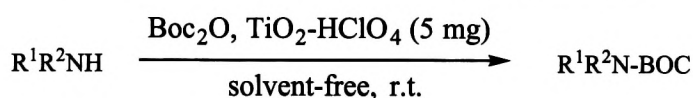
A new kind of thiazole-containing unsymmetrical *ortho*-diamine monomer and corresponding novel polyimide were synthesized. The resulting polyimide exhibits excellent solubility, film-forming capability and high thermal and thermo-oxidative stability.

Chinese Chemical Letters, 24 (2013) 34

Nanocrystalline TiO₂-HClO₄: A novel, efficient and recyclable catalyst for the chemoselective *N*-Boc protection of amines under solvent-free conditions

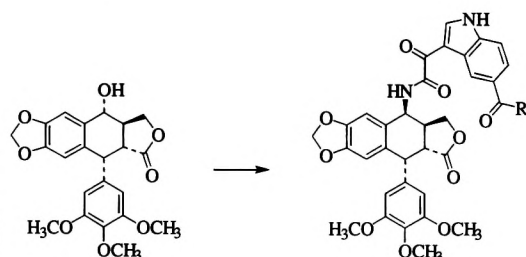
Farhad Shirini, Seyyed Vahid Atghia, Mojtaba Ghazi Jirdehi

Department of Chemistry, College of Science, University of Guilan, Rasht 41335, Islamic Republic of Iran

Nanocrystalline TiO₂-HClO₄, as newly reported catalyst, has been used as an efficient and reusable catalyst for the chemoselective *N*-Boc protection of amines.

Chinese Chemical Letters, 24 (2013) 37

Synthesis and anti-tumor activity evaluation of novel podophyllotoxin derivatives

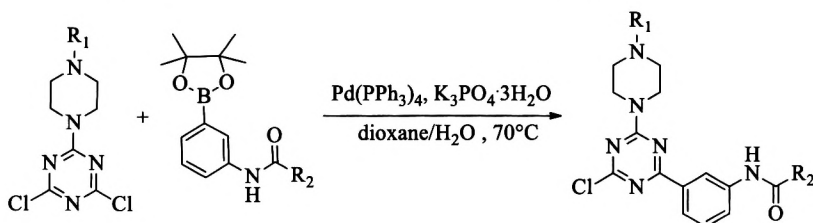
Ting Ai^{a,b}, Shao-Yu Shi^{a,b}, Li-Ting Chen^a, Ling Li^b, Bo Cao^b, Ying Gao^b, Hong Chen^{a,b}, Jing Zhou^a^aTianjin Key Laboratory on Technologies Enabling Development of Clinical Therapeutics and Diagnostics, School of Pharmacy, Tianjin Medical University, Tianjin 300070, China^bTianjin Key Laboratory for Biomarkers of Occupational and Environmental Hazard, Department of Pharmacognosy, Logistics University of Chinese People's Armed Police Forces, Tianjin 300162, ChinaBased on the medical chemistry combination principles, seven novel C4-*N*-substituted novel podophyllotoxin derivatives were synthesized. Among them, several analogs showed an improved anti-tumor activity than podophyllotoxin.

Selective mono-arylation in palladium-catalyzed cross-coupling reaction of dichlorotriazines with phenylboronate ester derivatives

Chinese Chemical Letters, 24 (2013) 41

Jin-Fu Dong^a, Xin Yu^b, Cheng-Qing Ning^a, Liang Hu^a, Nie-Fang Yu^a^aSchool of Pharmaceutical Sciences, Central South University, Changsha 410013, China^bSchool of Pharmaceutical Sciences, Sun Yat-sen University, Guangzhou 51006, China

A practical procedure for selective mono-arylation of dichlorotriazines was successfully developed.

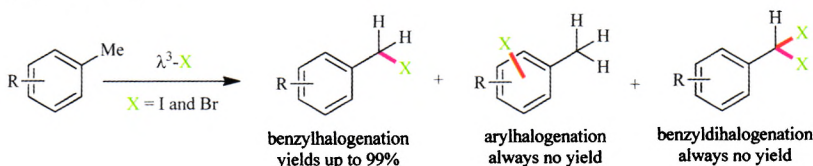


Effective synthesis of benzyl halides triggered by *in situ* prepared hypervalent halides

Chinese Chemical Letters, 24 (2013) 45

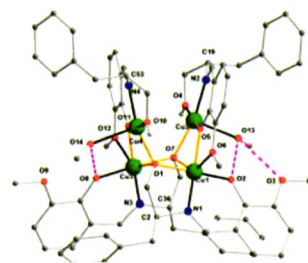
Xue-Ge Ling, Yan Xiong, Shu-Ting Zhang, Ruo-Feng Huang, Xiao-Hui Zhang

School of Chemistry and Chemical Engineering, Chongqing University, Chongqing 400030, China

Effective benzylhalogenation triggered by *in situ* prepared hypervalent halide.

Synthesis and characterization of a tetranuclear copper(II) complex with a chiral Schiff base ligand

Chinese Chemical Letters, 24 (2013) 49

Hua Xiang^a, Long Jiang^b, Huan-Yong Li^b, Xiao-Dan Zheng^b, Yu Li^c^aDepartment of Media and Communication, Guangdong Industry Technical College, Guangzhou 510300, China^bSchool of Chemistry and Chemical Engineering, Sun Yat-Sen University, Guangzhou 510275, China^cDepartment of Chemical Engineering, Guangdong Industry Technical College, Guangzhou 510300, ChinaThe title complex $[Cu^II_4(Hvap)_2(vap)_2(MeOH)_2](ClO_4)_2$ 1 has been synthesized and characterized by EA, IR, TGA, solid-state CD spectra and X-ray single-crystal analyses. Complex 1 contains a boat-shaped $\{Cu_4O_4\}$ motif. The solid-state CD spectra confirm the chiral nature of complex 1.

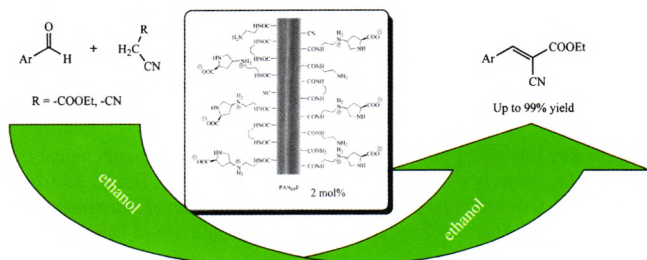
Highly efficient Knoevenagel condensation reactions catalyzed by a proline-functionalized polyacrylonitrile fiber

Chinese Chemical Letters, 24 (2013) 52

Guo-Wei Li, Jia Xiao, Wen-Qin Zhang

Department of Chemistry, School of Sciences, Tianjin University, Tianjin 300072, China

A new proline-functionalized fiber catalyst was used as a highly efficient and reusable supported catalyst for catalyzing Knoevenagel condensation reactions between aromatic aldehydes and ethyl cyanoacetate or malononitrile.

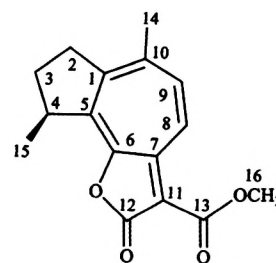


A new guaianolide from the roots of *Pterocypsela elata*

Chinese Chemical Letters, 24 (2013) 55

Yi-Xiao Bai^a, Jing Tan^b, Fu-Lin Yan^a, Ming-Ming Ding^a, Xiang Wang^a^aPharmacy College, Xinxiang Medical University, Xinxiang 453003, China^bThird Clinical College of Xinxiang Medical University, Xinxiang 453003, China

One new guaianolide, (4*S*)-11-methoxycarbonyl-guaiane-1(10),5(6),7(11),8(9)-tetraen-6,12-olide was isolated from the roots of *Pterocypsela elata*. Its structure was elucidated by various spectroscopic methods and confirmed by X-ray crystallographic analysis.

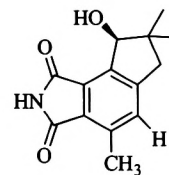


A novel norsesquiterpene alkaloid from the mushroom-forming fungus *Flammulina velutipes*

Chinese Chemical Letters, 24 (2013) 57

Zhen-Yu Xu^{a,b}, Zhi-Ang Wu^a, Kai-Shun Bi^a^aSchool of Business Administration, Shenyang Pharmaceutical University, Shenyang 110016, China^bCenter for Drug Evaluation, SFDA, Beijing 100038, China

A new cytotoxic norsesquiterpene alkaloid (**1**) was isolated from the culture of *Flammulina velutipes* and the absolute configuration was determined by CD data.



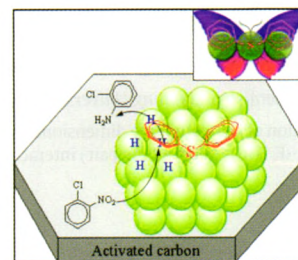
Behavior of adsorbed diphenyl-sulfide on the Pd/C catalyst for *o*-chloronitrobenzene hydrogenation

Chinese Chemical Letters, 24 (2013) 59

Chang Su, Xiao-Nian Li, Qun-Feng Zhang, Lei Ma, Chun-Shan Lu, Feng Feng

Industrial Catalysis Institute of Zhejiang, University of Technology, Hangzhou 310032, China

A diphenyl-sulfide (Ph₂S)-immobilized Pd/C catalytic system (Pd-Ph₂S_(x)/C) was developed and employed for the hydrogenation of *o*-chloronitrobenzene showed very high selectivity. The possible mechanism for the enhanced selectivity of the Pd-Ph₂S_(x)/C catalyst was proposed.

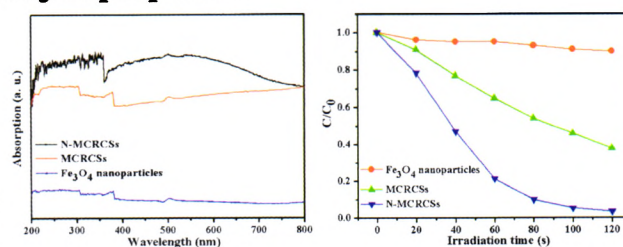


Magnetite/*N*-doped carboxylate-rich carbon spheres: Synthesis, characterization and visible-light-induced photocatalytic properties

Chinese Chemical Letters, 24 (2013) 63

Hong-Jun Tang^a, Ting-Ting Han^a, Zhi-Jun Luo^{b,c}, Xiang-Yang Wu^b^aSchool of Chemistry and Chemical Engineering, Jiangsu University, Zhenjiang 212013, China^bSchool of the Environment, Jiangsu University, Zhenjiang 212013, China^cState Key Laboratory of Coordination Chemistry, Nanjing University, Nanjing 210093, China

Magnetite/*N*-doped carboxylate-rich carbon spheres (N-MCRCSs) were synthesized, which can not only be easily recycled by applying an external magnetic field, but also exhibit powerful visible light photocatalytic activity for the degradation of methylene blue (MB).



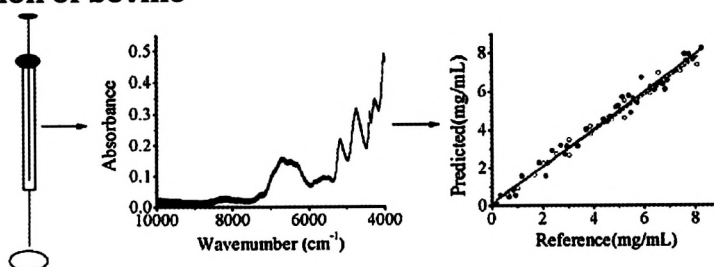
Near-infrared diffuse reflectance spectroscopy with sample spots and chemometrics for fast determination of bovine serum albumin in micro-volume samples

Chinese Chemical Letters, 24 (2013) 67

Cai-Jing Cui, Wen-Sheng Cai, Xue-Guang Shao

Research Center for Analytical Sciences, College of Chemistry, Nankai University, Tianjin 300071, China

A method for fast determination of bovine serum albumin (BSA) in micro-volume samples was studied using near-infrared diffuse reflectance spectroscopy (NIRDRS) with sample spots and chemometric techniques.

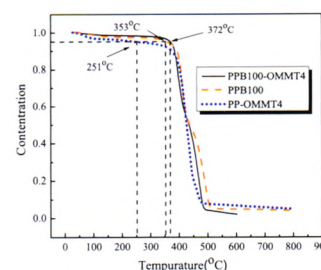


A new composite polymer electrolyte based on poly(ethyleneoxide)/polysiloxane/BMI/TFSI/organomontmorillonite

Chinese Chemical Letters, 24 (2013) 70

Yue-Jiao Li^{a,b}, Feng Wu^{a,b}, Hu-Ren Chao^a, Shi Chen^{a,b}^aBeijing Key Laboratory of Environmental Science and Engineering, School of Chemical Engineering and Environment, Beijing Institute of Technology, Beijing 100081, China^bNational Development Center for High Technology Green Material, Beijing 100081, China

The composite polymer electrolyte exhibited high thermal and electrochemical stability and high ionic conductivity.



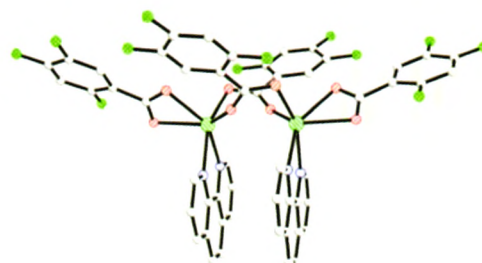
Supramolecular assembly of 2,4,5-trifluorobenzoate complex based on weak interactions involving fluorine atoms

Chinese Chemical Letters, 24 (2013) 73

Chun-Hua Ge, Rui Zhang, Ping Fan, Xiang-Dong Zhang, Li-Juan Wang, Fang-Fang Wang

College of Chemistry, Liaoning University, Shenyang 110036, China

The formation of intricate three dimensional supramolecular network is dependent on weak interactions of C-H...F, F...F, F(lp)···π (lp = lone pair) interactions between the dinuclear complexes.

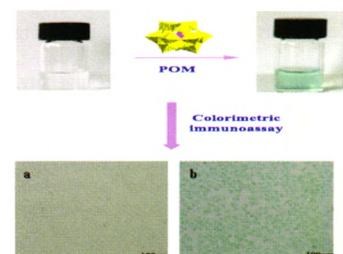


Fabrication of inorganic-organic hybrid based on polyoxometalate SiW₁₀Fe₂ and folate as peroxidases for colorimetric immunoassay of cancer cells

Chinese Chemical Letters, 24 (2013) 76

Zhong Sun^a, Hai-Zhou Bie^b, Mei-Jie Wei^a, Jing-Jing Wang^a, Xu-Guang Mi^c, Xiao-Hong Wang^a, Yin Wu^c^aKey Laboratory of Polyoxometalate, Science of Ministry of Education, Faculty of Chemistry, Northeast Normal University, Changchun 130024, China^bChangchun Central Hospital, Changchun 130051, China^cNational Engineering Laboratory for Druggable Gene and Protein Screening, Northeast Normal University, Changchun 130024, China

FA-SiW₁₀Fe₂ nanoparticles can facilitate the fast oxidation of organic dye (TMB) with H₂O₂ at a neutral pH condition. FA-SiW₁₀Fe₂ is inexpensive, easily preparation, and very efficient in a wide range of new potential applications in biotechnology, environmental chemistry, and medicine.



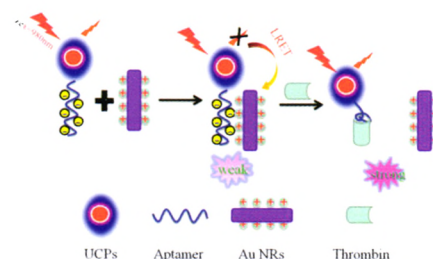
A “turn-off” luminescence resonance energy transfer aptamer sensor based on near-infrared upconverting $\text{NaYF}_4\text{:Yb}^{3+}$, Tm^{3+} nanoparticles as donors and gold nanorods as acceptors

Hong-Qi Chen, Juan Xu, Fei Yuan, Yong Wu, Yi-Yan Zhang, Lun Wang

Anhui Key Laboratory of Chemo-Biosensing, College of Chemistry and Materials Science, Anhui Normal University, Wuhu 241000, China

A new “turn-off” luminescence resonance energy transfer aptamer sensor was constructed for sensing thrombin in near-infrared region that utilizes near-infrared upconversion $\text{NaYF}_4\text{:Yb}^{3+}$, Tm^{3+} nanoparticles as the donors, and Au nanorods as the acceptors.

Chinese Chemical Letters, 24 (2013) 79



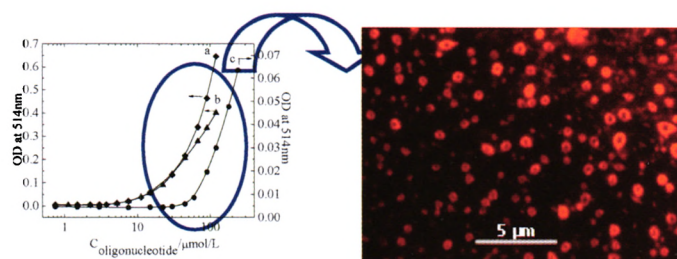
Vesicle formation between single-chained cationic surfactants and ribo-oligonucleotides

Hua Li, Xia Guo

School of Chemistry and Chemical Engineering, Yangzhou University, Yangzhou 225002, China

Ribo-oligonucleotide can induce vesicle formation with a higher inductive efficiency than deoxyribo-oligonucleotide.

Chinese Chemical Letters, 24 (2013) 82



A theoretical study on the water-mediated asynchronous addition between urea and formaldehyde

Tao-Hong Li^{a,b}, Xiao-Guang Xie^c, Guan-Ben Du^{a,b}

^aCollege of Wood Science and Technology, Nanjing Forestry University, Nanjing 210037, China

^bFaculty of Chemistry, Southwest Forestry University, Kunming 650224, China

^cDepartment of Chemistry, Yunnan University, Kunming 650091, China

The urea-formaldehyde addition can be catalyzed by water molecules and occurs in a concerted mechanism with asynchronous character. The zwitterionic-like intermediate which has been found previously for amination of formaldehyde with amines proved to be not involved in this reaction.

Chinese Chemical Letters, 24 (2013) 85

