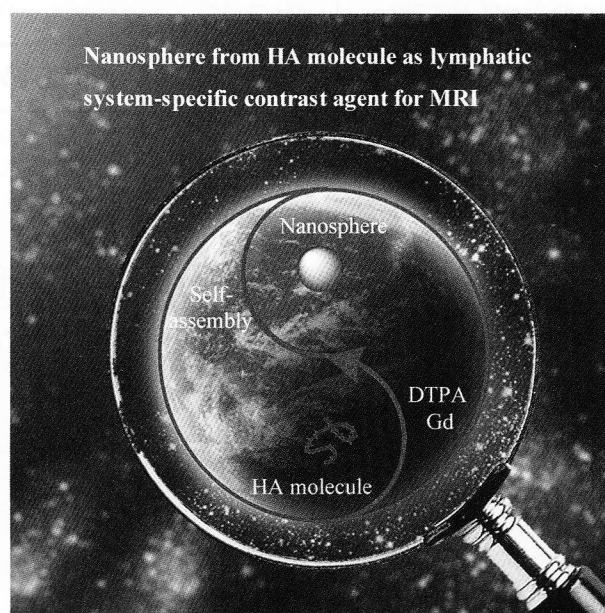


中国科学院科学出版基金资助出版

COVER PICTURE

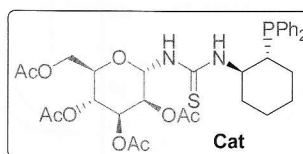
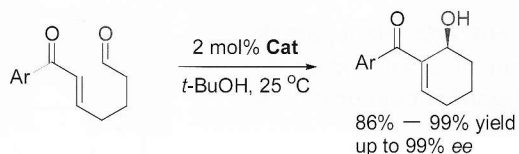
The cover picture shows the synthesis of hyaluronic acid gadolinium complex (HA-Gd-DTPA) nanosphere from natural hyaluronic acid molecule through complexation and assembly. The nanosphere, as a novel magnetic resonance imaging (MRI) contrast agent, is specially used to the examination and diagnosis of the lymphatic system disease because the hyaluronic acid is a highly promising lymphatic targeting carrier. More details are discussed in the article by Zhu *et al.* on page 1153—1158.



COMMUNICATIONS

1111

Highly Enantioselective Intramolecular Morita-Baylis-Hillman Reaction Catalyzed by Mannose-Based Thiourea-phosphine



Weihong Yang, Kui Yuan, Hongliang Song, Feng Sha, Xinyan Wu*

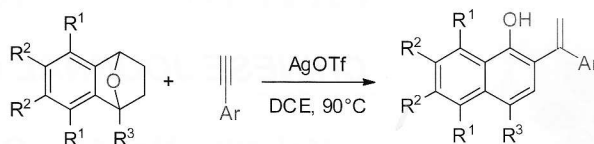
Chiral bifunctional thiourea-phosphine derived from *D*-mannose was developed as highly efficient organocatalyst for the enantioselective intramolecular Morita-Baylis-Hillman reaction of ω -formyl-enones.

CONTENT

1115

AgOTf-Catalyzed Tandem Reaction of Oxabenzonorbornadienes with Arylacetylenes

Yongyun Zhou, Shanshan Liu, Hualei Chen, Jingchao Chen, Weiqing Sun, Sifeng Li, Qingjing Yang, Baomin Fan*

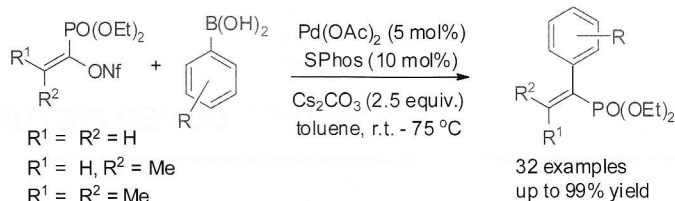


A tandem isomerization/hydroarylation reaction of oxabenzonorbornadienes and arylacetylenes was realized by using AgOTf as catalyst. 1,1-Diarylethylenes could be easily generated as products in moderate to good yields in this tandem reaction.

1119

Pd-Catalyzed Synthesis of α -Aryl Vinylphosphonates via Suzuki Arylation of α -Phosphonovinyl Nonaflates

Meijuan Yuan, Yewen Fang,* Li Zhang, Xiaoping Jin,* Minjia Tao, Qilin Ye, Ruirong Li,* Jinjian Li, Hui Zheng, Juejun Gu

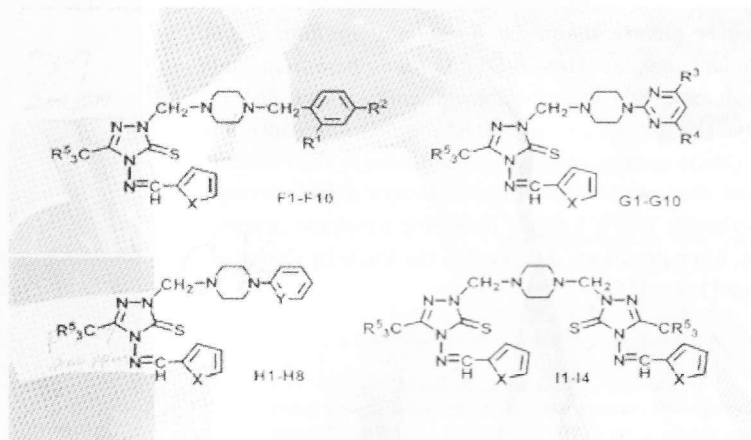


FULL PAPERS

1124

Synthesis and Biological Activity of Novel Furan/Thiophene and Piperazine-Containing (Bis)1,2,4-triazole Mannich Bases

Baolei Wang, Yanxia Shi, Yizhou Zhan, Liyuan Zhang, Yan Zhang, Lihong Wang, Xiao Zhang, Yonghong Li, Zhengming Li,* Baoju Li*

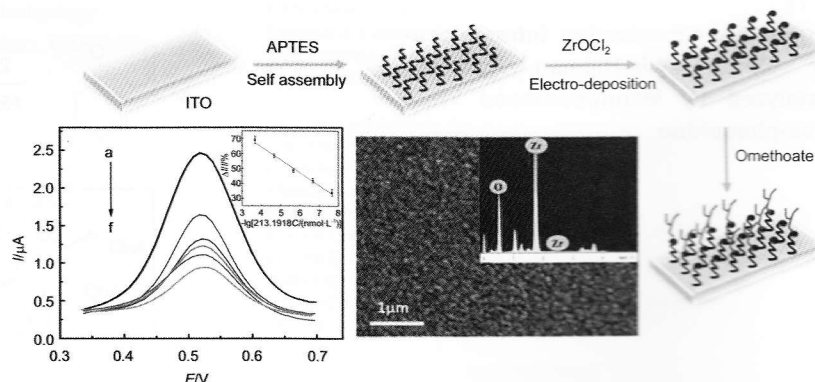


A series of novel (bis)1,2,4-triazole Mannich bases containing furan/thiophene and piperazine moieties were synthesized and characterized by melting point, organic spectroscopy and elemental analysis. The fungicidal activity, herbicidal activity, KARI inhibitory activity and insecticidal activity of new compounds were investigated.

1135

A Highly Efficient ZrO₂ Nanoparticle Based Electrochemical Sensor for the Detection of Organophosphorus Pesticides

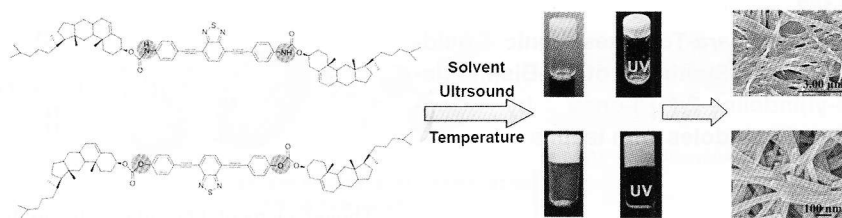
Haibo Wang, Yingchun Su, Hojong Kim, Daming Yong, Lei Wang, Xiaojun Han*



Due to the strong affinity of ZrO₂ with the phosphoric group, a sensitive electrochemical method for the detection of organophosphate (OP) compounds was developed based on zirconia (ZrO₂) nanoparticles modified electrode.

1140

Multiple-Stimuli Responsive Luminescent Gels Based on Cholesterol Containing Benzothiadiazole Fluorophores

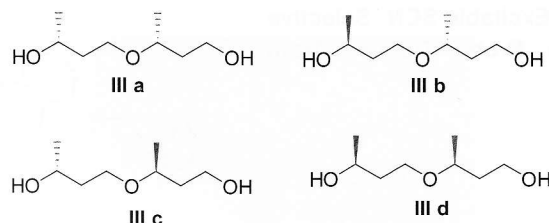


Two new fluorescent organogelators based on cholesterol containing benzothiadiazole group have been designed and synthesized, both of which show multiple-stimuli responsive properties to solvent, temperature, ultrasound and Hg^{2+} . And the self-assembly process and mechanism were studied via FT-IR, UV-vis absorption and PL spectra, and XRD.

Huibin Sun, Shujuan Liu, Qiang Zhao,*
Wei Huang*

1145

First Synthesis and Characterization of Stereoisomers of Choleric Drug Dihydroxydibutylether

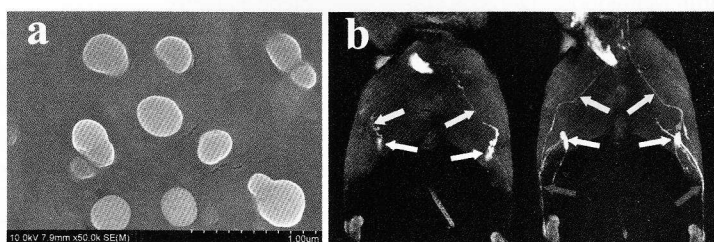


The first synthesis of the four stereoisomers of **III** from readily available starting materials, methyl (*R/S*)-3-hydroxybutanoate, in 9 steps with overall yields of 13%–17% was reported. This study will provide an access to developing new drugs.

Qiming Yue, Yi Zhao, Baohou Sun, Li
Hai, Li Guo*, Yong Wu*

1153

Hyaluronic Acid-Gadolinium Complex Nanospheres as Lymphatic System-Specific Contrast Agent for Magnetic Resonance Imaging

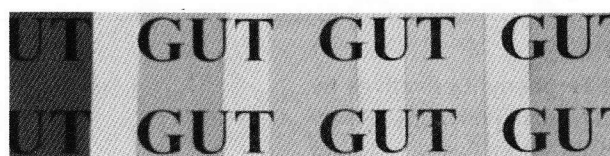


A novel MRI contrast agent, hyaluronic acid gadolinium complex (HA-Gd-DTPA) nanospheres, was prepared by the synthesis of hyaluronic acid gadolinium complexes and their assembly, which showed obviously higher relaxation effectiveness and MRI contrast between blood vessel and lymph vessel in rabbit than that of Magnevist.

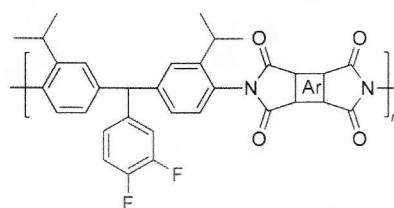
Guangyu Wu, Huajuan Zhang, Qing Lu,
Jiejun Cheng, Jianrong Xu,* Jun Zhu*

1159

Synthesis and Characterization of Fluorinated Polyimide Derived from 3,3'-Diisopropyl-4,4'-diaminodiphenyl-3'',4''-difluorophenylmethane



Kapton PI-PMDA PI-BPDA PI-ODPA PI-BTDA



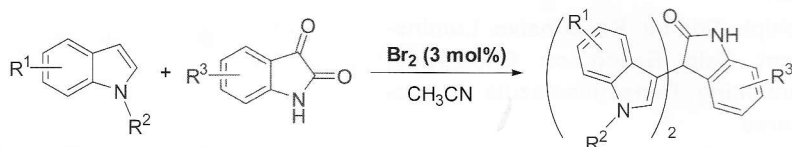
A series of organosoluble, optical transparent and low dielectric constant fluorinated polyimides were designed and synthesized from a novel diamine PAFM and various aromatic dianhydrides.

Xiaohua Huang,* Mei Mei, Chanjuan Liu,
Xianglin Pei, Chun Wei

CONTENT

1167

Bromine/*para*-Toluenesulfonic Acid-Catalyzed Synthesis of 3,3-Bis(indole-3-yl)indoline-2-(1*H*)-ones by Condensing Indoles with Isatins

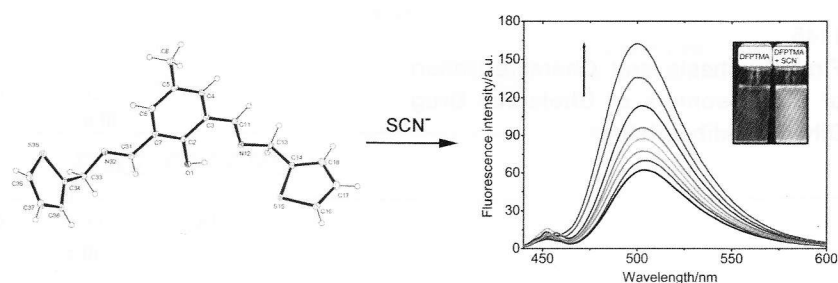


Though elemental bromine is by no means considered to be a green reagent, the curious bromine effect would inspire more inquires into, say, the application of Br_2 as a novel catalyst in organic chemistry. Herein, an example is presented, and under the catalysis of only 3 mol% of Br_2 at room temperature, indoles reacted rapidly with isatins to form biologically important 3,3-bis(indole-3-yl)indoline-2-(1*H*)-ones with high efficiency and wide substrate scope.

Wenzhong Huang, Lingli Nang, Xiangguang Li, Lin Yuan, Yin Hai Ma, Deqiang Liang*

1173

Visible Light Excitable SCN^- Selective Fluorescence Probe Derived from Thiophene

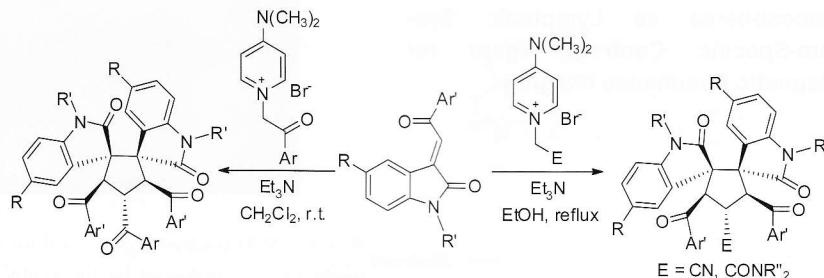


Crystallographically characterized thiophene derived turn-on fluorescence probe (DFPTMA) selectively binds SCN^- with a binding constant (K_a) of 1.32×10^4 L/mol and detection limit of 0.88 $\mu\text{mol/L}$, well below the acceptable level for SCN^- in human blood and milk.

Sudipta Das, Sisir Lohar, Jesús Sanmartín Matalobos,* Debasis Das*

1178

Synthesis of Dispirocyclopentyl-3,3'-bisoxindoles via Domino Cycloaddition Reactions of 4-Dimethylaminopyridinium Bromides with 3-Phenacylideneoxindoles

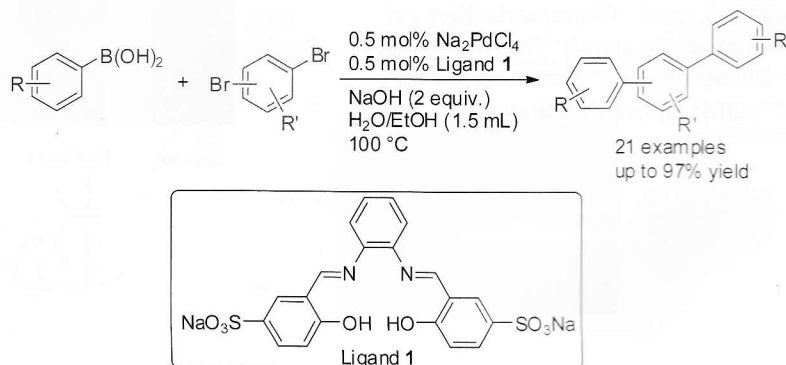


The base mediated domino cycloaddition reactions of 4-dimethylaminopyridinium bromides with two molecular 3-phenacylideneoxindoles afforded functionalized dispirocyclopentyl-3,3'-bisoxindoles in good yields and with high diastereoselectivity.

Lijuan Lu, Chaoguo Yan*

1189

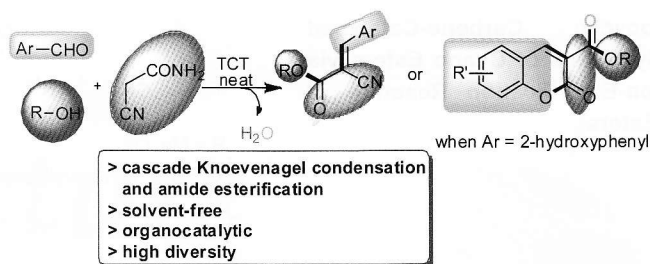
Synthesis of Terphenyl Derivatives by Pd-Catalyzed Suzuki-Miyaura Reaction of Dibromobenzene Using 2N2O-Salen as a Ligand in Aqueous Solution



Terphenyl derivatives were synthesized by Na_2PdCl_4 catalyzed Suzuki-Miyaura reactions of dibromobenzenes and arylboronic acids by using 2N2O-salen as a ligand in $\text{H}_2\text{O}/\text{EtOH}$.

Ningning Gu, Yashuai Liu, Ping Liu,* Xiaowei Ma, Liu Yan,* Bin Dai

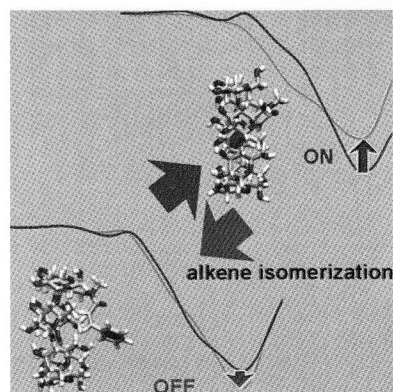
1194

Direct Three-Component Synthesis of α -Cyano Acrylates Involving Cascade Knoevenagel Reaction and Esterification

Yanfeng Jing, Jiaojiao Meng, Yunyun Liu,* Jie-Ping Wan*

In the presence of TCT organocatalyst, the direct syntheses of alkyl acrylates and chromenones have been realized via three-component reactions of aryl aldehydes, alcohols and cyano acetamide.

1199

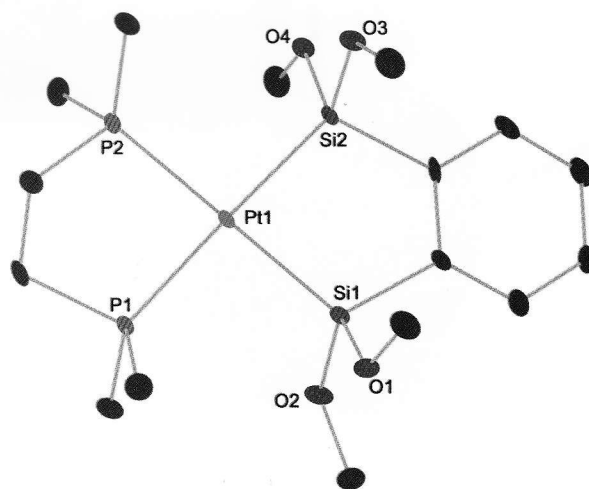
Deciphering the Mechanism Involved in the Switch On/Off of Molecular Pistons

Peng Liu, Xueguang Shao, Wensheng Cai*

The mechanism underlying the switch on/off of the operation of the molecular piston was revealed. The *cis-trans* isomerization of the alkene bond integrated within the derivatives of the cyclodextrin controls the work generated by the piston.

NOTES

1206

Synthesis, Structural Characterization and Reactivity of a Bis(phosphine)-(silyl) Platinum(II) Complex

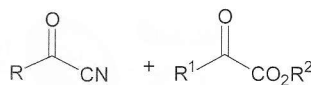
Yonghua Li,* Wenjin Zeng, Wenyong Lai, Shigeru Shimada, Shi Wang, Lianhui Wang, Wei Huang*

Treatment of 1,2- $\text{C}_6\text{H}_4(\text{SiH}_3)(\text{SiH}_3)$ (**1**) with $\text{Pt}(\text{dmpe})(\text{PET}_3)_2$ ($\text{dmpe} = \text{Me}_2\text{PCH}_2\text{CH}_2\text{PMe}_2$) in the ratio of 1 : 1 leads to the complex $\{1,2\text{-C}_6\text{H}_4(\text{SiH}_2)(\text{SiH}_2)\text{-Pt}^{\text{II}}(\text{dmpe})$ (**2**), which can react with proton organic reagent bearing hydroxy group with low steric hindrance to form a tetra-alkoxy substituted silyl platinum(II) compound (**3**).

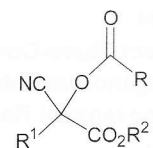
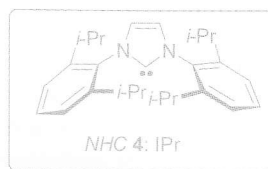
CONTENT

1211

***N*-Heterocyclic Carbene-Catalysed Direct Synthesis of Cyano Esters via Cyanation-Esterification Reaction of α -Keto Esters**



R = Me, OEt
R¹ = aryl, heteroaryl, alkyl
R² = Et, Me



43% - 94% yield
23 examples

Jie Zhang, Ying Wang, Guangfen Du,
Cheng-Zhi Gu,* Bin Dai