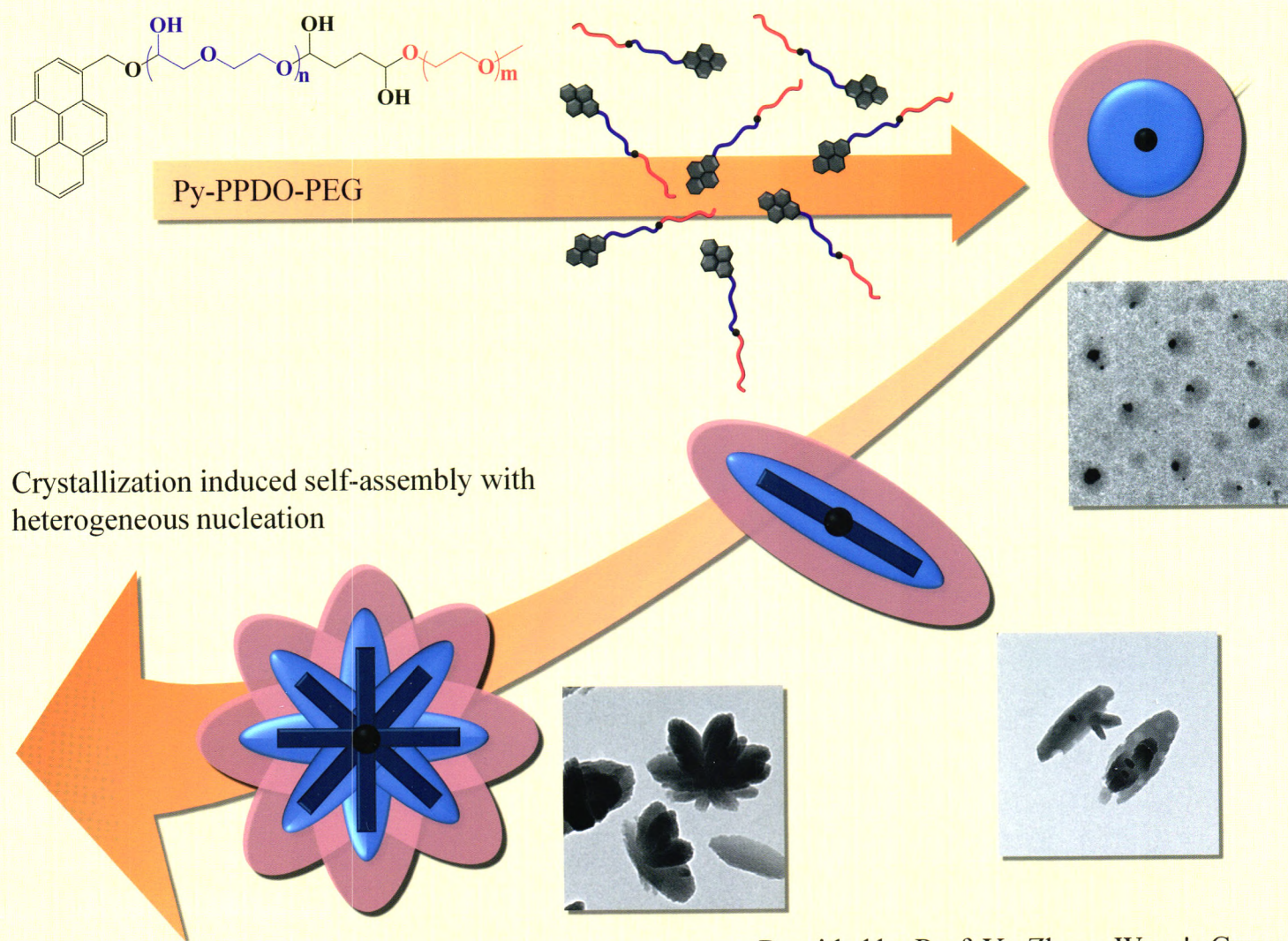


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Chinese Chemical Letters

| Volume 25 | Number 10 | OCTOBER 2014 |



Provided by Prof. Yu-Zhong Wang's Group



ORIGINAL ARTICLE

Ke-Min Wang et al.
A facile approach toward multicolor polymers:
Supramolecular self-assembly via host-guest
interaction

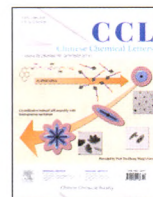
ORIGINAL ARTICLE

Xiao-Hao Wang et al.
A quick and effective multivariate
statistical strategy for imaging mass
spectrometry

ISSN 1001-8417



Chinese Chemical Society



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

Original articles

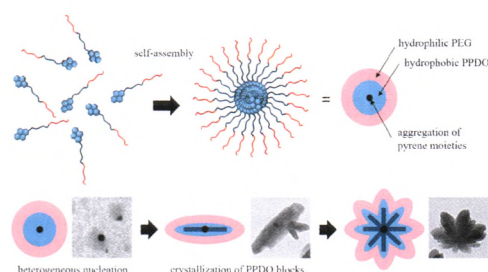
Crystallization induced micellization of poly(*p*-dioxanone)-block-polyethylene glycol diblock copolymer functionalized with pyrene moiety

Chang-Lei Liu, Gang Wu, Si-Chong Chen, Jiao You, Yu-Zhong Wang

Center for Degradable and Flame-Retardant Polymeric Materials, State Key Laboratory of Polymer Materials Engineering, College of Chemistry, National Engineering Laboratory of Eco-Friendly Polymeric Materials (Sichuan), Sichuan University, Chengdu 610064, China

Crystallization induced micellization of poly(*p*-dioxanone)-block-polyethylene glycol diblock copolymer functionalized with pyrene moiety were studied. The aggregation of pyrene moieties promotes both micellization of the copolymer and crystallization of the PPDO blocks by serving as heterogeneous nucleation agent, resulted in much higher micelle stability than copolymer without pyrene moieties.

Chinese Chemical Letters 25 (2014) 1311



A facile approach toward multicolor polymers: Supramolecular self-assembly via host-guest interaction

Xiao-Hai Yang, Fang Zhao, Lei-Liang He, Ke-Min Wang, Jin Huang, Qing Wang, Jian-Bo Liu, Meng Yang

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

We have developed a one-step and facile method for constructing multicolor polymers based on supramolecular self-assembly between adamantane-labeled dyes and β -cyclodextrin polymer.

Chinese Chemical Letters 25 (2014) 1318



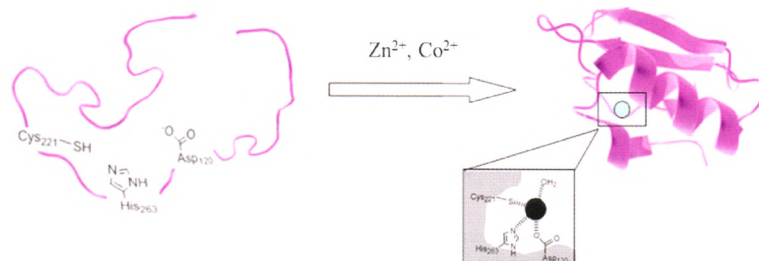
Activation free energy of Zn(II), Co(II) binding to metallo- β -lactamase ImiS

Xia Yang, Ya-Jun Zhou, Pei He, Yun-Hua Guo, Cong-Jun Liu, Ke-Wu Yang

Key Laboratory of Synthetic and Natural Functional Molecule Chemistry of Ministry of Education, College of Chemistry and Materials Science, Northwest University, Xi'an 710069, China

Binding of Zn(II), Co(II) to apo-ImiS results in an activation free energy ΔG°_a value of 92.948 and 93.908 kJ mol⁻¹, respectively, and increasing of fluorescence intensity at maxima emission of 340 nm.

Chinese Chemical Letters 25 (2014) 1323



Nucleophilic imidoesterification of dicarbonyl compounds with cyanatobenzenes through C–C bond formation

Chinese Chemical Letters 25 (2014) 1327

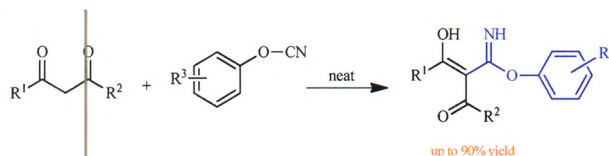
Hang Ma^a, Yang He^a, Ruo-Feng Huang^a, Xiao-Hui Zhang^a, Jing Pan^a, Jia-Qiang Li^a, Chao He^a, Xue-Ge Ling^a, Xuan-Lun Wang^c, Yan Xiong^{a,b}

^aSchool of Chemistry and Chemical Engineering, Chongqing University, Chongqing 400044, China

^bChongqing Key Laboratory of Chemical Process for Clean Energy and Resource Utilization, Chongqing University, Chongqing 400044, China

^cCollege of Materials Science and Engineering, Chongqing University of Technology, Chongqing 400054, China

An efficient method for synthesis of imidoesters has been developed using cyanatobenzenes reagents and dicarbonyl compounds, and yields of up to 90% have been obtained under neat conditions.



A quick and effective multivariate statistical strategy for imaging mass spectrometry

Chinese Chemical Letters 25 (2014) 1331

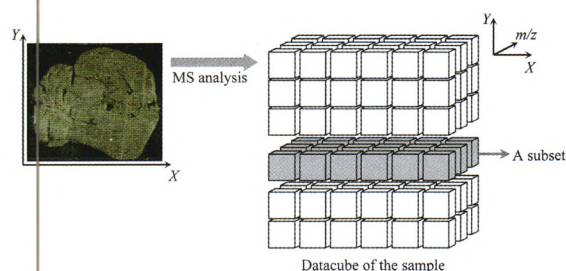
Fei Tang^a, Yi Chen^a, Tie-Gang Li^b, Jiu-Ming He^b, Zeper Abliz^b, Gang Huang^c, Xiao-Hao Wang^a

^aState Key Laboratory of Precision Measurement Technology and Instruments, Department of Precision Instrument, Tsinghua University, Beijing 100084, China

^bState Key Laboratory of Bioactive Substance and Function of Natural Medicines, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100050, China

^cNational Key Laboratory of Human Factors Engineering, China Astronaut Research and Training Center, Beijing 100094, China

It was the original data to be analyzed by the multivariate statistical strategy. The (X, Y) was the length and the width of the sample. A subset of the datacube was a dataset which had same X or Y.



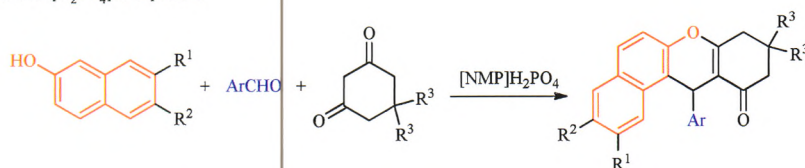
A new green approach for the synthesis of 12-aryl-8,9,10,12-tetrahydrobenzo[a]xanthene-11-one derivatives using task specific acidic ionic liquid [NMP]H₂PO₄

Chinese Chemical Letters 25 (2014) 1336

Harjinder Singh, Sudesh Kumari, Jitender M. Khurana

Department of Chemistry, University of Delhi, Delhi 110007, India

New efficient and green synthesis of benzo[a]xanthene derivatives in [NMP][H₂PO₄] is reported.



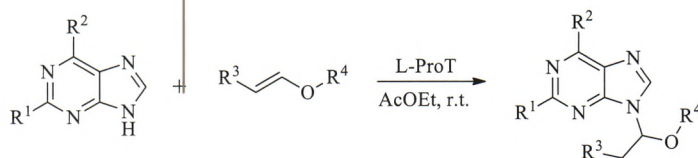
L-ProT catalyzed highly regioselective N-alkoxyalkylation of purine rings with vinyl ethers

Chinese Chemical Letters 25 (2014) 1341

Jian-Jun Li, Xing-Xing Gui

Key Laboratory for Green Pharmaceutical Technologies and Related Equipment of Ministry of Education, College of Pharmaceutical Sciences, Zhejiang University of Technology, Hangzhou 310014, China

An efficient route for the synthesis of alkoxyalkylated purine nucleoside derivatives has been developed through highly regioselective N-alkoxyalkylation of purine rings with vinyl ethers using L-ProT as the catalyst.



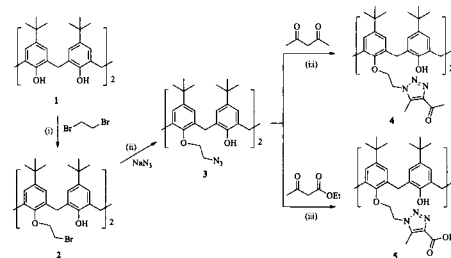
Synthesis and thermal properties of novel calix[4]arene derivatives containing 1,2,3-triazole moiety via K_2CO_3 -catalyzed 1,3-dipolar cycloaddition reaction

Zai-Gang Luo, Yu Zhao, Feng Xu, Chao Ma, Xue-Mei Xu, Xiao-Mei Zhang

College of Chemical Engineering, Anhui University of Science & Technology, Huainan 232001, China

Two calix[4]arene derivatives containing 1,2,3-triazole moiety were synthesized via K_2CO_3 -catalyzed 1,3-dipolar cycloaddition reaction between calix[4]arene-based azide and active methylene compounds. The thermal analysis showed that the mass losses of the title compounds **4** and **5** containing 1,2,3-triazole groups are similar to each other.

Chinese Chemical Letters 25 (2014) 1346



Improved synthesis of sterically encumbered multibrominated corroles

Mian HR Mahmood^{a,b}, Ze-Yu Liu^a, Hai-Yang Liu^a, Huai-Bo Zou^a, C.-K. Chang^c

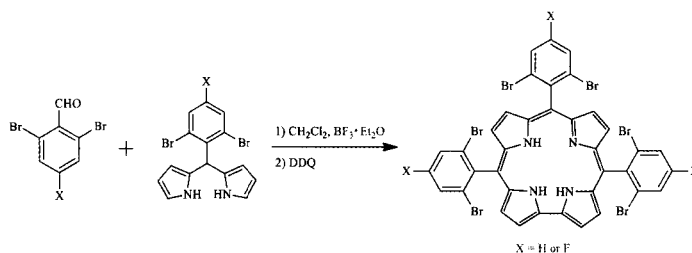
^aDepartment of Chemistry, South China University of Technology, Guangzhou 510641, China

^bDepartment of Chemistry, University of Education, Lahore 54770, Pakistan

^cDepartment of Chemistry, Michigan State University, E. Lansing, MI 48824, USA

An improved, facile method for the synthesis of sterically encumbered multibrominated corroles is described based on the use of boron trifluoride dietherate ($BF_3 \cdot Et_2O$) as the catalyst.

Chinese Chemical Letters 25 (2014) 1349



Iridoid glycosides from the roots of *Scrophularia ningpoensis* Hemsl.

Ling-Juan Zhu^{a,b}, Cheng Qiao^{a,b}, Xiu-Yu Shen^{a,b}, Xue Zhang^{a,b}, Xin-Sheng Yao^{a,b,c}

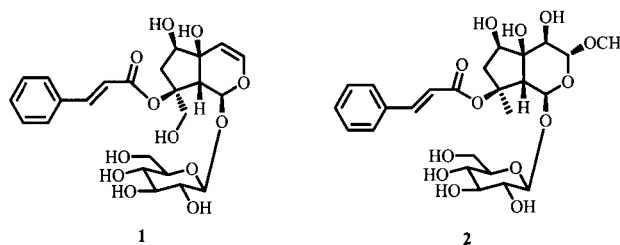
^aCollege of Traditional Chinese Materia Medica, Shenyang Pharmaceutical University, Shenyang 110016, China

^bKey Laboratory of Structure-Based Drug Design & Discovery of Ministry of Education, Shenyang Pharmaceutical University, Shenyang 110016, China

^cInstitute of Traditional Chinese Medicine & Natural Products, College of Pharmacy, Jinan University, Guangzhou 510632, China

Two new iridoid glycosides, named scrophularianoids A (**1**) and B (**2**), were isolated from the roots of *Scrophularia ningpoensis*. The chemical structures were established on the basis of extensive analyses of spectroscopic data.

Chinese Chemical Letters 25 (2014) 1354



Efficient synthesis of chromenopyridine and chromene via MCRs

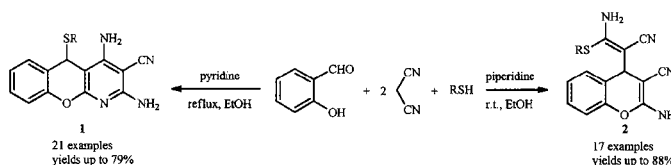
Hai-Feng Gan^a, Wei-Wei Cao^a, Zheng Fang^b, Xin Li^a, Shi-Gui Tang^a, Kai Guo^a

^aCollege of Biotechnology and Pharmaceutical Engineering, Nanjing Tech University, Nanjing 211816, China

^bSchool of Pharmaceutical Sciences, Nanjing Tech University, Nanjing 211816, China

MCRs for preparation of chromenopyridines under reflux conditions and chromenes at room temperature conditions, respectively, from different salicylaldehydes, malononitrile and different thiols (mol ratio = 1:2:1) were established.

Chinese Chemical Letters 25 (2014) 1357



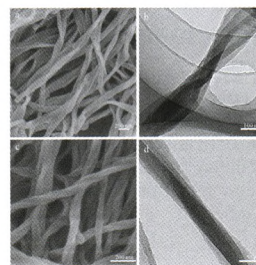
Preparation of single-handed helical phenolic resin nanofibers using a supramolecular templating method

Li-Qing Ma, Hao Chen, Yong-Min Guo, Bao-Zong Li, Yi Li

Jiangsu Key Laboratory of Advanced Functional Polymer Design and Application, Department of Polymer Science and Engineering, College of Chemistry, Chemical Engineering and Materials Science, Soochow University, Suzhou 215123, China

Single-handed helical phenolic resin nanofibers were synthesized through a supramolecular templating approach using the self-assemblies of a pair of chiral low-molecular-weight amphiphiles as the templates and 2,4-dihydroxybenzoic acid and formaldehyde as the precursors. The left- and right-handed helical phenolic resin nanofibers exhibited opposite optical activity.

Chinese Chemical Letters 25 (2014) 1363



Synthesis and thermal polymerization of perylene bisimide containing benzocyclobutene groups

Zhi-Jun Wei^{a,c}, Ye-Wei Xu^b, Lin Zhang^c, Mei-Ming Luo^a

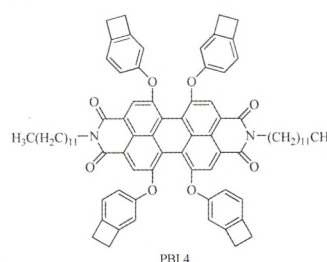
^aKey Laboratory of Green Chemistry and Technology of Ministry of Education, College of Chemistry, Sichuan University, Chengdu 610064, China

^bEngineering Research Center of Biomass Materials, Ministry of Education, School of Material Science and Engineering, Southwest University of Science and Technology, Mianyang 621010, China

^cResearch Center of Laser Fusion, China Academy of Engineering Physics, Mianyang 621900, China

Fourfold benzocyclobutene-functionalized perylene bisimide has been synthesized and its thermal polymerization and optical properties have been investigated.

Chinese Chemical Letters 25 (2014) 1367



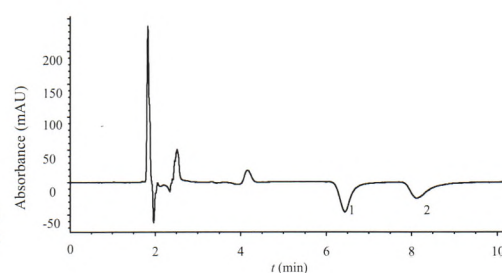
Imidazolium ionic liquid as the background ultraviolet absorption reagent for determination of morpholinium cations by high performance liquid chromatography-indirect ultraviolet detection

Hong Yu, Yi-Meng Sun, Chun-Miao Zou

College of Chemistry and Chemical Engineering, Harbin Normal University and Key Laboratory of Photonic and Electronic Bandgap Materials, Ministry of Education, Harbin 150025, China

Utilizing imidazolium ionic liquid as the background ultraviolet (UV) absorbing reagent, the determination of morpholinium cations is achieved by high performance liquid chromatography with indirect ultraviolet detection (HPLC-IUV).

Chinese Chemical Letters 25 (2014) 1371



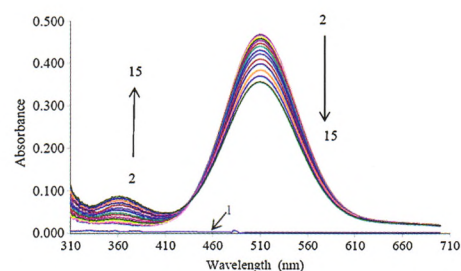
Interaction of benzene-1,3-disulfonylamid-kriptofix[22] with iodine in chloroform and dichloromethane solutions

Tayyeb Madrakian, Sara Heidari

Faculty of Chemistry, Bu-Ali Sina University, Hamedan 65174, Iran

BDSAK forms a 1:1 charge transfer complex with I₂ in chloroform and dichloromethane.

Chinese Chemical Letters 25 (2014) 1375



Investigation of multilevel ion-pairing effect of triferrocenylmethane in organic phase

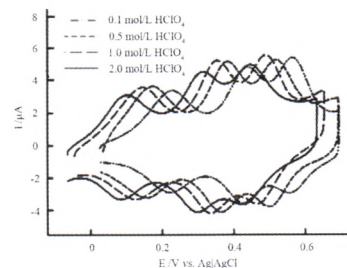
De-Bo Xiang^{a,b}, Hui-Bo Shao^a

^aKey Laboratory of Cluster Science (Ministry of Education of China), School of Chemistry, Beijing Institute of Technology, Beijing 100081, China

^bChina Aviation Lithium Battery Co., Ltd., Henan 471003, China

The multilevel ion-pairing effect was first investigated using triferrocenylmethane through "thin-layer electrochemistry" approach and the influence of intramolecular electronic communication on multilevel ion-pairing effect was also studied.

Chinese Chemical Letters 25 (2014) 1379



Highly efficient and magnetically separable nano-CuFe₂O₄ catalyzed S-arylation of thiourea by aryl/heteroaryl halides

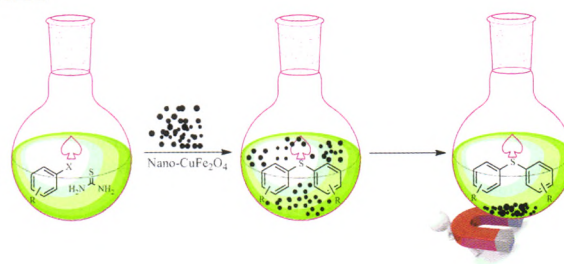
Abdol R. Hajipour^{a,b}, Morteza Karimzadeh^a, Ghobad Azizi^a

^aPharmaceutical Research Laboratory, Department of Chemistry, Isfahan University of Technology, Isfahan 84156, Islamic Republic of Iran

^bDepartment of Neuroscience, University of Wisconsin Medical School, Madison WI 53706-1532, USA

Preparation of symmetrical aryl sulfides from the reaction of thiourea with a wide variety of aryl halides was simply performed by nano-CuFe₂O₄ as a green and magnetically separable catalyst.

Chinese Chemical Letters 25 (2014) 1382



One-pot synthesis of novel pyrido[2,3-d]pyrimidines using HAp-encapsulated- γ -Fe₂O₃ supported sulfonic acid nanocatalyst under solvent-free conditions

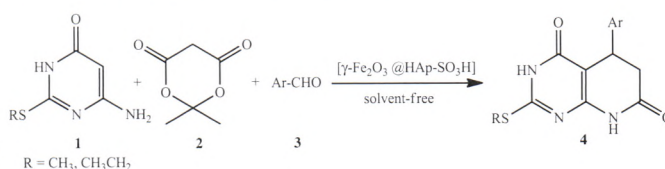
Moona Mohsenimehr^a, Manouchehr Mamaghani^a, Farhad Shirini^a, Mehdi Sheykhan^a, Fatemeh Azimian Moghaddam^b

^aDepartment of Chemistry, Faculty of Sciences, University of Guilan, P.O. Box 41335-1914, Rasht, Iran

^bDepartment of Chemistry, Islamic Azad University, Rasht Branch, Iran

A one-pot synthesis of pyrido[2,3-d]pyrimidine derivatives (**4a–n**) in the presence of [γ -Fe₂O₃@HAp-SO₃H] as a nanocatalyst at 60 °C under solvent-free conditions is described.

Chinese Chemical Letters 25 (2014) 1387



Determination of iminodiacetic acid in the glyphosate by ion chromatography

Jie He^{a,b}, Jia-Sheng Yu^{a,b}, Yan-Jie Hou^c, Zuo-Yi Zhu^{a,b}, Zhong-Ping Huang^{a,b}, Mu-Hua Wang^d, Nai-Fei Zhong^e, Yan Zhu^{a,b}

^aDepartment of Chemistry, Xixi Campus, Zhejiang University, Hangzhou 310028, China

^bZhejiang Provincial Key Laboratory of Health Risk Appraisal for Trace Toxic Chemicals, Zhejiang University, Hangzhou 310028, China

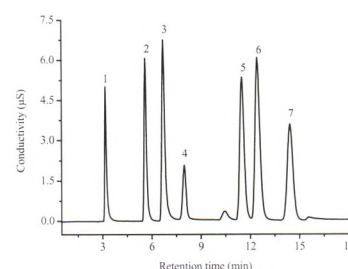
^cSchool of Pharmacy, East China University of Science and Technology, Shanghai 200237, China

^dDepartment of Chemistry, Lishui University, Lishui 323000, China

^eThermoFisher Scientific, Hangzhou 310028, China

A simple method based on ion chromatography (IC) with conductivity detection was developed for the determination of iminodiacetic acid (IDA) in the herbicide of glyphosate.

Chinese Chemical Letters 25 (2014) 1392



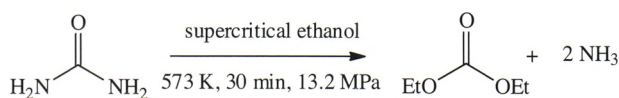
A catalyst-free novel synthesis of diethyl carbonate from ethyl carbamate in supercritical ethanol

Li-Cai Zhao, Zhi-Qiang Hou, Chun-Ze Liu, Yuan-Yuan Wang, Li-Yi Dai

Department of Chemistry, East China Normal University, Shanghai 200241, China

The synthesis of diethyl carbonate from ethyl carbamate was achieved for the first time in supercritical ethanol without any catalyst under the following conditions: a reaction temperature of 573 K, a reaction time of 30 min, a reaction pressure of 13.2 MPa, an ethanol/EC molar ratio of 10, a reactor loading of 285 μL .

Chinese Chemical Letters 25 (2014) 1395



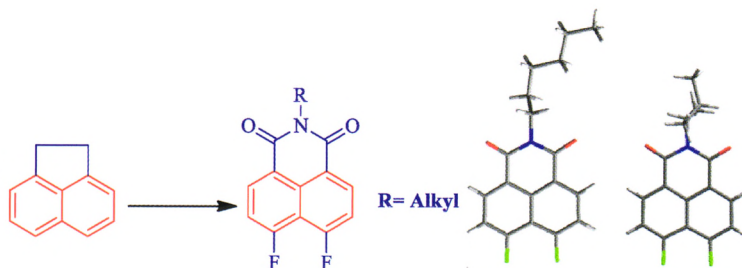
Fluorinated 1,8-naphthalimides: Synthesis, solid structure and properties

Jie Huang, Di Wu, Hao-Jie Ge, Sheng-Hua Liu, Jun Yin

Key Laboratory of Pesticide and Chemical Biology, Ministry of Education, College of Chemistry, Central China Normal University, Wuhan 430079, China

Three fluorinated 1,8-naphthalimides were synthesized from acenaphthene. All of naphthalimides are solution processing candidates in n-type semiconductor.

Chinese Chemical Letters 25 (2014) 1399



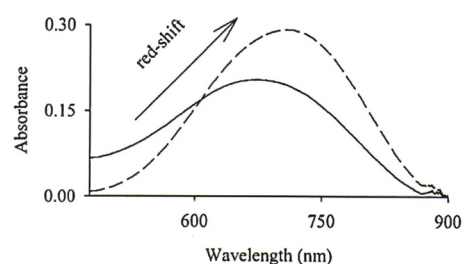
Tuning plasmon absorption of unmodified silver nanoplates for sensitive and selective detection of copper ions by introduction of ascorbate

Xiao-Dong Xia, Tian-Lun Wang, Xiao-Yuan Yuan

Key Laboratory of Theoretical Chemistry and Molecular Simulation, Minister of Education, School of Chemistry and Chemical Engineering, Hunan University of Science and Technology, Xiangtan 411201, China

With introduction of ascorbate as mild reductants, Cu^{2+} ions are reduced into Cu^+ , and the Cu^+ is further reduced to Cu to deposit on the surface of the silver nanoplates, as confirmed by HR-TEM analyses. The deposition of the Cu on the surface of the silver nanoplates allows a significant red-shift of their plasmon absorption (44 nm shift), which provides an optical sensor for sensitive and selective detection of copper ions.

Chinese Chemical Letters 25 (2014) 1403



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