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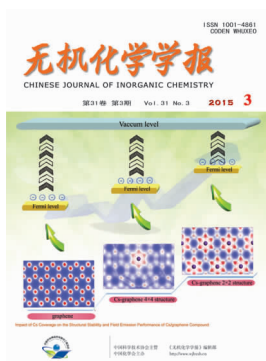
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Cover



Impact of Cs Coverage on the Structural Stability and Field Emission Performance of Cs/Graphene Compound

JIN Lei, FU Hong-Gang, XIE Ying, YU Hai-Tao

DOI:10.11862/CJIC.2015.092

Chinese J. Inorg. Chem., **2015**,**31**:446-451

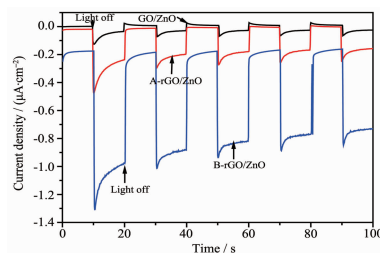
Articles

Preparation and Photoelectric Properties of Reduced Graphite Oxide (rGO)/ZnO Composite Films

CHEN Hui-Min, HE Yun-Qiu, LI Yi-Ming, CAI Si-Qi

DOI:10.11862/CJIC.2015.101

Chinese J. Inorg. Chem., **2015**,**31**:429-438



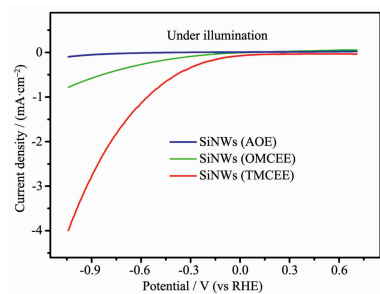
Different reduced graphite oxide/ZnO composite films prepared by spin-coating and heat treatment can produce photocurrent under visible-light irradiation. The GO after NaBH_4 -reduction with ZnO composite film shows the largest photocurrent density.

Preparation of Silicon Nanowires Array by Wet Chemistry Methods and Photoelectrochemical Hydrogen Generation Performance Analysis

LIAO Ming-Jia, QIAO Lei, XIAO Peng, ZHANG Yun-Huai, CHEN Gang-Cai, ZHOU Zhi-En, HE Xiao-Lan, JIE Fang-Fang

DOI:10.11862/CJIC.2015.043

Chinese J. Inorg. Chem., **2015**,**31**:439-445



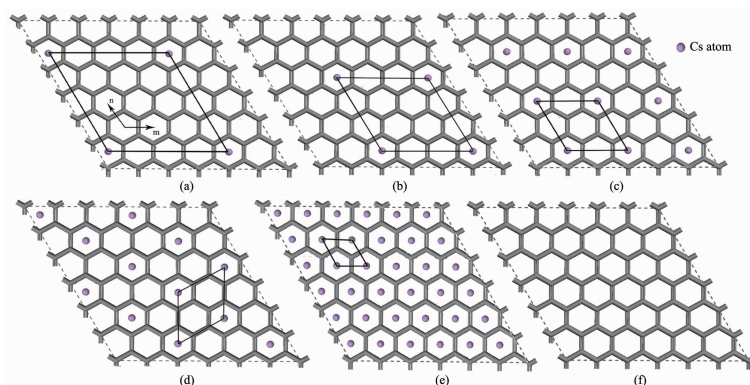
Through three kinds of wet chemistry methods to fabricate silicon nanowires array as photocathode material for photoelectrochemical hydrogen generation, the photocurrent density value of SiNWs array by TMCEE was 4 times than the one by OMCEE, and 40 times than the one by AOE.

Impact of Cs Coverage on the Structural Stability and Field Emission Performance of Cs/Graphene Compound

JIN Lei, FU Hong-Gang, XIE Ying,
YU Hai-Tao

DOI:10.11862/CJIC.2015.092

Chinese J. Inorg. Chem., **2015**,**31**:446-451



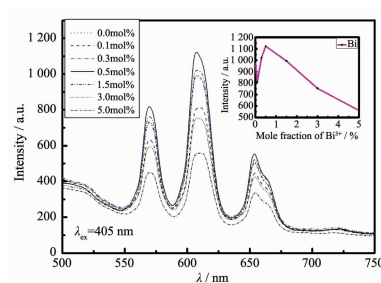
With increasing of Cs coverage, the electron transferred from Cs to graphene is enhanced, leading to an energy increase of the Fermi level and therefore the reduction of work function of the systems.

Preparation and Luminescence Properties of Reddish-Orange Phosphors of $\text{Ca}_{1-x-y}\text{Sm}_x\text{Bi}_y\text{SiO}_3$

WU Jin-Xiu, LI Mei, LIU Zhao-Gang,
HU Yan-Hong, WANG Mi-Tang

DOI:10.11862/CJIC.2015.083

Chinese J. Inorg. Chem., **2015**,**31**:452-458



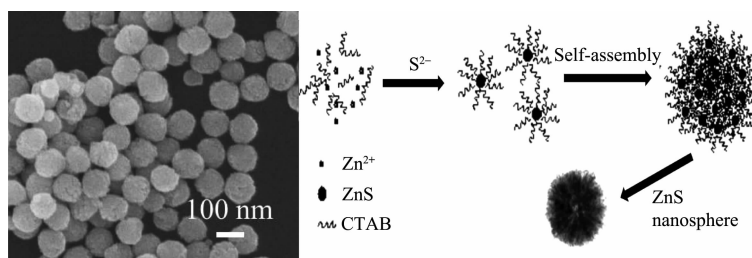
The series Sm^{3+} as activator and Bi^{3+} as auxiliary activator precursor $\text{Ca}_{1-x-y}\text{Sm}_x\text{Bi}_y\text{SiO}_3$ were synthesized by hydrothermal method. When the amount is 0.3% ~ 1.5% mole fraction, Bi^{3+} have sensitized effect on the luminescence intensity of $\text{Ca}_{0.97}\text{Sm}_{0.03}\text{SiO}_3$. So the optimum mole fraction of Sm^{3+} and Bi^{3+} respectively were 3% and 0.5%.

Fabrication of ZnS Nanoparticles with Enhanced Photocatalytic Activity by Hydrothermal Method

LIU Hai-Rui, FANG Li-Yu, JIA Wei,
JIA Hu-Sheng

DOI:10.11862/CJIC.2015.074

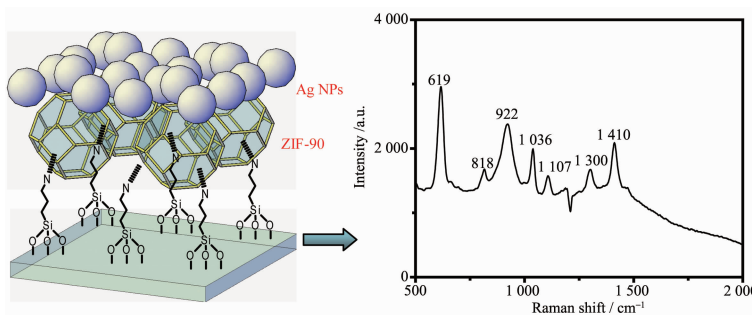
Chinese J. Inorg. Chem., **2015**,**31**:459-464



Under the role of CTAB, different size ZnS spherical-like particles were fabricated by hydrothermal method. The fabricated ZnS nanoparticles with reaction time 12 h shown best photocatalytic performance.

Preparation of Ag/ZIF-90 Self-Assembled Membrane and Its High SERS Performance

ZHENG Long-Zhen, KANG Xiao-Wei, JI Yi,
ZOU Zhi-Jun, WANG Yi-Min, CHEN Ji-Fang



The microporous sodalite ZIF-90 was chosen as host matrix to influence the dispersion of silver nanoparticles (Ag NPs). The SERS signal on the Ag/ZIF-90 self-assembled membrane was further improved comparing with that on ZIF-90 membrane and Ag@ZIF-90 composite.

DOI:10.11862/CJIC.2015.079

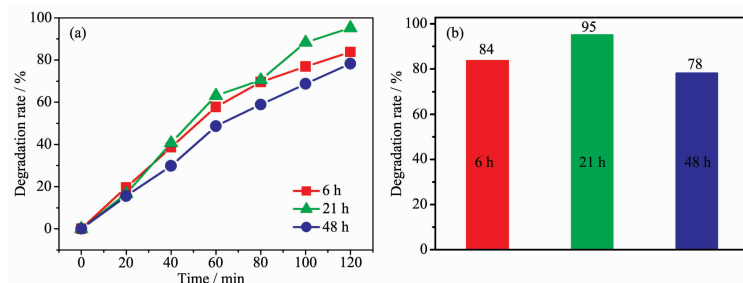
Chinese J. Inorg. Chem., **2015**,**31**:465-471

Effect of Pretreatment Time on Morphology and Photocatalytic Performance of Co_3O_4

LI Yun-Ling, LI Lin-Zhi, WANG Shu-Hui

DOI:10.11862/CJIC.2015.066

Chinese J. Inorg. Chem., **2015**,**31**:472-478



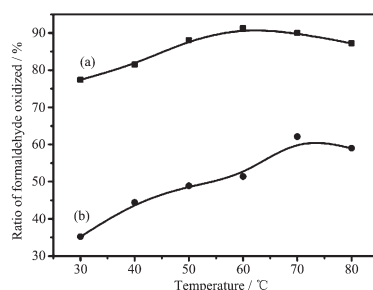
The highest photocatalytic activity for degradation of Rhodamine B (RhB) solution is obtained with the sample prepared by sintering at 400 °C the precursor hydrothermally treated for 21 h at 160 °C. Under ultraviolet light irradiation, the degradation rate of 10 $\text{mg}\cdot\text{L}^{-1}$ RhB with 120 min is 95%.

Supporting of Fe^{3+} on Surface of Activated Silica Gel and Its Catalytic Oxidation Performance to Formaldehyde

Lotfia-El Majdoub, YAO Fang-Tao, SHI Ya-Sai, LI Tian-Tian, XU Qing-Hong

DOI:10.11862/CJIC.2015.082

Chinese J. Inorg. Chem., **2015**,**31**:479-484



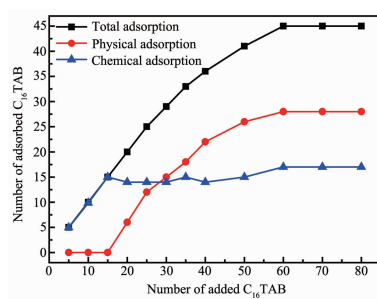
Composite catalyst, Fe^{3+} ions were coordinated on the surface of acetamide-modified silica gel, was synthesized. The catalyst has good catalytic oxidation performance to formaldehyde, and a maximum conversion of formaldehyde is about 91.3%.

Molecular Simulation of Structure of Cetyl Trimethyl Ammonium Bromide Intercalated Graphite Oxide

ZHAO Er-Zheng, PENG Tong-Jiang, SUN Hong-Juan, LIU Bo, JI Guang-Fu

DOI:10.11862/CJIC.2015.081

Chinese J. Inorg. Chem., **2015**,**31**:485-492



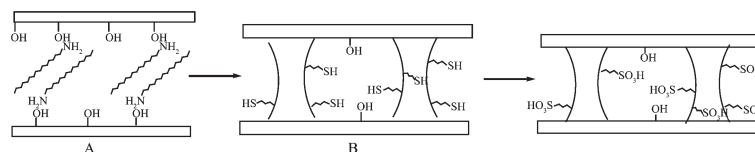
C_{16}TAB intercalate Graphite Oxide firstly by chemical adsorption and then by physical adsorption, the experimental results are in good agreement with simulation results.

Preparation of Sulfonic Acid-Functionalized Silica-Pillared Zirconium Phosphate with the Self-Assembly Method and Cocondensation

HUA Yi-Xiang, LIU Wen-Jin, WANG Hong-Ning, CHEN Ruo-Yu

DOI:10.11862/CJIC.2015.065

Chinese J. Inorg. Chem., **2015**,**31**:493-500



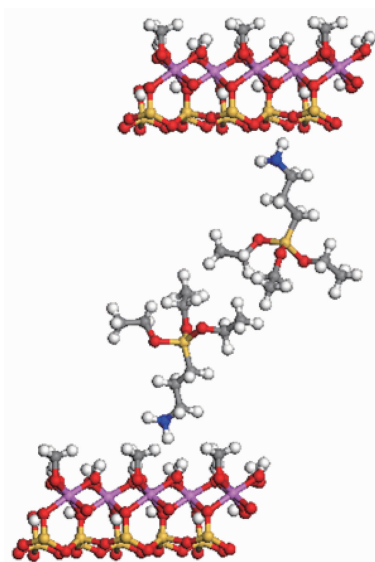
Sulfonic acid-functionalized silica-pillared zirconium phosphate materials with ordered layer structure were synthesized, whose acid site property was adjusted. The material shows 95.74% conversion in the esterification.

Characterization and Deintercalation
Kinetics of Kaolinite/
 γ -Aminopropyltriethoxysilane
Intercalation Complex

LIU Qin-Fu, JI Yang, DU Yan-Na,
LI Xiao-Guang, LIANG Peng

DOI:10.11862/CJIC.2015.096

Chinese J. Inorg. Chem., **2015**,**31**:501-508



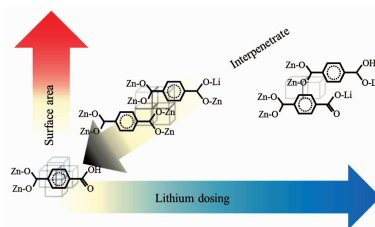
The kaolinite/ γ -aminopropyltriethoxysilane (K/APTES) was prepared by using kaolinite/methanol intercalation complex as an intermediate. The APTES molecules are arranged in double layer aslant between the kaolinite layers, and the inclination angle is related to the temperature.

Lithium Incorporating Simultaneous
with MOF-5 Synthesis for CO₂/CH₄
Mixed-Gas Separation

Somboon Chaemchuen, ZHOU Kui,
YAO Chen, LUO Zhi-xiong, Francis Verpoort

DOI:10.11862/CJIC.2015.078

Chinese J. Inorg. Chem., **2015**,**31**:509-513



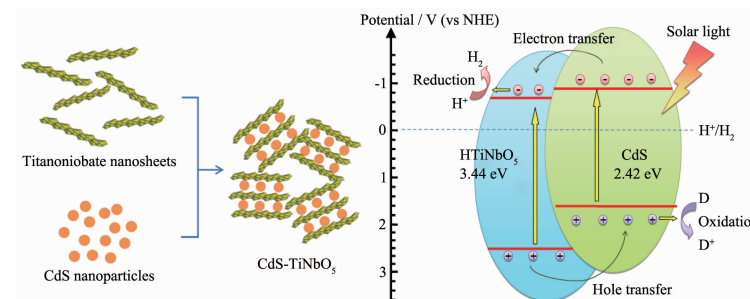
A new strategy of lithium incorporating controls the interpenetration level in MOFs, which can affect the structures and improve properties of MOF-5 materials such as adsorption and CO₂/CH₄ selectivity.

Preparation of Mesoporous CdS-Pillared
Titanoniobate Nanohybrids and Their
Photocatalytic Water-Splitting Activity
for Hydrogen Generation

JIANG Shao-Feng, YAO Qian-Ru,
GAO Bi-Fen, CHEN Yi-Lin, LIN Bi-Zhou

DOI:10.11862/CJIC.2015.077

Chinese J. Inorg. Chem., **2015**,**31**:514-520



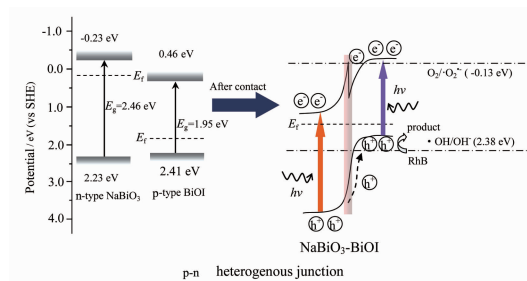
Mesoporous CdS-pillared titanoniobates were synthesized via an exfoliation-restacking route. The high hydrogen-evolution photoactivity is derived from the efficient separation of photogenerated carriers and the enlarged specific surface areas.

Synthesis of Heterojunction Type BiOI/NaBiO₃ Photocatalyst and Enhanced Photocatalytic Activities

Ji Lei, WANG Hao-Ren, YU Rui-Min,
JIANG Zhen, WANG Huai-Yuan

DOI:10.11862/CJIC.2015.080

Chinese J. Inorg. Chem., **2015**,**31**:521-528



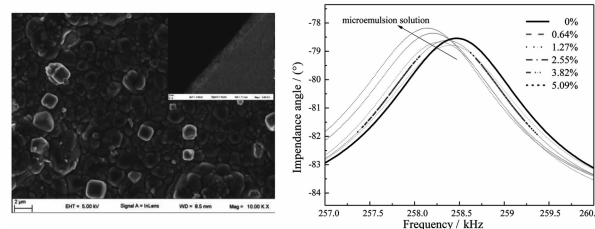
A possible charge separation processes between BiOI and NaBiO₃ heterostructures was proposed. And it is theoretically reasonable that the photocatalytic degradation could be attributed to the photogenerated hole rather than OH and O₂⁻ radicals.

Synthesis and Gas Adsorption Properties of Zeolite A Membrane on Lead Free Piezoelectric Ceramics

LONG Li-Xia, DU Hui-Ling, AN Qun-Li,
SHI Xiang, CHEN Jian

DOI:10.11862/CJIC.2015.087

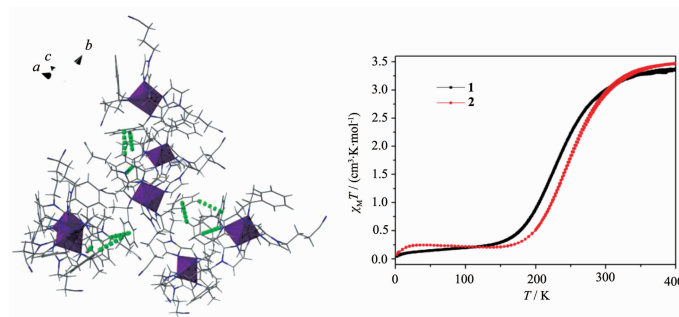
Chinese J. Inorg. Chem., **2015**,**31**:529-535



A tentative exploration for zeolite membranes on lead free piezoelectric ceramics were presented, which is expected to be applied to adsorption of methane in the resonant sensor. The controlled main influence factors and crystal shape of zeolite A membranes and methane adsorption in zeolite A membranes processing are investigated.

Syntheses, Structures and Magnetic Properties of Homochiral Spin-Crossover Iron(II) Schiff-Base Complexes

REN Dong-Hong, LIU Zhi-Ming, SUN Xiao-Li,
GU Ling, QIU Dan, GU Zhi-Guo, LI Zai-Jun



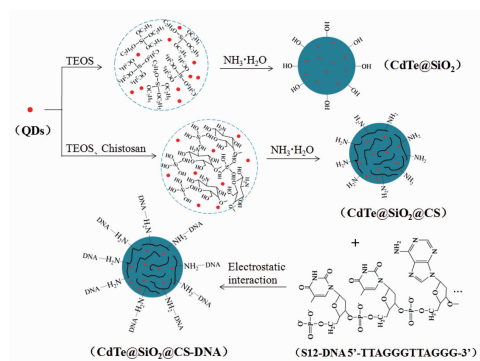
In two homochiral spin-crossover iron(II) complexes **1** and **2**, [Fe(L)₃]²⁺ components were chiral with Λ configuration due to the screw coordination arrangement of the chiral ligand around Fe(II) centers. **1** and **2** displayed obviously spin-crossover behaviour at 232 and 250 K, respectively. The different SCO behaviors of **1** and **2** mainly resulted from substitution effect.

DOI:10.11862/CJIC.2015.040

Chinese J. Inorg. Chem., **2015**,**31**:536-542

Preparation and Characterization of CdTe QDs-DNA Fluorescent Nanoprobes

ZHANG Qiu-Yan, SUN Lin, LI Zhen-Zhen,
PAN Yu-Jin, WANG Qing, ZHAO Qiang



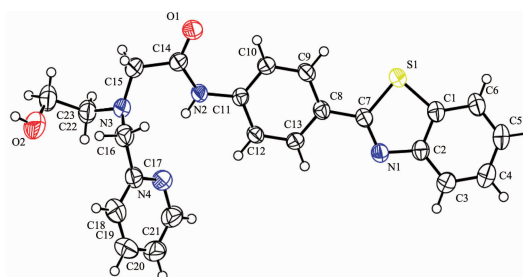
DOI:10.11862/CJIC.2015.093

Chinese J. Inorg. Chem., **2015**,**31**:543-547

The ammonified core/shell nanoparticles with high adsorption capacity for DNA were synthesized with the method of reverse microemulsion.

Synthesis, Crystal Structure and Spectroscopic Property of a Benzothiazole-Based Fluorescent Probe for Cu²⁺ (English)

FAN Fang-Lu, JING Jin-Qiu, CHEN Xue-Mei



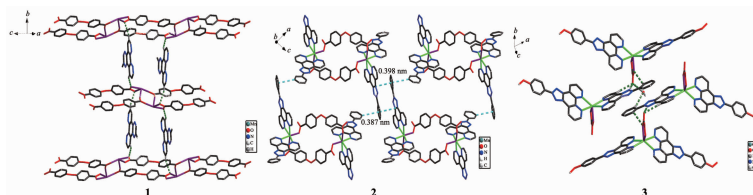
DOI:10.11862/CJIC.2015.026

Chinese J. Inorg. Chem., **2015**,**31**:548-554

The benzothiazole-based fluorescent probe FL showed a good sensitivity and selectivity to Cu²⁺ and a complexation ratio towards Cu²⁺ of 1:1. It could be applied to detect Cu²⁺ content in real water samples.

Frameworks of Metal Dicarboxylate Complexes: from Nuclear Structures to Double Chains Based on N-containing Ligands (English)

GU Xiao-Min, WANG Lei, SHAN Yue-Xia,
ZHANG Wen-Li, CHEN Qin, NI Liang,
YAO Jia



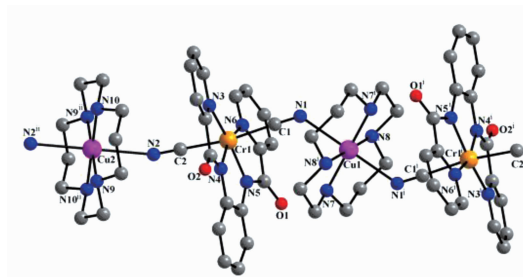
Compound **1** contains double chains, compound **2** features dinuclear structures, and compound **3** contains mononuclear structures. They present three-dimensional supramolecular network structure by $\pi \cdots \pi$ and hydrogen bonding interactions.

DOI:10.11862/CJIC.2015.091

Chinese J. Inorg. Chem., **2015**,**31**:555-564

Synthesis, Crystal Structure and Magnetic Properties of a One-Dimensional Cyanide-Bridged Cr^{III}-Cu^{II} Complex {[Cu(cyclam)][Cr(bpb)(CN)₂]₂·2H₂O}_n (English)

YANG Dai-Sheng, XU Li-Hua,
CHEN Hui, ZHANG Li-Fang, NI Zhong-Hai,
WANG Wen-Feng

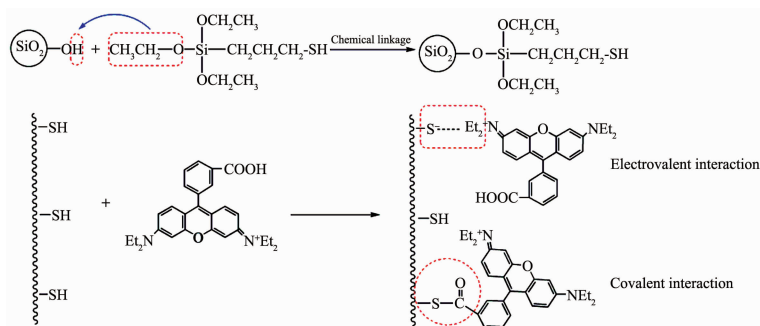


Thiolated Silica Gel: Synthesis and Immobilization of Rhodamine B from Aqueous Solution (English)

YANG Han-Pei, YU Mi-Hong, FU Xiao-Fei,
WU Jun-Ming

DOI:10.11862/CJIC.2015.064

Chinese J. Inorg. Chem., **2015**,**31**:571-579



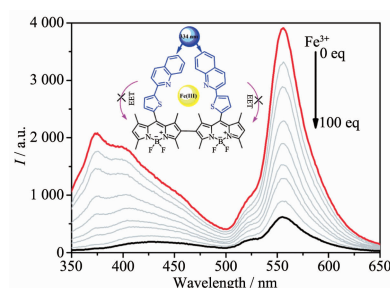
Enhanced adsorption capacity of aqueous RhB on thiolated silica gel is obtained and adsorption mechanism of RhB on thiolated silica gel is proposed.

Synthesis and Properties of Red Fluorescent Probe for Fe³⁺ Based on Boron-Dipyrromethene Dimer (English)

QU Xing-Yu, CHEN Wei, SHI Mao-Hu,
SHEN Zhen

DOI:10.11862/CJIC.2015.072

Chinese J. Inorg. Chem., **2015**,**31**:580-584



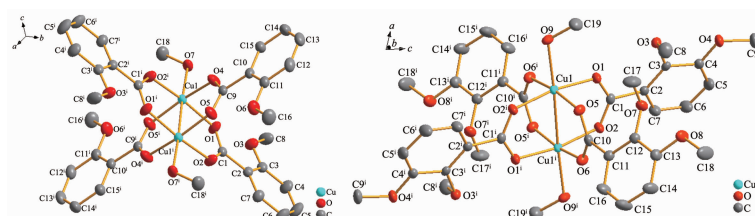
The selective binding of BODIPY dimer **1** with Fe³⁺ suppresses the excitation energy transfer from 2-(thiophen-2-yl) quinoline to BODIPY, resulting in significant fluorescence quenching.

Syntheses, Crystal Structures and Theoretical Calculation of Two Dinuclear Copper (II) Complexes with Methoxybenzoic Acids Ligands (English)

ZHANG Qi, YU Liang-Min, XIA Shu-Wei,
LI Xia, YAN Xing-Chen, NI Chun-Hua

DOI:10.11862/CJIC.2015.086

Chinese J. Inorg. Chem., **2015**,**31**:585-593



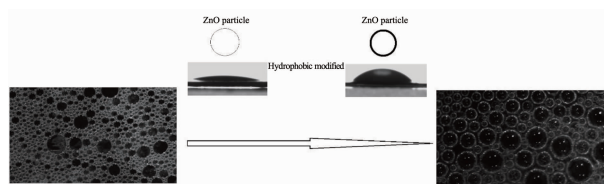
The two complexes have dinuclear structures, consisting of two Cu(II) cations, four methoxybenzoic acid ligands and two methanol molecules. The methoxybenzoic acid ligands are coordinated with copper cations by bidentate bridging coordination mode.

Hydrophobic ZnO: Low Temperature Complex-Precipitate Synthesis and Application in Improving Foam Stability (English)

GU Shao-Nan, LI Wen-Jun, LUO Wen-Li,
CHANG Zhi-Dong, ZHOU Hua-Lei,

DOI:10.11862/CJIC.2015.069

Chinese J. Inorg. Chem., **2015**,**31**:594-602



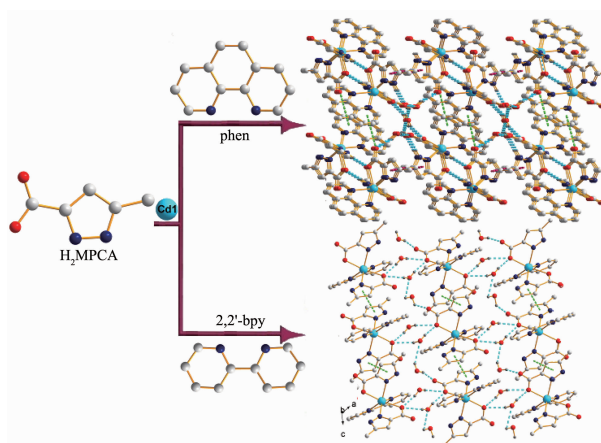
Adsorption of the hydrophobic modified ZnO particles produce a shell on bubbles surface, which armors bubbles and enhances the foams stability.

Syntheses, Crystal Structures and Luminescent Properties of Two Cadmium Supramolecular Complexes Based on Water-Carboxylate Chains (English)

TANG Li-Zhi-Peng, YANG Ming-Wei,
CHENG Mei-Ling, LIU Qi

DOI:10.11862/CJIC.2015.070

Chinese J. Inorg. Chem., **2015**,**31**:603-610

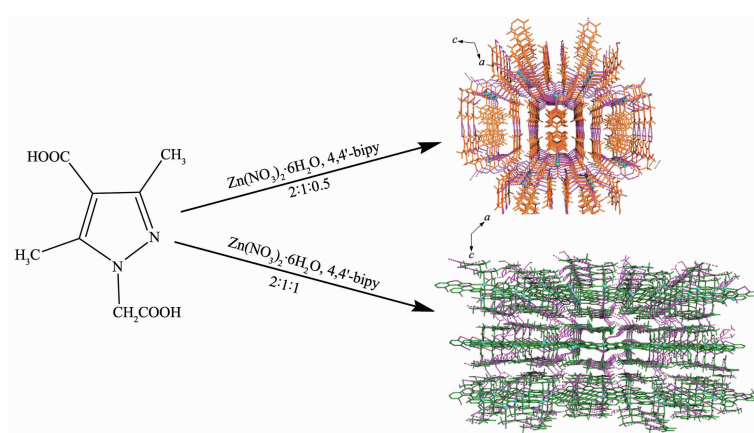


Two Zinc Complexes Based on 1-Carboxymethyl-3,5-dimethyl-1H-pyrazole-4-carboxylic Acid: Syntheses, Structures and Luminescent Properties (English)

LIU Xiu-Xiu, CHENG Mei-Ling,
REN Yan-Qiu, XIA Qing-Hong, HAN Wei,
LIU Qi

DOI:10.11862/CJIC.2015.098

Chinese J. Inorg. Chem., **2015**,**31**:611-618

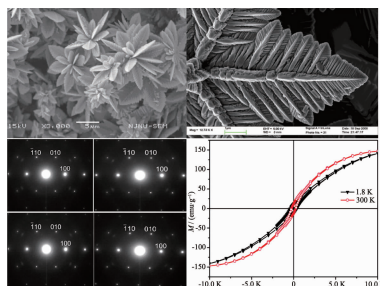


Flower-Like Mesocrystal Cobalt: Controllable Synthesis in Large Scale and Magnetic Property (English)

GUAN Ming-Yun, JIAN Yan, SUN Jian-Hua,
XU Zheng

DOI:10.11862/CJIC.2015.084

Chinese J. Inorg. Chem., **2015**,**31**:619-626



The titled cobalt mesocrystals not only exhibit Co nanocrystals property (an enhanced coercive force of 260 Oe at 300 K), but also have bulk Co property (saturation magnetization of 168 emu·g⁻¹).