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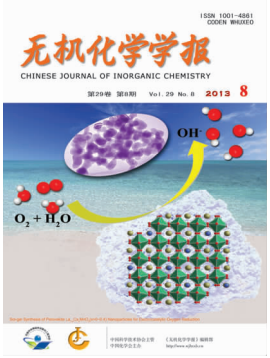


Sol-Gel Synthesis of Perovskite $La_{1-x}Ca_xMnO_3$ (x=0~0.4) Nanoparticles for Electrocatalytic Oxygen Reduction

FENG Hao, DU Jing, HAN Xiao-Peng, CHENG Fang-Yi, CHEN Jun

DOI:10.3969/j.issn.1001-4861.2013.00.286

Chinese J. Inorg. Chem., **2013**,**29**:1617-1625

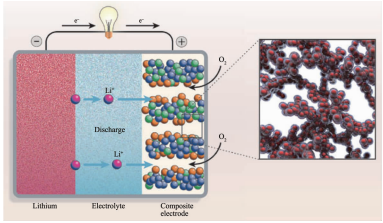
Reviews

Progress of Cathode Material and Electrolyte in Non-aqueous Li-Air Battery

YANG Feng-Yu, ZHANG Lei-Lei, XU Ji-Jing, LIU Qing-Chao, ZHAO Min-Shou, ZHANG Xin-Bo

DOI:10.3969/j.issn.1001-4861.2013.00.304

Chinese J. Inorg. Chem., **2013**,**29**:1563-1573



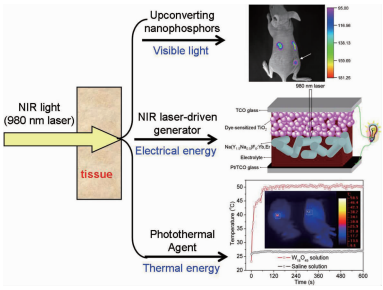
A Li-air battery could provide much higher energy density than conventional lithium-ion battery. This paper summarizes the latest development of the cathode material and electrolyte in the non-aqueous Li-air battery, then looks forward to the future on non-aqueous Li-air battery.

Research Progress in NIR-Light-Driven Nanomaterials and Nanodevices

CHEN Zhi-Gang, KUANG Xing-Yu, SONG Lin-Lin, TIAN Qi-Wei, HU Jun-Qing

DOI:10.3969/j.issn.1001-4861.2013.00.305

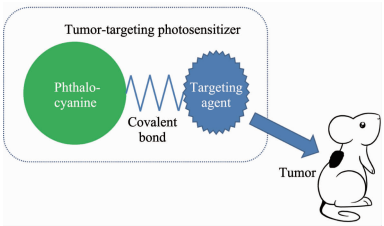
Chinese J. Inorg. Chem., **2013**,**29**:1574-1590



Near-infrared (NIR) light, which penetrate efficiently biological tissues, can be used as the light source *in vivo*. This paper reviews the recent research progress in NIR-light-driven nanomaterials and/or nanodevices, including up-converting nanophosphors, 980-nm laser-driven generator, and photothermal nanoagents, for biomedical applications.

Phthalocyanine Based Photosensitizers for Photodynamic Therapy

DING Lan-Lan, LUAN Li-Qiang, SHI Jia-Wei, LIU Wei



This review summarizes the progress of phthalocyanine based targeting photosensitizers with enhanced tumor selectivity and phototoxicity.

DOI:10.3969/j.issn.1001-4861.2013.00.311
Chinese J. Inorg. Chem., **2013**,**29**:1591-1598

Recent Progress in Organic Hybrid Main Group Heterometallic Chalcogenides Based on Antimony

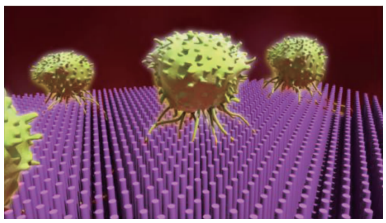
FENG Mei-Ling, HUANG Xiao-Ying

Recent Progress in Organic Hybrid Main Group Heterometallic Chalcogenides Based on Antimony has been reviewed.

DOI:10.3969/j.issn.1001-4861.2013.00.306
Chinese J. Inorg. Chem., **2013**,**29**:1599-1608

Construction of Nanostructured Inorganic Biointerface towards Highly Efficient Isolation of Circulating Tumor Cells

LIU Xue-Li, WANG Shu-Tao



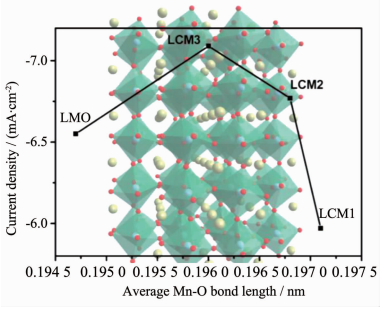
The exploration of nanostructured inoganic biointerfaces for highly efficient isolation of trace circulating tumor cells has been overviewed.

DOI:10.3969/j.issn.1001-4861.2013.00.315
Chinese J. Inorg. Chem., **2013**,**29**:1609-1616

Articles

Sol-Gel Synthesis of Perovskite $La_{1-x}Ca_xMnO_3$(x=0~0.4) Nanoparticles for Electrocatalytic Oxygen Reduction

FENG Hao, DU Jing, HAN Xiao-Peng, CHENG Fang-Yi, CHEN Jun



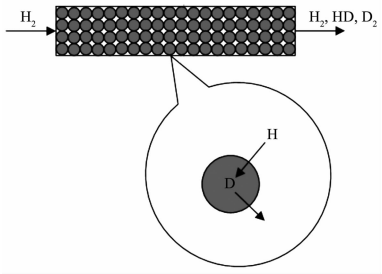
Perovskite $La_{1-x}Ca_xMnO_3$(x=0~0.4) nanoparticles were prepared through a sol-gel route and were electrocatalytically studied for the oxygen reduction reaction (ORR). Investigation on the composition-performance relationship revealed that mixed Mn valence and medium Mn-O bond length favored the ORR electrocatalysis.

DOI:10.3969/j.issn.1001-4861.2013.00.286
Chinese J. Inorg. Chem., **2013**,**29**:1617-1625

Simulation of Hydrogen-Deuterium Exchange Behavior in the Sphere Pd-Filled Column

ZENG Jing-Hui, SONG Jiang-Feng, YANG Yuan-You, HOU Qin, LUO De-Li, LIAO Jia-Li, YANG Ji-Jun, TANG Jun, LIU Ning, WANG Dong-Qi

DOI:10.3969/j.issn.1001-4861.2013.00.301
Chinese J. Inorg. Chem., **2013**,**29**:1626-1632

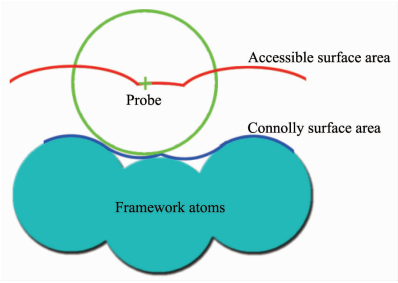


A hydrogen-deuterium exchange reaction in a column filled with palladium (Pd) particles was simulated by combining the Sphere Particle Exchange Model and the Gas-Solid Surface Exchange Model.

Initial Theoretical Evaluation of Pore Structure for Metal-Organic Frameworks

JU Zhan-Feng, YUAN Da-Qiang

DOI:10.3969/j.issn.1001-4861.2013.00.303
Chinese J. Inorg. Chem., **2013**,**29**:1633-1638

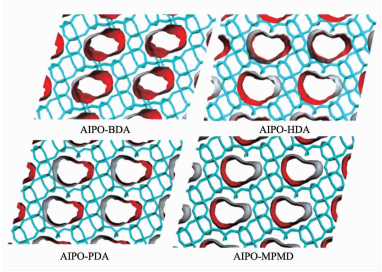


The calculation of the theoretic surface area in MOFs materials.

Synthesis and Characterization of a New Three-Dimensional Open-Framework Aluminophosphate $[C_4H_{14}N_2][Al_4P_5O_{19}OH]$ and Investigation of the Structure-Directing Effect

TONG Xiao-Qiang, LU Hui-Ying, HUANG Pai, YAN Wen-Fu, YU Ji-Hong, XU Ru-Ren

DOI:10.3969/j.issn.1001-4861.2013.00.281
Chinese J. Inorg. Chem., **2013**,**29**:1639-1644

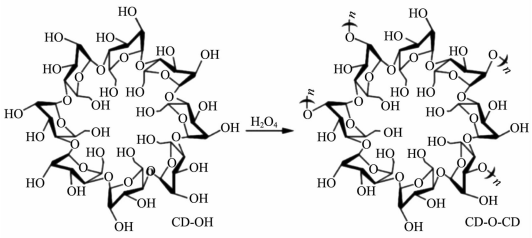


The topology of AlPO-BDA can be obtained in the presence of 1,6-hexanediamine (HDA), 1,5-pentanediamine (PDA), and 2-methylpentamethylenediamine (MPMD) under hydrothermal condition. The structure-directing effect of these four amines is discussed. The correlation between the calculated free volume and surface of the open-frameworks and the N-N distance of the diamines is observed.

γ-Cyclodextrin Porous Aromatic Frameworks Applied to Capture CO_2

YUAN Ye, REN Hao, SUN Fu-Xing

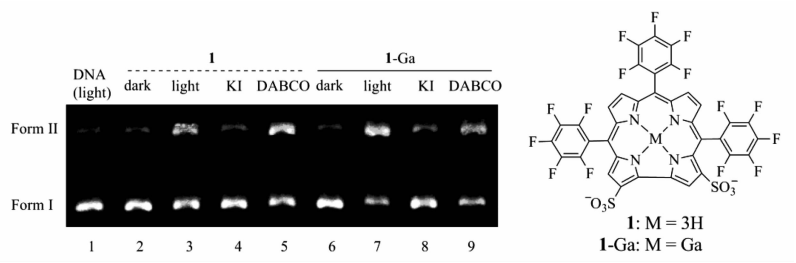
DOI:10.3969/j.issn.1001-4861.2013.00.297
Chinese J. Inorg. Chem., **2013**,**29**:1645-1648



A new γ-cyclodextrin porous aromatic frameworks (CD-PAF-1) based on γ-cyclodextrin as building units was synthesized by hydroxyl dehydration reaction.

DNA Binding and Photonuclease Activity of Sulfonated Corrole and Its Gallium(Ⅲ) Complex

HUANG Jun-Teng, ZHANG Yang, WANG Xiang-Li, JI Liang-Nian, LIU Hai-Yang

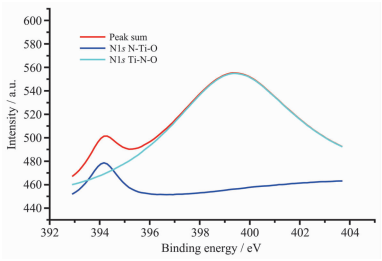


Water soluble sulfonated corrole and its Gallium complex display good photonuclease activity which is involved hydroxyl radical.

DOI:10.3969/j.issn.1001-4861.2013.00.261
Chinese J. Inorg. Chem., **2013**,**29**:1649-1656

Preparation and Mechanism of N-Doped TiO_2 Powders

YU Yang-Yang, YU Mei-Yan, ZHANG Yue, SUN Wei-Wei, LIU Ying

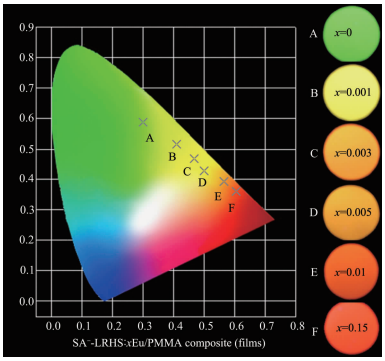


N-doped TiO_2 nanoparticals were prepared using tetrabutyl titanate and urea. The results revealed that TiO_2 were doped with interstitial N and substitutional N.

DOI:10.3969/j.issn.1001-4861.2013.00.284
Chinese J. Inorg. Chem., **2013**,**29**:1657-1662

Facile Fabrication of Layered-Rare-Earth-Hydroxide/ Polymethyl-Methacrylate Multi-color Luminescent Films

LIU Liang-Liang, XIA Dan, LIU Wei-Sheng, TANG Yu

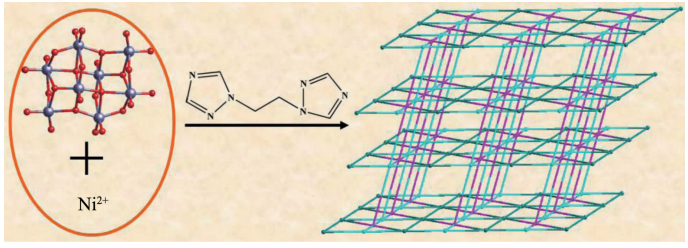


Transparent and color-tunable luminescent films were assembled with the use of layered-rare-earth-hydroxide organic-inorganic hybrid phosphors and polymethyl methacrylate (PMMA).

DOI:10.3969/j.issn.1001-4861.2013.00.293
Chinese J. Inorg. Chem., **2013**,**29**:1663-1667

Synthesis, Crystal Structure and Property of a 3D Octamolybdate Coordination Polymer Based on Nickel(Ⅱ)-bis(triazole) System (English)

WANG Xiu-Li, ZHAO Dan, TIAN Ai-Xiang, LIU Guo-Cheng



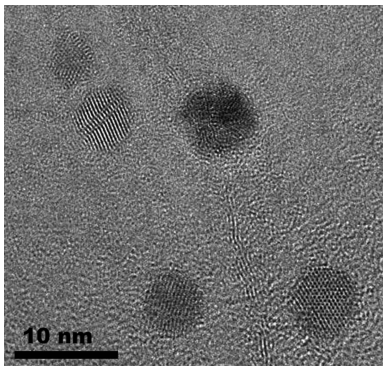
A new (6, 6, 6)-connected 3D octamolybdate hybrid polymer based on a nickel(Ⅱ)-bis(triazole) system with the Schläfli symbol of $\{3^2\cdot4^4\cdot5^4\cdot6^2\cdot7^3\}\{3^2\cdot4^6\cdot5^6\cdot6\}_2$ has been synthesized under hydrothermal condition, in which the bis (triazole) ligands coordinate directly with molybdenum atoms of γ-$Mo_8O_{26}^{4-}$ through Mo-N bond.

DOI:10.3969/j.issn.1001-4861.2013.00.256
Chinese J. Inorg. Chem., **2013**,**29**:1668-1674

One-Step Microwaving Method to Synthesize Graphene-CdS Nanocomposite

ZHANG Xin, CHEN Lin, WANG Hai-Fang, CAO Ao-Neng

DOI:10.3969/j.issn.1001-4861.2013.00.312
Chinese J. Inorg. Chem., **2013**,**29**:1675-1679

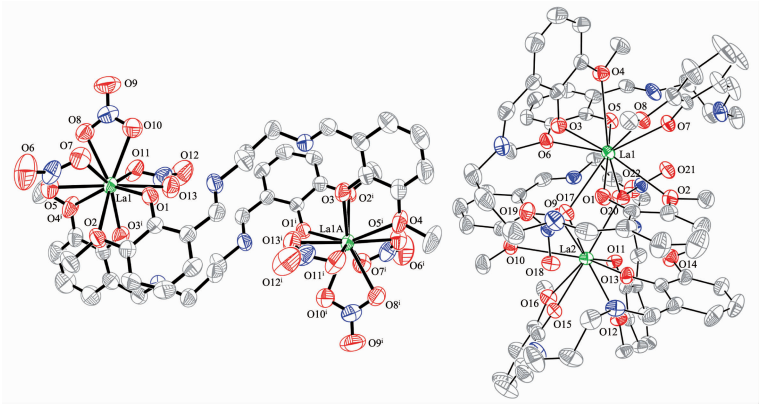


Well-dispersed Graphene-CdS nanocomposites, consisting of CdS nanocrystals with an average size of 5.7 nm grew on single layer graphene sheets, could be produced directly by microwaving the mixture of graphene oxide, dihydrate acid cadmium and thioacetamide for a few minutes.

Synthesis and Crystal Structure of *N*,*N*′-Bis(2-hydroxy-3-methoxybenzylidene)-1,3-propanediamine La (Ⅲ) Complexes Modulated by Counterion PF_6^-

ZOU Xiao-Yan, YAN Peng-Fei, ZHANG Feng-Ming, LI Guang-Ming

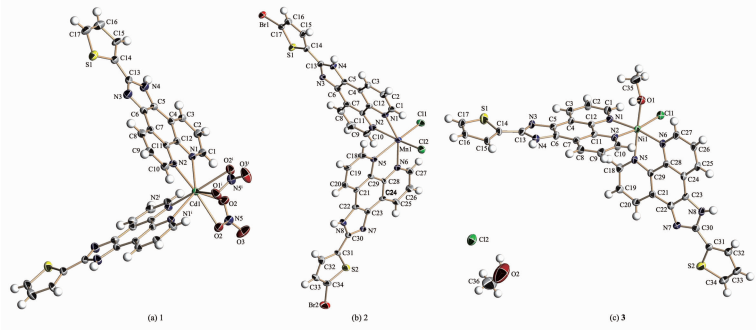
DOI:10.3969/j.issn.1001-4861.2013.00.314
Chinese J. Inorg. Chem., **2013**,**29**:1680-1686



Structural and Spectral Studies of *Cis* Cadmium(Ⅱ), Manganese(Ⅱ) and Nickel(Ⅱ) Complexes Having 2-Thiophenimidazo[4,5-*f*][1,10] phenanthroline and 2-(5-Bromothiophen)imidazo[4,5-*f*] [1,10]phenanthroline Ligands (English)

WANG Yin-Ge, LIU Qian-Qian, ZHAI Li-XIN, QIAN Hui-Fen, HUANG Wei

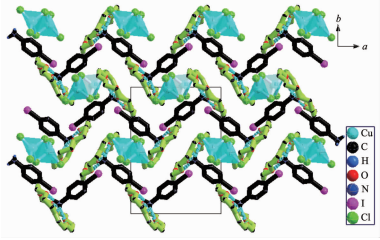
DOI:10.3969/j.issn.1001-4861.2013.00.294
Chinese J. Inorg. Chem., **2013**,**29**:1687-1695



A Novel Supramolecular Compound with 4-Iodobenzenaminium Based on 18-Crown-6: Synthesis, Structure and Dielectric Properties (English)

ZHOU Qin-Qin, FU Da-Wei

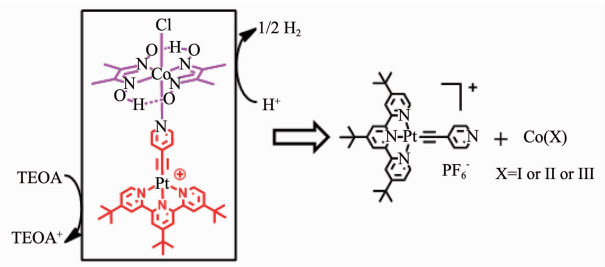
DOI:10.3969/j.issn.1001-4861.2013.00.299
Chinese J. Inorg. Chem., **2013**,**29**:1696-1702



One rotator-stator hybrid inclusion, ([(4-IA-NH_3)·(18-crown-6)]$_2$·(Cu_2Cl_6) (**1**), has been synthesized by performing the macrocyclic supramolecular self-assembly. The high dielectric constant above 350 K indicated that the increase in the disorder molecular thermal motion and/or H-bonding dipole interactions.

Platinum-Cobalt Dinuclear Complex: Synthesis, Photophysical Properties and Visible Light-Driven Hydrogen Production from Water(English)

Han A-Li, Du Ping-Wu

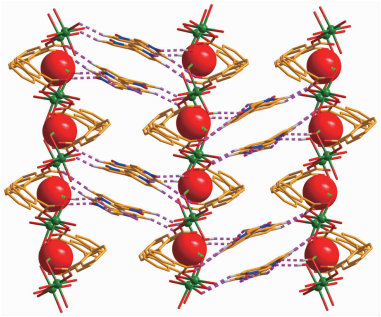


DOI:10.3969/j.issn.1001-4861.2013.00.309
Chinese J. Inorg. Chem., **2013**,**29**:1703-1709

A platinum-cobaloxime complex has been synthesized and studied for visible light-driven hydrogen production. The results show that this complex is possibly decomposed during photocatalysis.

Crystal Structure and Spectral Properties of a One-Dimensional Coordination Polymer $\{[Co(dpa)(H_2O)_4]\cdot(dpdo)\cdot(H_2O)\}_n$ (H_2dpa=2,2′-biphenyldicarboxylate, dpdo=4,4′-bipyridine-*N*,*N*′-dioxide) (English)

PAN Hui, BAI Yan, AN Bing,
DANG Dong-Bin

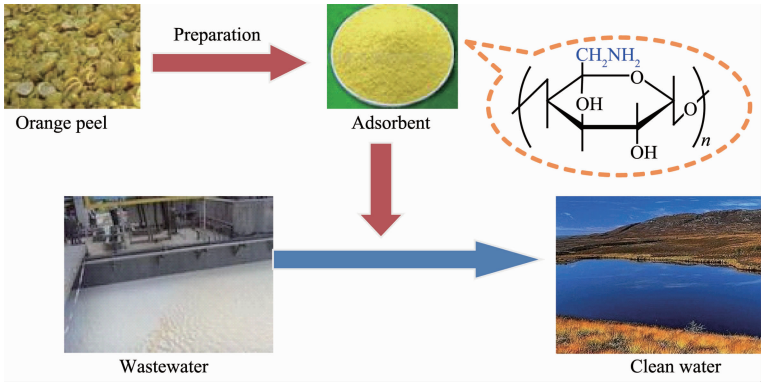


A three-dimensional supramolecular framework containing one-dimensional helical chain architectures was synthesized by solvothermal reaction, the luminescence properties was studied in the solid state.

DOI:10.3969/j.issn.1001-4861.2013.00.307
Chinese J. Inorg. Chem., **2013**,**29**:1710-1716

Recovery of Mo(Ⅵ) from Re(Ⅶ)-Containing Wastewater by Chemically Modified Orange Waste: Competitiveness and Selectivity (English)

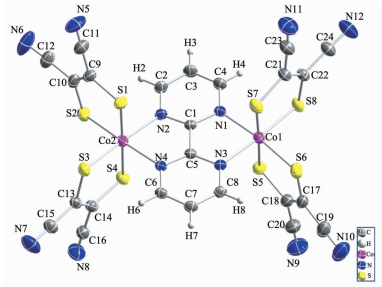
XIONG Ying, LOU Zhen-Ning,
SHAN Wei-Jun, REN Fu-Qiang, LI Ye-Xia,
ZANG Shu-Liang



DOI:10.3969/j.issn.1001-4861.2013.00.317
Chinese J. Inorg. Chem., **2013**,**29**:1717-1723

Synthesis and Crystal Structure of a Dicuclear Cobalt Complex Consisting of 2, 2′-Bipyrimidyl and Dithiolene (English)

WANG Dong-Ni, XU Duo-Hui, DING Liu-Liu, CHEN Qi, LU Chang-Sheng

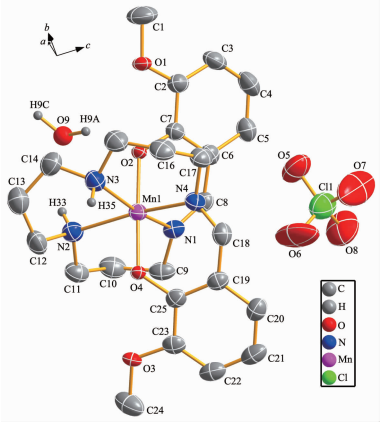


A new mixed-ligand dinuclear cobalt complex, in which each cobalt center was coordinated with two mnt groups and bridged by 2, 2′-bipyrimidyl ligand was synthesized and characterized.

DOI:10.3969/j.issn.1001-4861.2013.00.289
Chinese J. Inorg. Chem., **2013**,**29**:1724-1732

Synthesis, Crystal Structure and Magnetic Properties of a Tetragonally Compressed High-Spin Mn(Ⅲ) Schiff Base Complex (English)

WANG Shi, CUI Lin-Fang, LI Xing-Ao, WANG Lian-Hui, HUANG Wei

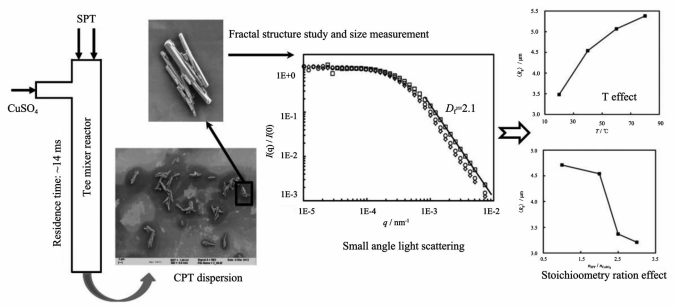


The Mn site has a tetragonally compressed octahedral geometry. The magnetic data are well fitted with a D>0 parameter.

DOI:10.3969/j.issn.1001-4861.2013.00.313
Chinese J. Inorg. Chem., **2013**,**29**:1733-1737

Synthesis of Copper Pyrithione by Co-Precipitation Method in Tee Mixer Reactor(English)

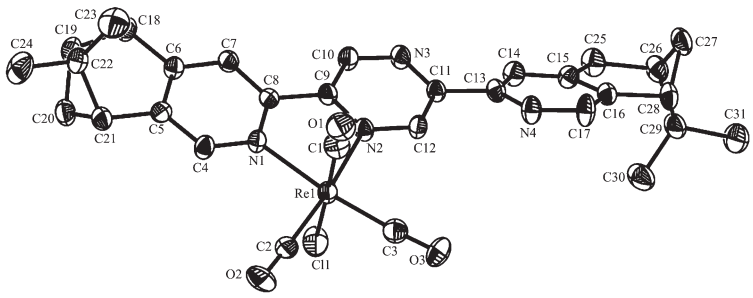
LUO Pei-Cheng, SHI Lei, XIANG Guo-Zhao, ZHAO Su-Qing, JIAO Zhen



DOI:10.3969/j.issn.1001-4861.2013.00.273
Chinese J. Inorg. Chem., **2013**,**29**:1738-1744

Synthesis and Characterization of Chiral 2,5-Bis(4,5-pinene-2-pyridyl) Pyrazine and Its Rhenium(I) Complex (English)

LI Shu-Jing, ZHANG Xiao-Peng, LIU Jian, ZHENG Wei, LI Cheng-Hui

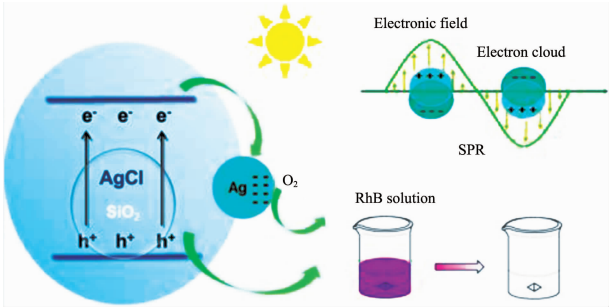


2,5-bis(4,5-pinene-2-pyridyl) pyrazine and $[Re(CO)_3Cl(L)]\cdot DMF$ were synthesized and characterized. Their luminescence, optical and second order NLO properties were investigated.

DOI:10.3969/j.issn.1001-4861.2013.00.295
Chinese J. Inorg. Chem., **2013**,**29**:1745-1752

SiO_2@AgCl:Ag Nanocomposites: an Efficient Plasmonic Photocatalyst for Degradation of Rhodamine B under Visible-Light Irradiation(English)

JIANG Wen, LIU Jun-Xue,
FENG Juan, WANG Ji-Zhuang,
LI Yan-Peng, AN Chang-Hua

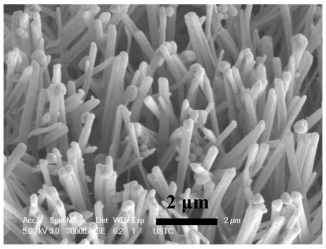


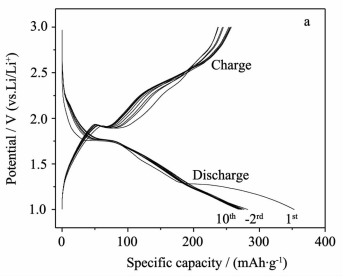
Plasmonic compositing SiO_2@AgCl :Ag nanophotocatalyst has been successfully prepared through coupling polyol precipitation with photoreduction. The as-achieved nanocomposites exhibit high efficiency towards the decomposition of organic pollutants, *i.e.*, RhB.

DOI:10.3969/j.issn.1001-4861.2013.00.187
Chinese J. Inorg. Chem., **2013**,**29**:1753-1758

Lithium Storage Performances of TiO_2 Nanotube Arrays on Copper Substrate (English)

CHEN Gong-De, ZHANG Wei-Xin,
YANG Ze-Heng, WANG Qiang,
YAO Hong-Xu

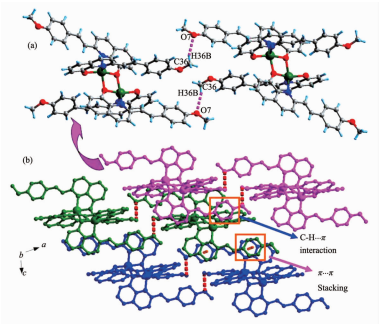




DOI:10.3969/j.issn.1001-4861.2013.00.308
Chinese J. Inorg. Chem., **2013**,**29**:1759-1768

Synthesis, Crystal Structures and Properties of One Binuclear Zinc Complex from a Novel 2-Substituted-8-Hydroxyquinoline Ligand

YUAN Guo-Zan, RONG Lu-Lu,
QIAO Xue-Long, XIA Yin-Pan,
GUO Ting, WEI Xian-Wen



One complex was fabricated by treating (*E*)-2-[2-(4-Methoxyphenyl)ethenyl]-8-hydroxyquinoline (HL) with zinc nitrate. The supramolecular structures of **1** features a two-folded helical chain and thereby 3D network via non-covalent interactions.

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