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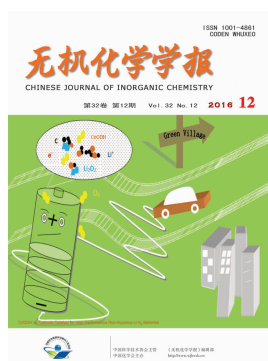
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CoOOH as Cathode Catalyst for High Performance Non-Aqueous Li-O₂ Batteries (English)

CAI Sheng-Rong, WANG Xiao-Fei, ZHU Ding, MU Shi-Jia, ZHANG Kai-Fang, HUANG Li-Wu, CHEN Yun-Gui

DOI:10.11862/CJIC.2016.272

Chinese J. Inorg. Chem., **2016**,**32**:2082-2087

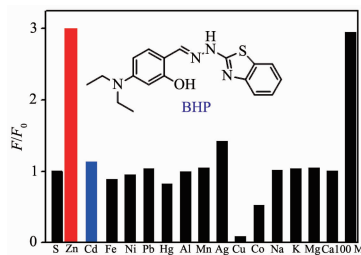
Articles

Benzothiazole-Based Zn²⁺-Specific Fluorescent Probe and Its Cell Imaging Application (English)

ZHANG Chang-Li, TIAN Jia-Jin, SHAO Yang, XU Jian

DOI:10.11862/CJIC.2016.274

Chinese J. Inorg. Chem., **2016**,**32**:2069-2074



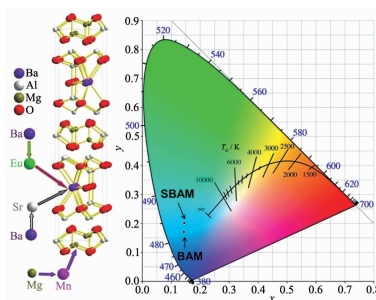
A Zn²⁺ fluorescence sensor BHP has been prepared. It is an effective intra-cellular Zn²⁺ imaging agent.

Eu²⁺, Mn²⁺, Sr²⁺ Tri-doped BaMgAl₁₀O₁₇ Phosphor: Solution Combustion Synthesis and Photoluminescence Properties (English)

ZHANG Chang-Wei, DING Yan-Hua, ZHANG Na, ZHANG Jian-Yong, FANG Yong-Zheng, ZHANG Cheng

DOI:10.11862/CJIC.2016.237

Chinese J. Inorg. Chem., **2016**,**32**:2075-2081



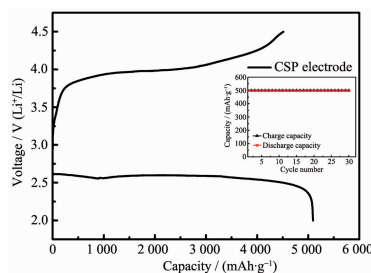
The well-dispersed Sr²⁺, Eu²⁺ and Mn²⁺ tri-doped BaMgAl₁₀O₁₇ (SBAM) phosphors with blue-green light emission were prepared by solution combustion synthesis and the PL intensity is 1.8 times of that BAM specimen obtained by high temperature solid state reaction with *xy* CIE chromaticity of (0.146, 0.250) for SBAM: 0.1Eu²⁺, 0.04Mn²⁺ phosphor.

CoOOH as Cathode Catalyst for High Performance Non-Aqueous Li-O₂ Batteries (English)

CAI Sheng-Rong, WANG Xiao-Fei, ZHU Ding, MU Shi-Jia, ZHANG Kai-Fang, HUANG Li-Wu, CHEN Yun-Gui

DOI:10.11862/CJIC.2016.272

Chinese J. Inorg. Chem., **2016**,**32**:2082-2087



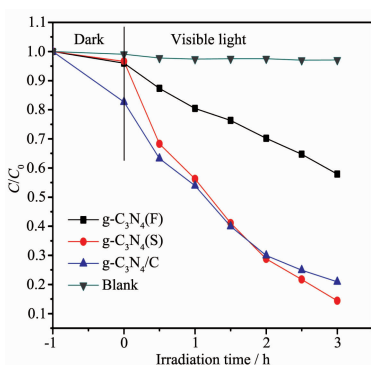
CoOOH catalyst endows the non-aqueous Li-O₂ batteries with a high specific capacity, significantly reduced recharge potential, and superior cycle stability.

Synthesis of g-C₃N₄/C Nanofibers by Electrospinning and Their Photodegradation Performance under Visible Light

YANG Jia-Jia, JIANG Ke-Wang, LIN Xue-Mei, YING Zong-Rong, ZHANG Wen-Wen

DOI:10.11862/CJIC.2016.279

Chinese J. Inorg. Chem., **2016**,**32**:2088-2094



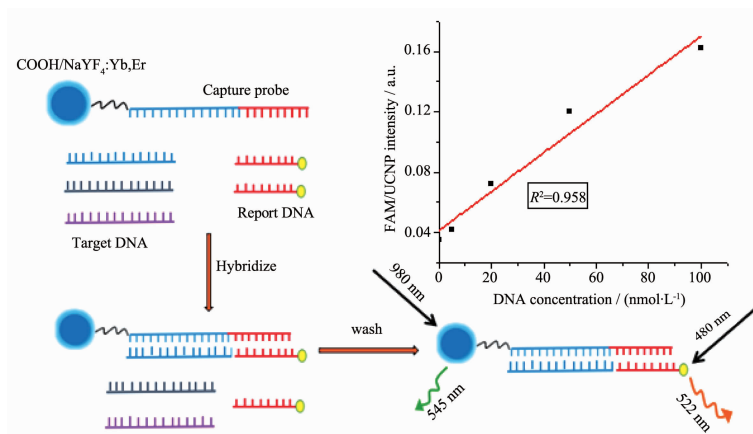
g-C₃N₄ nanosheets/carbon nanofibers were synthesized through electrospinning followed by preoxidation and carbonization. They show good photodegradation performance under visible light originating from better ability of their partially amorphous carbon matrix to reduce the combination of the photogenerated electron and hole pair.

Accurate Detection of DNA Based on the NaYF₄:Yb, Er Upconversion Nanoparticles

MAO Lan-Lan, ZHANG Li-Ming, DENG Yan, LÜ Zhuo-Xuan, HE Nong-Yue

DOI:10.11862/CJIC.2016.271

Chinese J. Inorg. Chem., **2016**,**32**:2095-2101



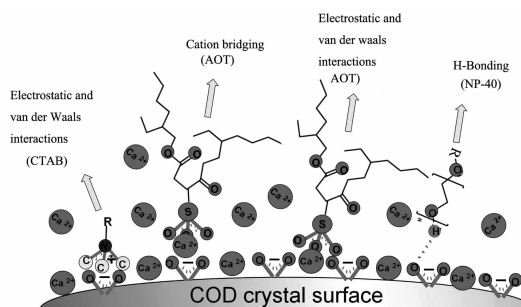
A method for DNA detection was based on the NaYF₄:Yb, Er upconversion nanoparticles and base stacking hybridization. In this method, the fluorescence of NaYF₄:Yb, Er upconversion nanoparticles functioned as a reference standard, which can improve the accuracy of DNA detection.

Differences in Adsorption of Anionic, Cationic and Nonionic Surfactant on Micron/nano Calcium Oxalate Monohydrate and Dihydrate Crystals

WEN Xiao-Ling, DING Yi-Ming,
OUYANG Jian-Ming

DOI:10.11862/CJIC.2016.269

Chinese J. Inorg. Chem., **2016**,**32**:2102-2108



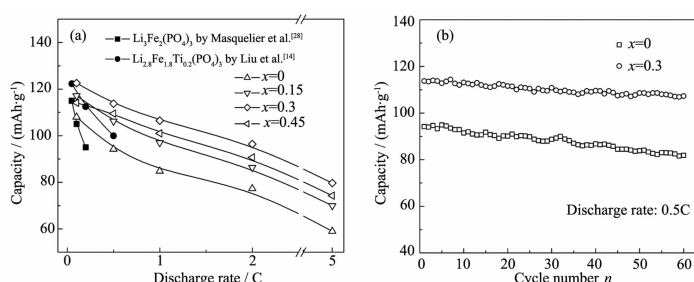
The adsorption quantity of surfactants on COM and COD was ranked in the following order: AOT > CTAB > NP-40. The crystal size, specific surface area, aggregation, and even crystal structural differences between COM and COD all affect the adsorption quantity.

Effect of MoO_4^{2-} Substitution on Electrochemical Properties of Nasicon $\text{Li}_3\text{Fe}_2(\text{PO}_4)_3$ Cathode

ZHANG Bo, HE Jun, HUA Zheng-Shen,
LU Haoqi, WANG Xin, PENG Hui-Fen

DOI:10.11862/CJIC.2016.267

Chinese J. Inorg. Chem., **2016**,**32**:2109-2116



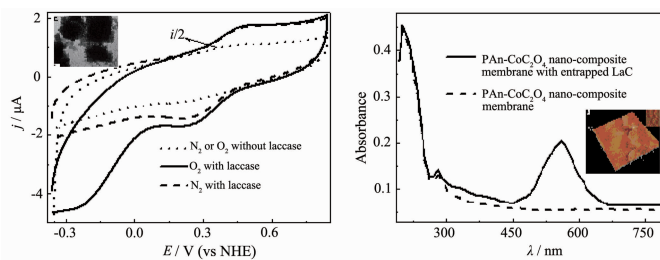
MoO_4^{2-} substituted $\text{Li}_3\text{Fe}_2(\text{PO}_4)_3$ samples were prepared by sol-gel method. The MoO_4^{3-} substitution improved the rate capability and cycling performance of the $\text{Li}_3\text{Fe}_2(\text{PO}_4)_3$ due to decrease in charge transfer resistances and enhanced lithium ion diffusion.

Direct Electrochemistry of Electrode Modified with Thin Film of Laccase Immobilized in Nano-Composite of Polyaniline- CoC_2O_4

YANG Yang, HUO Wen-Shan,
ZHOU Zheng, ZHANG Qi, ZENG Han

DOI:10.11862/CJIC.2016.277

Chinese J. Inorg. Chem., **2016**,**32**:2117-2128



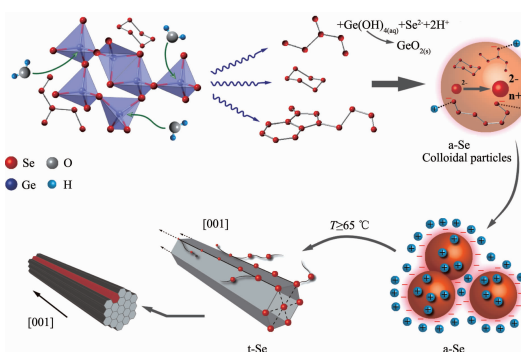
Basal electrode over-coated by a layer of thin film made up of PAN- CoC_2O_4 nano-composite with attached Laccase exhibited preferable catalytic performance for electro-reduction of oxygen.

Hydrothermal Synthesis and Nanomechanical Performance of One-Dimensional Selenium Nanostructures

NIU Yi-Fan, YANG Ying, YANG Wen-Tao

DOI:10.11862/CJIC.2016.270

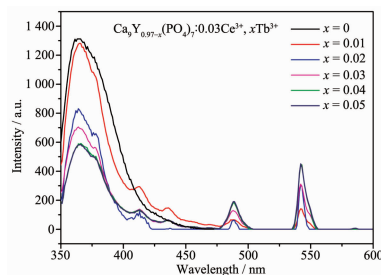
Chinese J. Inorg. Chem., **2016**,**32**:2129-2135



One-dimensional trigonal-selenium (t-Se) nanostructures were synthesized in environment-friendly and one-step hydrothermal process, using GeSe_4 glass as raw material in aqueous solution at 80 °C. The Se nanofibers were grown along [001] direction with a hexagonal cross section.

Preparation and Luminescent Properties of $\text{Ca}_9\text{Y}(\text{PO}_4)_7\text{:Ce}^{3+},\text{Tb}^{3+}$ Nano-phosphors

WANG Zan, MI Xiao-Yun, XIE Ling-Jie,
PAN Xiao-Ying, ZHOU Hong-Yan,
CHEN Shu-Yi, ZHANG Xi-Yan,
BAI Zhao-Hui



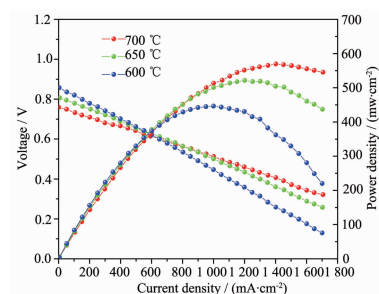
$\text{Ca}_9\text{Y}(\text{PO}_4)_7\text{:Ce}^{3+},\text{Tb}^{3+}$ nano-phosphors were synthesized by hydrothermal method. The introduction of the energy transfer of $\text{Ce}^{3+}\text{-Tb}^{3+}$ of $\text{Ca}_9\text{Y}(\text{PO}_4)_7\text{:Ce}^{3+},\text{Tb}^{3+}$ nano-phosphors.

DOI:10.11862/CJIC.2016.284

Chinese J. Inorg. Chem., **2016**,**32**:2136-2142

Preparation and Electrochemical Properties of $(\text{Pr}_{0.9}\text{La}_{0.1})_2(\text{Ni}_{0.74}\text{Cu}_{0.21}\text{Ga}_{0.05})\text{O}_{4\delta}\text{-Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{2\delta}$ Composite Cathode

SHENG Shuang, ZHAO Hui,
HAO Ju-Hong, SUN Li-Ping, HUO Li-Hua



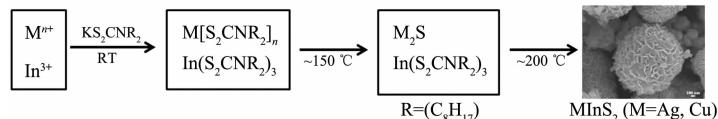
The ORR of PLNCG-CGO composite cathode is greatly improved by the addition of $\text{Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{2\delta}$. The power density of the anode supported single cell Ni-CGO/CGO/PLNCG-30CGO reaches to $569 \text{ mW} \cdot \text{cm}^{-2}$ at 700°C in $\text{H}_2\text{-air}$.

DOI:10.11862/CJIC.2016.275

Chinese J. Inorg. Chem., **2016**,**32**:2143-2150

Thermolysis Synthesis and Growth Mechanism of Metastable MInS_2 ($\text{M} = \text{Ag}, \text{Cu}$) Flowerlike Microsphere

WANG Yue, ZOU Xiao-Chuan, WANG Cun,
SHI Yong-Fang



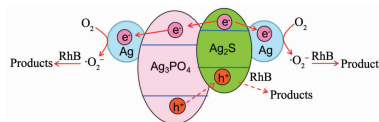
Metastable MInS_2 ($\text{M} = \text{Ag}, \text{Cu}$) flowerlike microsphere has been synthesized by thermolysis of $\text{M}(\text{S}_2\text{CNR}_2)_n/\text{In}(\text{S}_2\text{CNR}_2)_3$, and both the reaction temperature and feed ratio of metallic ion ($n_{\text{M}}/n_{\text{In}}$) had an influence on the formation of pure-phase MInS_2 .

DOI:10.11862/CJIC.2016.233

Chinese J. Inorg. Chem., **2016**,**32**:2151-2157

$\text{Ag}_2\text{S}/\text{Ag}_3\text{PO}_4/\text{Ni}$ Thin Films: Preparation and Photocatalytic Activity for Rhodamine B

ZHAO Di, ZHANG Bo, DUAN Zhao-Juan,
LI Ai-Chang



$\text{Ag}_2\text{S}/\text{Ag}_3\text{PO}_4/\text{Ni}$ thin films exhibited high photocatalytic activity for RhB with the degradation rate of 88.7%. During the photocatalytic process the $\text{Ag}_2\text{S}/\text{Ag}_3\text{PO}_4$ system was transformed into a $\text{Ag}@\text{Ag}_2\text{S}/\text{Ag}_3\text{PO}_4/\text{Ag}$ system. It is precisely because of the synergistic effect between Ag_2S and Ag_3PO_4 and the plasma resonance effect of silver nanoparticles to enhance the rate of removal of pollutants.

DOI:10.11862/CJIC.2016.276

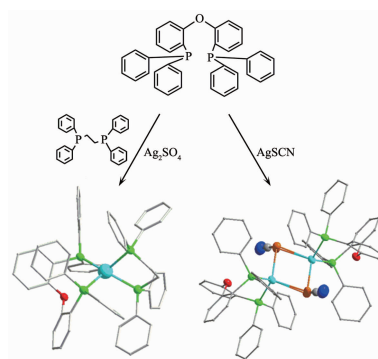
Chinese J. Inorg. Chem., **2016**,**32**:2158-2164

Syntheses and Characterization of Silver(I) Complexes of Bis(2-(diphenylphosphino)phenyl)ether (English)

LIN Sen, LI Yue, CUI Yang-Zhe, ZHANG Yan-Ru, WANG Meng-Qin, LI Zhong-Feng, JIN Qiong-Hua

DOI:10.11862/CJIC.2016.273

Chinese J. Inorg. Chem., **2016**,**32**:2165-2171



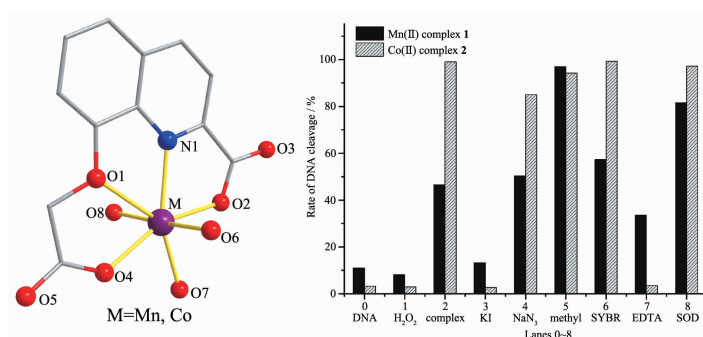
Complex **1** is a simple mono-nuclear structure, and the Ag atom is chelated by two different phosphine ligands. Complex **2** is a bi-nuclear structure, which has a great symmetry of molecule.

Syntheses, Structures, DNA/BSA Binding and DNA Cleavage of Mononuclear Manganese(II) and Cobalt(II) Complexes with *N,O*-Chelating Quinoline Derivative Ligand (English)

ZHANG Yong-Po, YANG Jia-Jia, LÜ Jia-Yuan, GAO Chun-Yan, ZHAO Jin-Zhong

DOI:10.11862/CJIC.2016.265

Chinese J. Inorg. Chem., **2016**,**32**:2172-2182



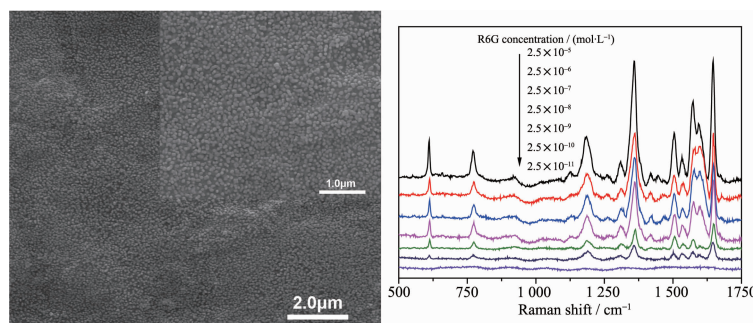
Isostructural mononuclear Mn(II) and Co(II) complexes with quinoline derivative ligand show apparently different biological activities.

Two-Step Electrodeposition Process for Fabrication of Au-Graphene Oxide Hybrid Films as SERS Substrates (English)

XU Ling, YAO Ai-Hua, XU Yan, WANG De-Ping

DOI:10.11862/CJIC.2016.280

Chinese J. Inorg. Chem., **2016**,**32**:2183-2190



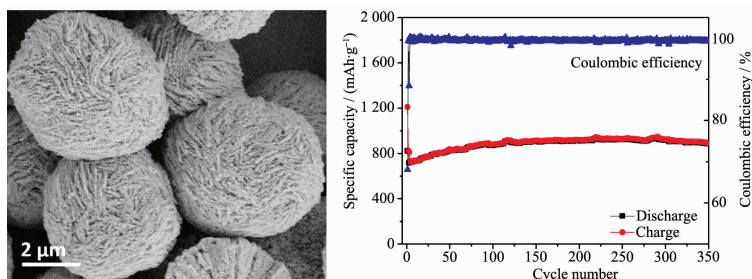
Large-area SERS substrates based on Au-GO hybrid films were prepared by two-step electrodeposition process. Au nanoparticles with an average size of ~60 nm were uniformly deposited on the surface of GO. The substrates exhibited strong and stable SERS response toward R6G with a detection limit of $\sim 10^{-10}$ mol·L⁻¹ and an enhancement factor of $\sim 10^6$.

Clew-like Microspheres Composed of Uniform ZnCo_2O_4 Nanoparticles as Anode Material for Lithium-Ion Batteries (English)

WANG Ying, LIN Ning

DOI:10.11862/CJIC.2016.259

Chinese J. Inorg. Chem., **2016**,**32**:2191-2197



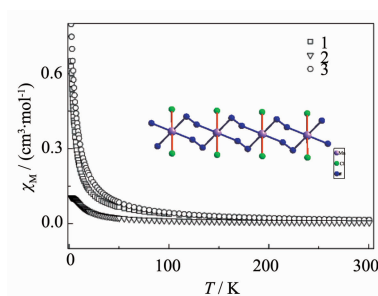
Clew-like ZnCo_2O_4 microspheres are synthesized by heat treatment of precursor containing co-precipitated Zn and Co at 600 °C. As anode for Li ion battery, the obtained ZnCo_2O_4 microspheres show a reversible capacity of 965 $\text{mA}\cdot\text{h}\cdot\text{g}^{-1}$ at 0.5 $\text{A}\cdot\text{g}^{-1}$ after 200 cycles, 882 $\text{mA}\cdot\text{h}\cdot\text{g}^{-1}$ at 0.8 $\text{A}\cdot\text{g}^{-1}$ over 350 cycles, and superior rate capability.

Syntheses, Structures and Magnetic Studies of Three Double Hydrazine Bridging Transition Metal Compounds (English)

LI Huan, CHEN Yun-Zhou, WANG Yan-Jun, CHEN Yun-Feng, WANG Bing-Wu, JIA Li-Hui

DOI:10.11862/CJIC.2016.250

Chinese J. Inorg. Chem., **2016**,**32**:2198-2204



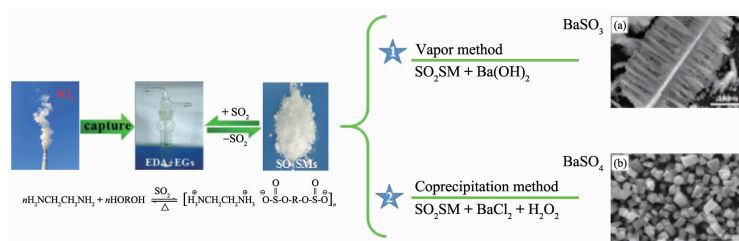
Three double hydrazine bridged transition metal compounds has been synthesized by hydrothermal reaction and characterized by single-crystal X-ray diffraction. The hydrazine as bridge ligand can mediate the antiferromagnetic (AF) coupling interaction between magnetic centers.

A SO_2 Fixation Method and Its Use in Preparation of BaSO_3 or BaSO_4 (English)

ZHANG Fei, LIU Li-Hua, SHA Feng, QIAO Xian-Shu, ZHANG Jian-Bin

DOI:10.11862/CJIC.2016.256

Chinese J. Inorg. Chem., **2016**,**32**:2205-2211



The formative process of SO_2SMs using EDA and EGs can capture SO_2 and be used in the preparation process of BaSO_3 and BaSO_4 .

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