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论　文

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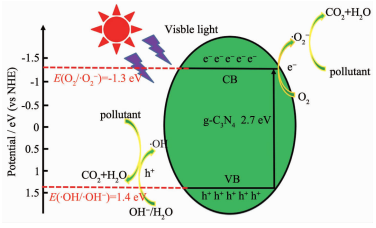
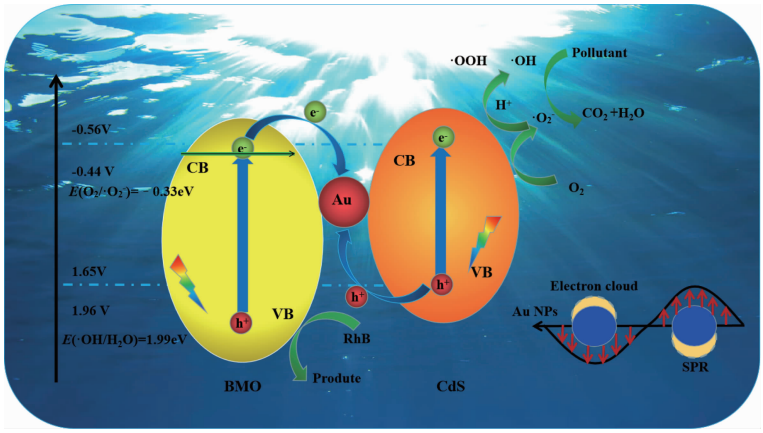


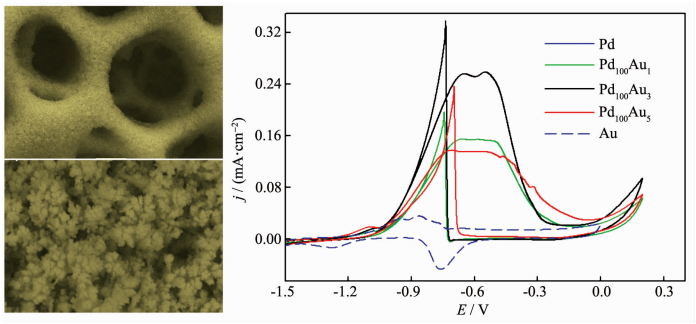
x-HNO_3-g-C_3N_4 which had high catalytic activity and stability was synthesized from the activiation of melamine by HNO_3. A multilayered buildup structure was formed, whichincreased specific surface area and pores volume of sample. Consequently, the carrier transport capacity was significantly enhanced, and band gap droped to 2.7 eV.



Z-scheme CdS/Au/Bi_2MoO_6 heterostructure have been successfully fabricated by co-modification with CdS and Au on the surface of Bi_2MoO_6, thus significantly significantly improving photocatalytic activity of Bi_2MoO_6.

Preparation and High Electrocatalytic Activity for the Oxidation of Ethanol of PdAu Alloy Foam Films (English)

LIU Jun, ZHOU Quan, XIE Jia-Qi, LI Rong

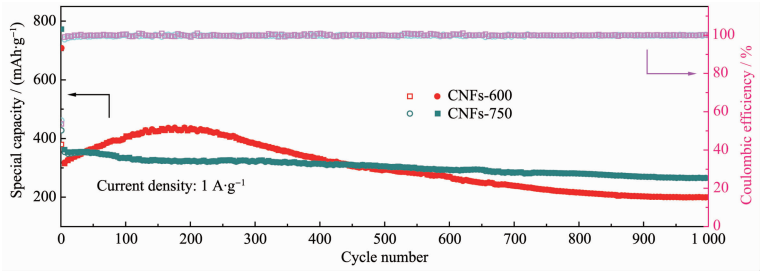


Three-dimensional (3D) porous Au-doped PdAu alloy foam films were obtained by using a hydrogen bubble dynamic template electrodeposition method. The Au-doped PdAu alloy foam films showed high electrocatalytic activity toward the electrooxidation of ethanol in alkaline media.

DOI:10.11862/CJIC.2019.195
Chinese J. Inorg. Chem., **2020**,**36**(1):21-30

Effect of Heat Treatment on Structure and Lithium Ion Storage Properties of N-Rich Carbon Nanofibers

WANG Jing-Jing, ZAHNG Jiang, WANG Jin-Yue, WANG Lu, LI Xuan-Ke

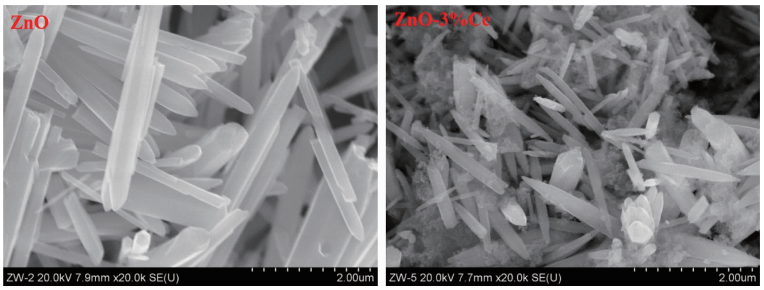


The type and content of nitrogen in CNFs prepared at different carbonization temperature can improve the storage performance of Li^+ in LIBs, and then improve the capacity of electrode.

DOI:10.11862/CJIC.2020.026
Chinese J. Inorg. Chem., **2020**,**36**(1):31-39

Preparation by Co-precipitation Method and Photocatalytic Performances on the Degradation of Dyes of Ce^{3+}-Doped Nano-ZnO

ZHONG Wei, XIA Ying-Fan, ZHAI Hang-Ling, GAO Yue, LI Shi-Hui, LÜ Chun-Xin

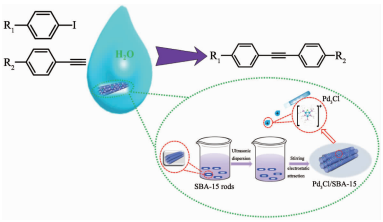


Moderate doping of Ce^{3+} can change the morphology of nano-ZnO and greatly improve the photocatalytic degradation activity of organic dyes

DOI:10.11862/CJIC.2020.006
Chinese J. Inorg. Chem., **2020**,**36**(1):40-52

Mesoporous SBA-15 Rods Supported Pd_3Cl Catalysts for Sonogashira C-C Coupling (English)

HE Rong, YUN Ya-Pei, SUN Li-Li, SHENG Hong-Ting, DU Yuan-Xin, XIANG Dong, LI Peng, YUAN Xiao-You, ZHU Man-Zhou, HONG Xun, WU Yu-En

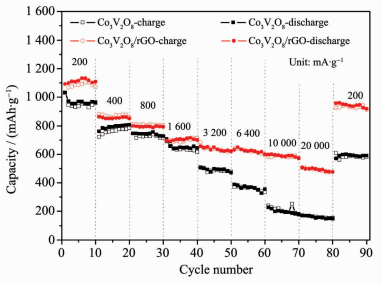


Atomically precise $[Pd_3Cl(PPh_2)_2(PPh_3)_3]^+$ (denoted as Pd_3Cl) nanoclusters were supported on mesoporous SBA-15 by electrostatic attraction strategy. The well-defined Pd_3Cl/SBA-15 catalysts exhibited high catalytic activities and good recyclability for Sonogashira C-C coupling reaction.

DOI:10.11862/CJIC.2020.022
Chinese J. Inorg. Chem., **2020**,**36**(1):53-61

Preparation and Electrochemical Properties of $Co_3V_2O_8$/graphene Composite of Anode Material for Lithium Storage

ZHENG Hao, JIN Jia-Xin, CHENG Jing-Song, ZHAO Rong-Fei, LI Lin

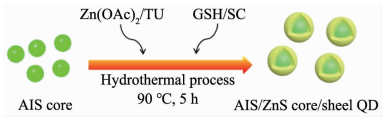


The $Co_3V_2O_8$/rGO composite has been successfully prepared by through a facile hydrothermal combined thermal treatment method. The excellent electrochemical performance is attributed to the synergistic effect from reduced graphene oxide and $Co_3V_2O_8$, and the composite structure can improve the electrode conductivity and efficient buffering the volume change.

DOI:10.11862/CJIC.2020.010
Chinese J. Inorg. Chem., **2020**,**36**(1):62-68

Hydrothermal Synthesis and Fluorescence Properties of $AgInS_2$/ZnS Core/Shell Quantum Dots

CHEN Ting, HU Xiao-Bo, XU Yan-Qiao, WANG Lian-Jun, JIANG Wan, JIANG Wei-Hui, XIE Zhi-Xiang

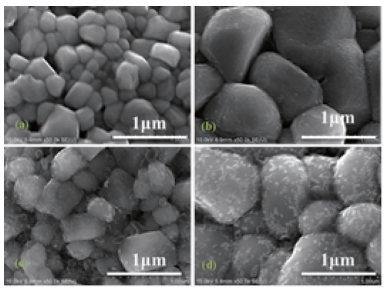


AIS/ZnS core/shell QDs with high crystallinity and stability were synthesized via hydrothermal method with adding ZnS precursors into AIS cores solution. In contrast with AIS QDs, the AIS/ZnS core/shell QDs show significantly improved emissive intensity, which increases with increasing the reaction temperature and the addition amount of ligands.

DOI:10.11862/CJIC.2020.024
Chinese J. Inorg. Chem., **2020**,**36**(1):69-78

Preparation of Long-Life Nickel-Rich and Cobalt-Free Layered $LiNi_{0.75}Mn_{0.25}O_2$ Cathode Materials

BAN Li-Qing, BAI Xiang-Tao, ZHUANG Wei-Dong, LI Wen-Jin, HUANG Wei, LU Shi-Gang

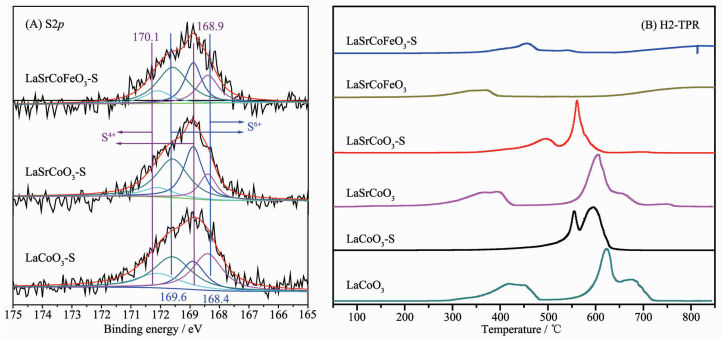


The $LiNi_{0.75}Mn_{0.25}O_2$ material exhibited a low residual alkali content and a high cyclability, with 80% capacity retention after 830 cycles under the coating modification with a mechanical fusion method.

DOI:10.11862/CJIC.2020.011
Chinese J. Inorg. Chem., **2020**,**36**(1):79-86

Effect of Sr and Fe Doped $LaCoO_3$ on Catalytic Oxidation of Soot and Sulfur Resistance

WEI Wei, WU Ai-Chun, QIAO Zhi-Wei, LI Shu-Hua, LIANG Hong, PENG Feng

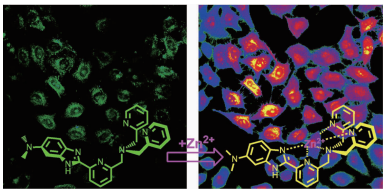


The catalysts exhibited excellent catalytic oxidation soot activity and sulfur resistance. Moreover, the poisoning of SO_2 was mainly attributed to the sulfation (SO_3^{2-}, SO_4^{2-}) of Co^{2+}/Co^{3+} and surface adsorbed oxygen, leading to deactivating the active site (O_2^- or O^- and Fe^{4+}) of catalyst.

DOI:10.11862/CJIC.2020.031
Chinese J. Inorg. Chem., **2020**,**36**(1):87-96

A Highly Sensitive Ratiometric Fluorescence Probe for Zn^{2+} Detection in Living Cells

ZHANG Chang-Li, XU Jian, HUANG Fang, ZHAO Hai-Rong, CHEN Chang-Yun



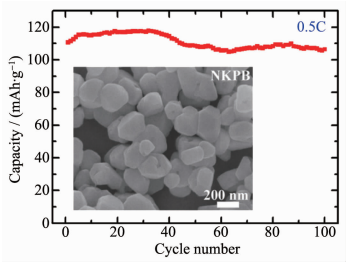
A ratiometric fluorescent Zn^{2+} sensor **DBITA** which featured a Zn^{2+}-induced large Stokes shift of 172 nm and picomolar sensitivity for Zn^{2+} detection in both aqueous media and living cells was developed.

DOI:10.11862/CJIC.2020.009

Chinese J. Inorg. Chem., **2020**,**36**(1):97-105

Prussian Blue Cathode Material: Preparation by Ion-Exchange Method and Electrochemical Potassium-Storage Performance

SUN Yun-Po, XIE Jian, ZHAO Xin-Bing, ZHUANG Da-Gao, ZHANG Gen-Lin



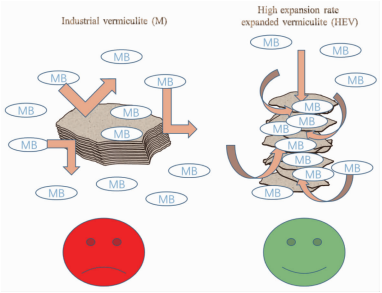
A Na-doped K-based Prussian blue material $K_{1.9}Na_{0.1}Mn[Fe(CN)_6]\cdot 0.4H_2O$ prepared by an ion-exchange method showed a high capacity of 136.3 $mAh\cdot g^{-1}$ at 0.1C, good rate capability of 68.4 $mAh\cdot g^{-1}$ at 10C and good cycling stability with 96.1% capacity retained after 100 cycle at 0.5C.

DOI:10.11862/CJIC.2020.008

Chinese J. Inorg. Chem., **2020**,**36**(1):106-112

High Expansion Rate Expanded Vermiculite: Preparation by Chemical-Microwave Method and the Adsorption Mechanism of Methylene Blue

XIE Yan-Yan, SUN Hong-Juan, PENG Tong-Jiang, LUO Li-Ming, TIAN Jing-Fei, QIN Ya-Ting



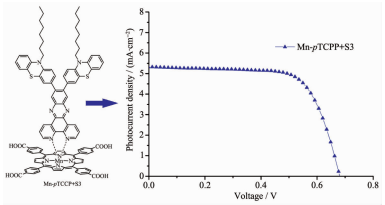
To improve vermiculite application efficiency and broaden its application field, we prepared HEV and tested its adsorption effect on MB. The results showed that the MB adsorption capacity of HEV was higher than that of some natural clay minerals and commercial grade activated carbon.

DOI:10.11862/CJIC.2020.004

Chinese J. Inorg. Chem., **2020**,**36**(1):113-122

Application of Self-Assembly of an Antenna Molecule with Porphyrin Dyes in Dye-Sensitized Solar Cells

JIA Hai-Lang, LI Shan-Shan, GONG Bing-Quan, GU Lei, GUAN Ming-Yun



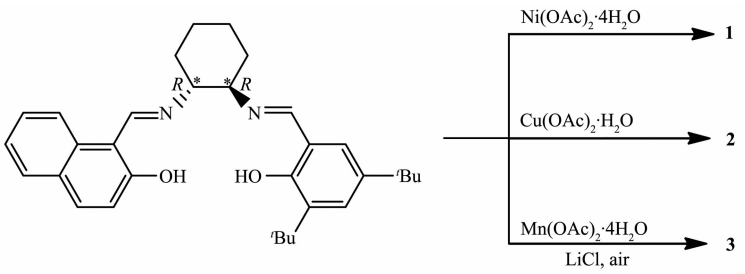
The antenna molecule S3 effectively enhances the spectral responsiveness of the DSSC, making the conversion efficiency increase by 1.2 times.

DOI:10.11862/CJIC.2020.014

Chinese J. Inorg. Chem., **2020**,**36**(1):123-131

Synthesis and Crystal Structure of Ni(Ⅱ)/Cu(Ⅱ)/Mn(Ⅲ) Complexes with Asymmetric Salen Ligand

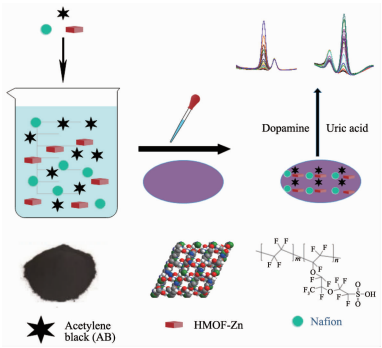
ZHANG Qi-Long, WANG Jia-Zhong,
YANG Xiao-Sheng, ZHU Bi-Xue



DOI:10.11862/CJIC.2020.030
Chinese J. Inorg. Chem., **2020**,**36**(1):132-138

Simultaneous Detection of Dopamine and Uric Acid Based on Chiral MOF and Acetylene Black Modified Electrode (English)

FANG Zhi-Li, WANG Ping, LIU Sheng-Dong,
WANG Xin, NIE Qi-Xiang, YANG Shao-Ming,
XU Wen-Yuan, ZHOU Mei-Hua

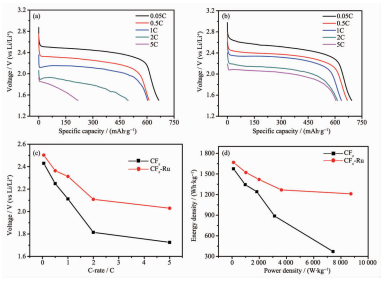


The GCE electrode modified by a kind of chiral MOF blended with acetylene black that fixed by Nafion had a high electrical signal response to dopamine and uric acid. Dopamine and uric acid can be simultaneously detected on the modified GCE electrode and totally independent of each other.

DOI:10.11862/CJIC.2019.273
Chinese J. Inorg. Chem., **2020**,**36**(1):139-147

CF_x-Ru Composite Cathode for Lithium Primary Battery with Significantly Improved Electrochemical Performance (English)

ZHANG Ling-Xiao, ZHANG Li-Juan,
XILI De-Ge, LI Fan

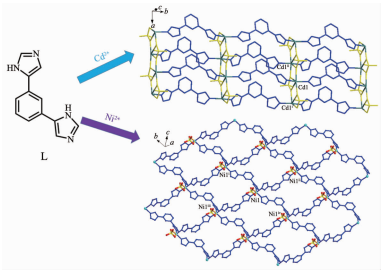


The ruthenium-modified fluorocarbons as anode material of lithium primary battery showed excellent rate capability and energy density, which is attributed to the removal of inert groups and the increase of specific surface area during the introduction of ruthenium.

DOI:10.11862/CJIC.2020.005
Chinese J. Inorg. Chem., **2020**,**36**(1):148-158

Two Metal-Organic Frameworks Constructed by 1,3-Di(1*H*-imidazol-4-yl) Ligand: Synthesis, Crystal Structure and Photoluminescence Property (English)

LIU Zhi-Qiang, WU Jun-Feng, CHEN Jun,
WU Xia, WANG Yan



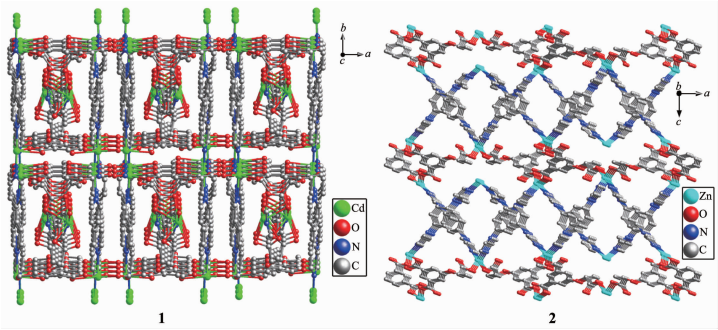
Two complexes, $[Cd(L)(SO_4)]_n$ (**1**) and $\{[Ni(L)(SO_4)]\cdot H_2O\}_n$ (**2**) (L=1,3-di(1*H*-imidazol-4-yl)benzene) were structurally characterized, and their thermal stability and luminescent properties were presented.

DOI:10.11862/CJIC.2020.003
Chinese J. Inorg. Chem., **2020**,**36**(1):159-164

Two 3D Pillar-Layered Homochiral Coordination Complexes: Syntheses, Structures and Properties (English)

XU Zhong-Xuan, BAI Xue-Lei, MENG Qin

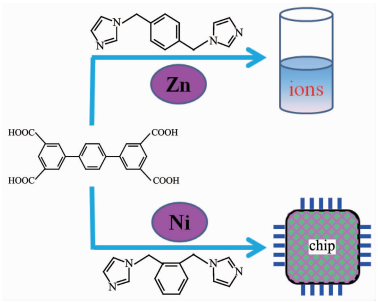
DOI:10.11862/CJIC.2020.029
Chinese J. Inorg. Chem., **2020**,**36**(1):165-172



Two Coordination Polymers Constructed by Aromatic Tetracarboxylic Acid: Luminescent and Magnetic Properties (English)

ZHAI Li-Jun, ZHANG Jie, GAO Ling-Ling, GAO Ting, JIA Jiao-Jiao, NIU Yu-Lan, HU Tuo-Ping

DOI:10.11862/CJIC.2019.257
Chinese J. Inorg. Chem., **2020**,**36**(1):173-182

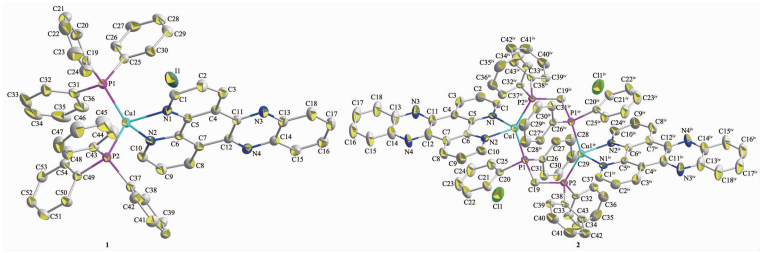


Complex **1** is good luminescent probe for detecting Fe^{3+}/$Cr_2O_7^{2-}$ and complex **2** shows antiferromagnetic properties.

Syntheses, Structures and Terahertz Time-Domain Spectroscopy of Two Diimine-Copper(Ⅰ)-Phosphine Complexes (English)

ZHU Ning, PAN Xun, LIN Sen, YANG Yu-Ping, XIN Xiu-Lan, LI Zhong-Feng, ZHANG Fan, JIN Qiong-Hua

DOI:10.11862/CJIC.2020.015
Chinese J. Inorg. Chem., **2020**,**36**(1):183-191

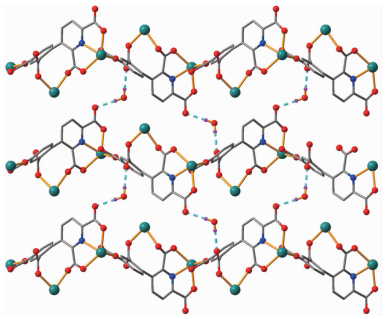


Complex **1** is of simple mononuclear structure. Complex **2** is different from **1** for its dinuclear geometry structure because of the phosphine ligand dppm replacing PPh_3. The room temperature terahertz (THz) absorption spectra of complexes **1**~**2** provides useful information for the properties of complexes.

Syntheses, Crystal Structures, Luminescent and Magnetic Properties of Two 1D Cadmium(Ⅱ) and Nickel(Ⅱ) Coordination Polymers (English)

LI Yu, CHEN Yong-Xuan, ZHAO Na, FENG An-Sheng, ZOU Xun-Zhong

DOI:10.11862/CJIC.2020.017
Chinese J. Inorg. Chem., **2020**,**36**(1):192-198



Two 1D chain $\{[M_2(\mu_3\text{-L})(phen)_3]\cdot 5H_2O\}_n$ (M=Cd (**1**), Ni (**2**)) have been constructed and the structures, luminescent and magnetic properties of the polymers were investigated.