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CHINESE JOURNAL OF INORGANIC CHEMISTRY

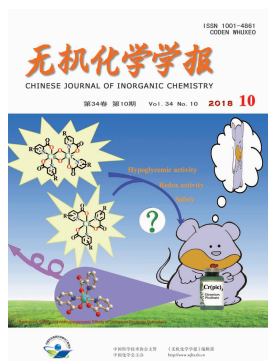
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Syntheses, Safety and Antihyperglycemic Effects of Chromium Picolinate Derivatives

CHAI Jie, YANG Bin-Sheng, LIU Bin

DOI:10.11862/CJIC.2018.217

Chinese J. Inorg. Chem., **2018**,**34**(10):1783-1791

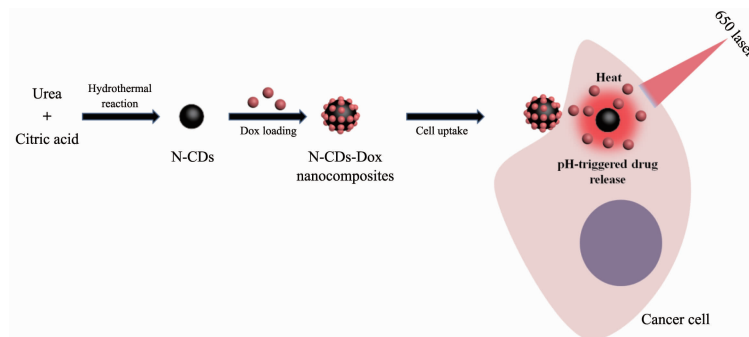
Articles

pH-Controlled Drug Release of Nitrogen Doped Carbon Dots Delivering Doxorubicine for Synergetic Photo-Thermal Therapy and Chemotherapy (English)

YANG Zheng, XIE An-Jian, SHEN Yu-Hua

DOI:10.11862/CJIC.2018.236

Chinese J. Inorg. Chem., **2018**,**34**(10):1775-1782



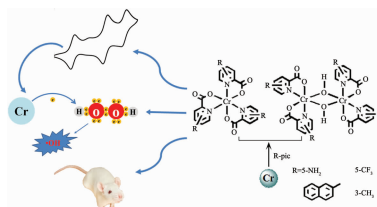
The synthesized N-CDs could load Dox effectively to form N-CD-Dox nanocomposites, which achieved chemotherapy by pH-triggered drug release and light-induced photo-thermal therapy to cancer cells synergistically after cell uptake.

Syntheses, Safety and Antihyperglycemic Effects of Chromium Picolinate Derivatives

CHAI Jie, YANG Bin-Sheng, LIU Bin

DOI:10.11862/CJIC.2018.217

Chinese J. Inorg. Chem., **2018**,**34**(10):1783-1791



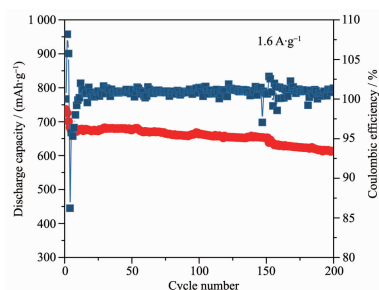
Four new chromium complex were synthesized and one of them behaved more safety in toxicity test and more efficient in lowering low-density lipoprotein (LDL).

Preparation and Lithium Storage Properties of Grid-like SnO₂ Fibers

YU Ji, WEI Hai-Yan, LI Li, YANG Zhen-Yu, CAI Jian-Xin

DOI:10.11862/CJIC.2018.232

Chinese J. Inorg. Chem., **2018**,**34**(10):1792-1798



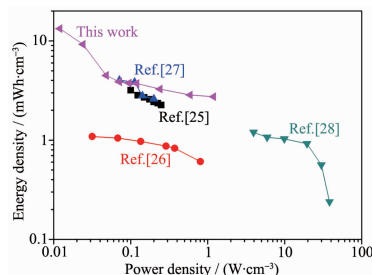
The SnO₂ fibers displays a better electrochemistry performance than SnO₂-C fibers. They have higher discharge capacity and longer cycle life.

Preparation by Electro-Deposition Method and Application in Flexible All-Solid-State Supercapacitors of Poly(3,4-ethylenedioxythiophene) Microtubes

LI Hui-Hua, GE You, ZHU Hong-Li, FENG Xiao-Miao, LIU Yu-Ge

DOI:10.11862/CJIC.2018.231

Chinese J. Inorg. Chem., **2018**,**34**(10):1799-1807

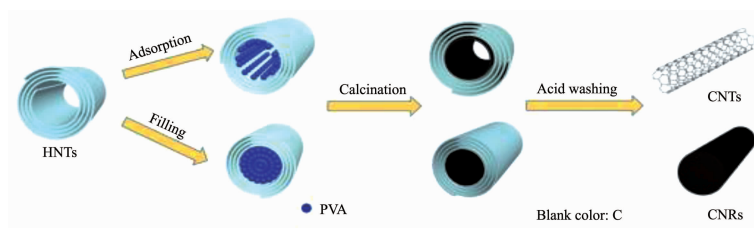


Halloysite Nanotubes-Templated One-Step Preparation for Carbon Nanotubes/Carbon Nanorods Mixed Carbon Nanomaterials

CHENG Zhi-Lin, CAO Bao-Chong, LIU Zan

DOI:10.11862/CJIC.2018.228

Chinese J. Inorg. Chem., **2018**,**34**(10):1808-1816



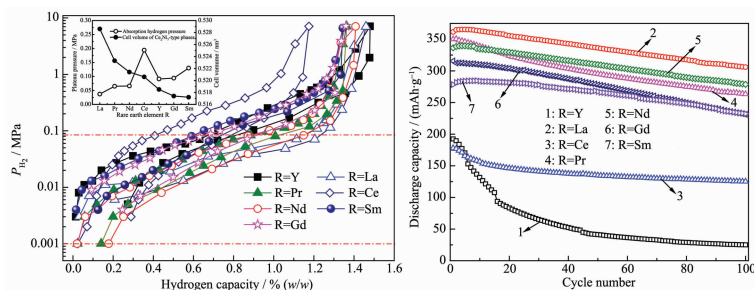
The CNTs/CNRs mixed nanomaterials were fabricated by nanocasting method in HNTs template with tuning PVA proportion.

Effect of Rare Earth Elements on the Microstructure and Electrochemical Properties of Mg-Free R-Y-Ni Based A₂B₇-Type Hydrogen Storage Alloys

JIANG Wan-Ting, LUO Yong-Chun, ZHAO Lei, DEN An-Qiang, ZHANG Guo-Qing

DOI:10.11862/CJIC.2018.222

Chinese J. Inorg. Chem., **2018**,**34**(10):1817-1825



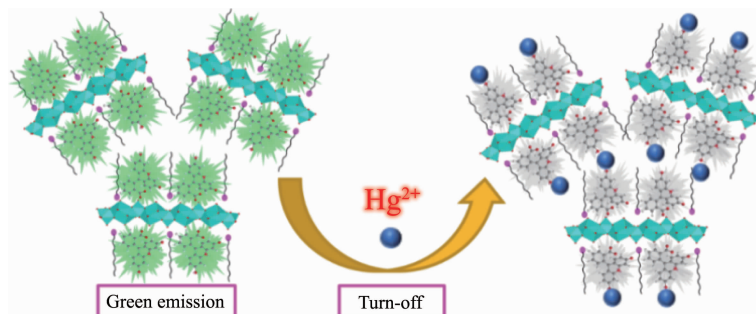
The present work reports the hydrogen storage and electrochemical properties of the Mg-free A₂B₇-type R_{0.3}Y_{0.7}Ni_{3.25}Mn_{0.15}Al_{0.1} (R=Y, La, Pr, Ce, Nd, Gd, Sm) alloys. The appropriate substitution of R=La for Y provided the alloys with excellent hydrogen storage properties, high discharge capacity and better cyclic stability.

Photoluminescence and Detection of Hg(II) Ions of Layered Yttrium Hydroxide Composite with Fluorescein

LI Jian, SU Fei-Fei, GUO Rong, LIANG Zu-Pei, MA Shu-Lan

DOI:10.11862/CJIC.2018.226

Chinese J. Inorg. Chem., **2018**,**34**(10):1826-1832



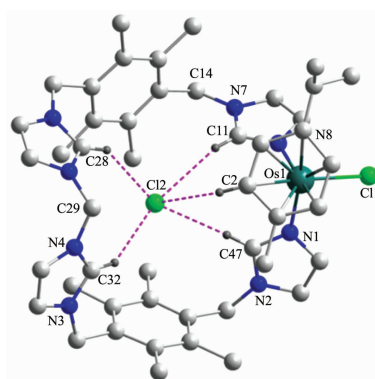
The FN/OS-LYH composite exhibits tunable luminescence in solid and delaminated state. The quenched fluorescence under Hg^{2+} addition provides a promising turn-off fluorescence sensor for detecting Hg^{2+} .

Synthesis, Crystal Structure and DNA Interaction of Mononuclear Osmium Complexes

ZHAO Ya-Chen, LI Ji, HU Jiong-Sheng, LIU Lu, WANG Meng-Meng, SU Zhi, QIAN Yong, Peter J. Sadler, LIU Hong-Ke

DOI:10.11862/CJIC.2018.214

Chinese J. Inorg. Chem., **2018**,**34**(10):1833-1840



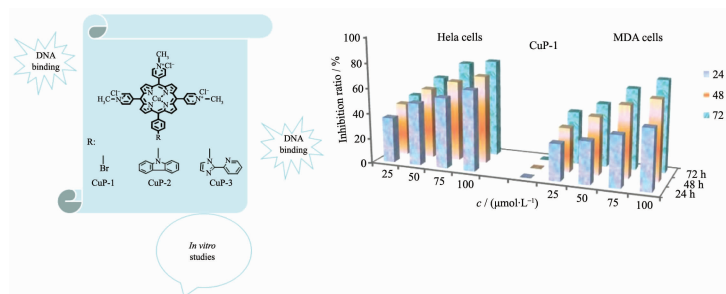
We report a strategy to construct Janus metallocyclic Os-arene complexes with an Os-arene face and a didentate imidazolium face, which possess unusual structures and properties.

Syntheses, DNA-binding and Antitumor Activities of Water Soluble Copper Porphyrins Complexes

HASI Qi-Mei-Ge, CHEN Li-Hua, XIAO Chao-Hu

DOI:10.11862/CJIC.2018.239

Chinese J. Inorg. Chem., **2018**,**34**(10):1841-1850



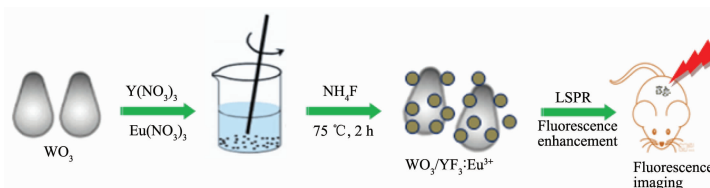
Three cationic copper porphyrin complexes, which all can effectually bind with CT-DNA via intercalation or outside groove binding mode, especially, CuP-1 has the strongest binding affinity with CT-DNA compared with others. In addition, antitumor activity *in vitro* of CuP-1 is much better than CuP-2 and CuP-3.

Preparation and Luminescence Property of $\text{WO}_3/\text{YF}_3:\text{Eu}^{3+}$ Composite Nanomaterial

PENG Hong-Xia, LIU Zhi-Yan, HU Chuan-Yue, ZHANG Lei, TIAN Xiu-Ying, PENG Yang-Xi

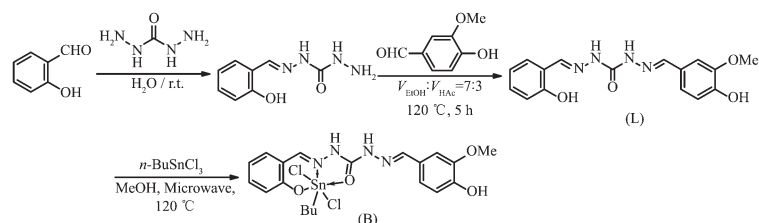
DOI:10.11862/CJIC.2018.241

Chinese J. Inorg. Chem., **2018**,**34**(10):1851-1856



Compared with the pure $\text{YF}_3:\text{Eu}^{3+}$, the luminescence intensity of $\text{WO}_3/\text{YF}_3:\text{Eu}^{3+}$ is obviously enhanced. The nanoparticles are feasibly applicable to simultaneous bimodal imaging, therapy of tumor and optical confocal microscopy technology.

Syntheses, Structures, Spectroscopic Properties and Herbicidal Activity of 1-(2-Hydroxybenzylidene)-5-(4-hydroxy-3-methoxybenzylidene) Carbohydrazide Butyltin Complexes

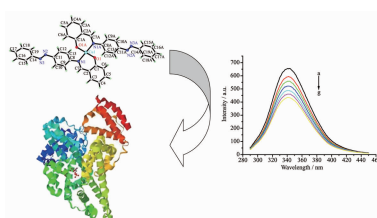


FENG Yong-Lan, ZHANG Fu-Xing, YU Jiang-Xi, JIANG Wu-Jiu, KUANG Dai-Zhi

DOI:10.11862/CJIC.2018.216

Chinese J. Inorg. Chem., **2018**,**34**(10):1857-1863

Synthesis, Crystal Structure, Anticancer Activity and Interaction with Bovine Serum Albumin of Copper(II) Complex (English)



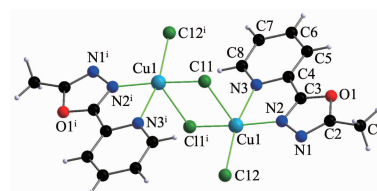
One Cu(II) complex was synthesized and its crystal structure was determined by X-ray diffraction. The antitumor activities and the interaction with bovine serum albumin were studied.

ZHANG Yan, MENG Xiang-Gao, CAI Ping, CHENG Gong-Zhen, JIA Shi-Fang

DOI:10.11862/CJIC.2018.234

Chinese J. Inorg. Chem., **2018**,**34**(10):1864-1874

Syntheses, Crystal Structures and Spectral Properties of Cu(II), Cd(II) Complexes with 2-Methyl-5-(2-pyridyl)-1,3,4-oxadiazole (English)



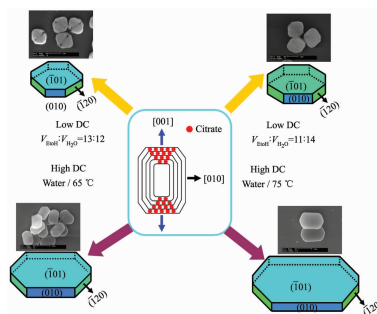
Two novel complexes of $[\text{Cu}_2\text{L}_2(\mu\text{-Cl})_2\text{Cl}_2]$ (**1**) and $[\text{CdL}_2(\text{NO}_3)_2]$ (**2**) have been reported. Complex **1** is a binuclear Cu(II) complex bridged by two Cl atoms, and the copper(II) ions have distorted tetragonal geometries.

BU De-Yan, GUO Yan-Hong, ZHENG Tao, SUN Ai-Jing, WANG Zuo-Xiang

DOI:10.11862/CJIC.2018.230

Chinese J. Inorg. Chem., **2018**,**34**(10):1875-1882

Syntheses, Characterization, Properties and Cytotoxicity of Hexagonal Calcium Oxalate Monohydrate Crystals with Various Sizes (English)



Four kinds of calcium oxalate monohydrate (COM) crystals with different sizes were prepared by changing reaction temperature, solvent, additive and stirring speed. The cytotoxicity of these COM crystals to human kidney proximal tubular epithelial cells is negatively correlated with the crystal size.

GUO Da, XU Meng, SUN Xin-Yuan, OUYANG Jian-Ming

DOI:10.11862/CJIC.2018.212

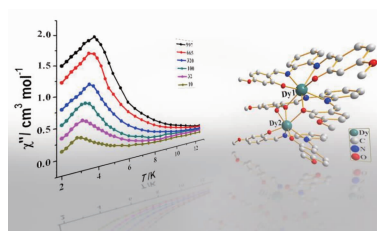
Chinese J. Inorg. Chem., **2018**,**34**(10):1883-1890

Sandwich-Type Tb and Dy Complexes with Schiff-Base Ligand: Syntheses, Crystal Structures and Magnetic Properties (English)

YANG Li-Guo, WANG Fang, YU You-Zhu, WANG Xin, ZHANG Yong-Hui, YANG Hua, WANG Da-Qi, LI Da-Cheng

DOI:10.11862/CJIC.2018.235

Chinese J. Inorg. Chem., **2018**,**34**(10):1891-1898



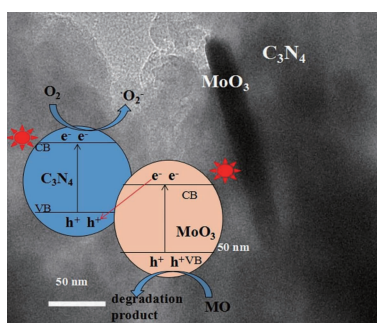
Two new sandwich-type di-lanthanide complexes $[\text{M}_2\text{L}_3(\text{H}_2\text{O})]$ ($\text{M}=\text{Tb}$ (**1**), Dy (**2**), $\text{H}_2\text{L}=\text{N},\text{N}'$ -bis(4-methyloxysalicylidene)benzene-1,2-diamine) were synthesized and characterized by single crystal X-ray diffraction. Complexes **1** and **2** exhibit the antiferromagnetic interactions between lanthanide ions, and field-induced slow magnetic relaxation.

$\text{MoO}_3\text{-C}_3\text{N}_4$ Photocatalysts with High Performance for Degradation of Methyl Orange under Visible Light (English)

MA Ling-Juan, HOU Meng-Ning, MA Hong-Bin, CAO Zhen, XUE Zhen, LU Yue-Ru

DOI:10.11862/CJIC.2018.251

Chinese J. Inorg. Chem., **2018**,**34**(10):1899-1909



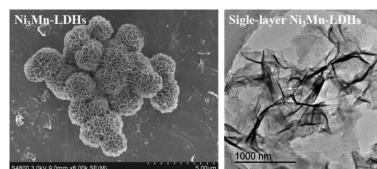
High performance $\text{MoO}_3\text{-C}_3\text{N}_4$ was prepared by impregnation method and a Z-scheme charge carrier transfer mechanism was confirmed for methyl orange degradation.

Single-Layer Ni_3Mn -Layered Double Hydroxides as Bifunctional Catalyst for Rechargeable Li-O_2 Batteries (English)

HOU Xue-Dan, GUO Shou-Wu, WANG Qia, WANG Xiao-Fei

DOI:10.11862/CJIC.2018.237

Chinese J. Inorg. Chem., **2018**,**34**(10):1910-1916



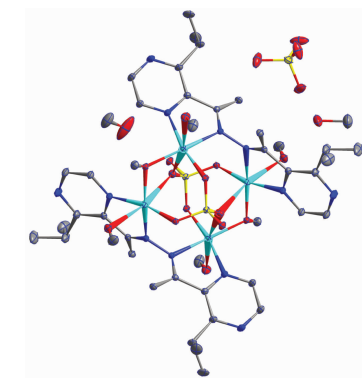
Bulk Ni_3Mn -layered double hydroxides ($\text{Ni}_3\text{Mn-LDHs}$) was exfoliated into single-layer $\text{Ni}_3\text{Mn-LDHs}$ nanosheets via liquid phase exfoliation, and then incorporated with CNT to obtain $\text{Ni}_3\text{Mn-LDHs/CNT}$ composites by self-assemble method.

Synthesis, Crystal Structure and DNA Interaction of a Cu(II) Complex with a Bis-hydrazone Ligand Bearing Pyrazine Unit (English)

WU Hao, ZHAO Xiao-Lei, ZHONG Run-Bin, DAI Geng-Geng, WU Wei-Na, WANG Yuan

DOI:10.11862/CJIC.2018.215

Chinese J. Inorg. Chem., **2018**,**34**(10):1917-1922



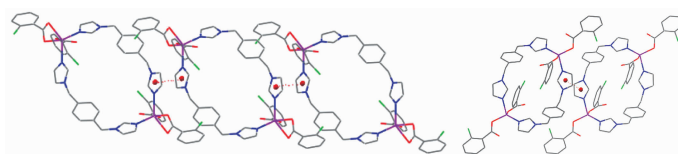
A tetrameric complex $[\text{Cu}_4(\text{L})_2(\text{CH}_3\text{O})_2(\text{CH}_3\text{OH})_4(\text{SO}_4)_2]\text{SO}_4 \cdot 6\text{CH}_3\text{OH}$ with a bis-hydrazone ligand bearing pyrazine unit have been synthesized and characterized, which displays higher affinity with DNA than the ligand.

Syntheses, Crystal Structures and Theoretical Calculations of Cadmium/Zinc Supramolecular Coordination Compounds (English)

LI Xiu-Mei, PAN Ya-Ru, LIU Bo, ZHOU Shi, CHANG Ying-Fei

DOI:10.11862/CJIC.2018.225

Chinese J. Inorg. Chem., **2018**,**34**(10):1923-1928



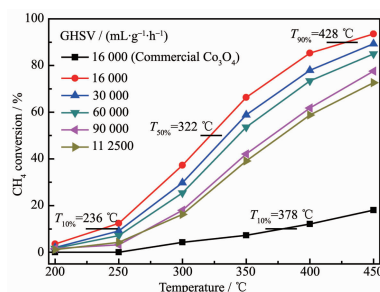
Two new complexes, $[\text{Cd}(\text{cba})_2(\text{bix})]_2$ (**1**) and $[\text{Zn}(\text{cba})_2(\text{bix})]_2$ (**2**) (Hcba = 2-chlorinebenzoic acid, bix = 1,4-bis(imidazol-1-ylmethyl) benzene) were synthesized and analyzed. They all display three-dimensional supramolecular network via π - π stacking interactions.

Catalytic Combustion of Ventilation Air Methane over Co_3O_4 Rectangular Prism (English)

NIU Ru-Yue, LIU Peng-Cheng, LI Wei, WANG Shuang, LI Jin-Ping

DOI:10.11862/CJIC.2018.223

Chinese J. Inorg. Chem., **2018**,**34**(10):1929-1935



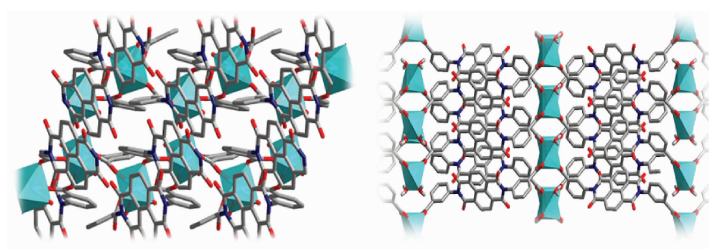
As-synthesized Co_3O_4 possesses a rectangular prism structure and it is a novel catalyst material, which has superior catalytic performance on the methane catalytic oxidation.

Crystal Structures, Magnetic Property, and Photocatalytic Activity of Two Coordination Polymers Based on π -Conjugated Benzenedicarboxylic Acid (English)

ZHAI Li-Jun, NIU Lan-Yu, HAO Xiao-Yan, CHEN Li-Jie, LI Guo-Fang, FAN Li-Ming

DOI:10.11862/CJIC.2018.242

Chinese J. Inorg. Chem., **2018**,**34**(10):1936-1942



Based on the π -conjugated ligand of 3,3'-(1,3,6,8-tetraoxobenzol [lmn][3,8]-phenanthroline-2,7(1H,3H,6H,8H)diyl)-di-benzoic acid, two novel CPs were obtained with 2D sheet for **1**, and 1D polymeric chain for **2**. Variable-temperature susceptibility of **1** indicated there are antiferromagnetic interactions between the Mn(II) cations. And the photocatalytic tests demonstrated that the obtained complex **2** are good photocatalyst in the degradation of MB.