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杂双金属 Cu(II)-Nd(III)和 Zn(II)-Ce(III)的 Salamo 型配合物;合成、晶体结构和荧光性质(英文)

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CHINESE JOURNAL OF INORGANIC CHEMISTRY

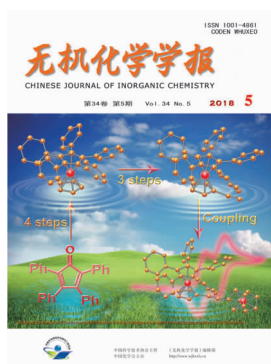
Vol.34

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Designed Syntheses and Electrochemistry Properties of Alkynyl-Bridged Asymmetric Phenyl Substituted Biferrocenyl Derivatives

ZHANG Xiao-Yong, HAN Li-Min, GAO Yuan-Yuan, JIA Hui-Jie, SUO Quan-Ling

DOI:10.11862/CJIC.2018.109

Chinese J. Inorg. Chem., **2018,34**(5):864-873

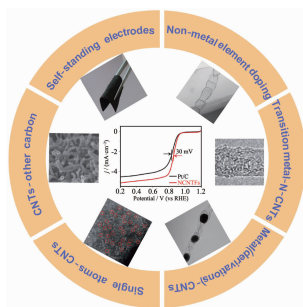
Reviews

Research Progress on Carbon Nanotubes in Noble-Metal-Free Electrocatalytic Oxygen Reduction Reaction

WANG Qi-Chen, WANG Jing, LEI Yong-Peng, CHEN Zhi-Yan, SONG Yao, LUO Shi-Bin

DOI:10.11862/CJIC.2018.101

Chinese J. Inorg. Chem., **2018,34**(5):807-822



A variety of non-precious metal carbon nanotubes-based ORR catalysts, mainly including non-metal element doping, surface modification, transition metal-nitrogen-CNTs, self-standing electrodes based on CNTs and others were summarized and discussed.

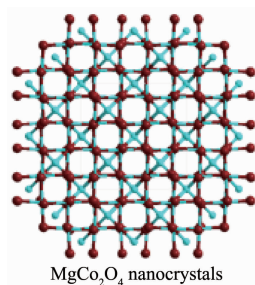
Articles

Influence of Crystallinity and Binder on the Energy Delivery Efficiency for Porous Magnesium Cobaltate Supercapacitor Electrodes (English)

LUO Xue-Fei, GUO Lei, WEI Qian-Qian, XU Jiang-Yan, WANG Kuai-Bing, LÜ Bo

DOI:10.11862/CJIC.2018.119

Chinese J. Inorg. Chem., **2018,34**(5):823-833



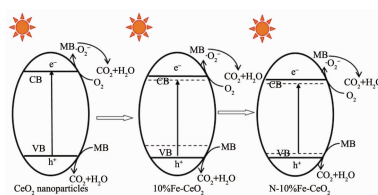
Porous MgCo_2O_4 nanostructures display different electrochemical performances using PTFE and PVDF binder. The result shows moderate crystallinity and high surface area is more suitable for MgCo_2O_4 electrode.

Solvothermal Synthesis and Photocatalytic Property of Fe-CeO₂ and N-Fe-CeO₂

HUANG Jian-Ping, CHEN Fang, SHE Xiao-Mei, WANG He, SHI Hui-Ming

DOI:10.11862/CJIC.2018.092

Chinese J. Inorg. Chem., **2018**,**34**(5):834-842



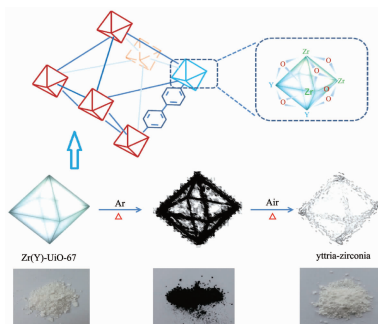
The solvothermal synthesized N-10%Fe-CeO₂ nanopowder, concentrated ammonia as nitrogen source, show excellent photo-degradation rate (97%) for methylene blue (MB) solution as well as performance stability. The changes of the phase structure and energy band of CeO₂ by doping Fe and N play important roles for the enhancement.

Mesoporous Yttria Doped Zirconia Solid Solutions Derived from Bimetallic Y/Zr-Uio-67 and Its Ion Conduction

CHEN Ping, LIU Shu-Cheng, XU Jiao, QIU Jun-Jie, DAI En-Gao, LIU Yi

DOI:10.11862/CJIC.2018.121

Chinese J. Inorg. Chem., **2018**,**34**(5):843-849



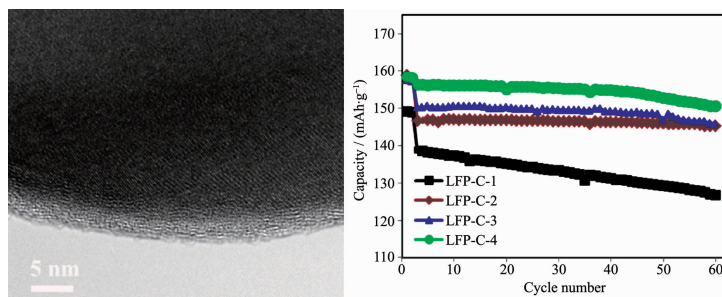
Mesoporous yttria doped zirconia is synthesized by two-step calcination treatment using the bimetallic MOFs as a template. This new class of binary mesoporous material displays the high surface area and oxygen ionic conductivity.

Preparation by Employing Mixed Lithium Source and Carbon Content Optimization of LiFePO₄/C Materials

WU Guan, ZHOU Ying-Ke

DOI:10.11862/CJIC.2018.118

Chinese J. Inorg. Chem., **2018**,**34**(5):850-856



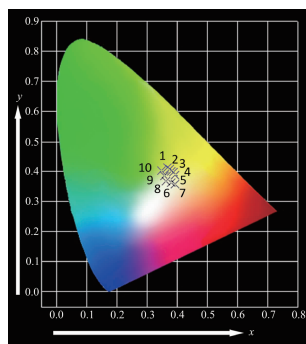
A thin and uniform carbon coating layer was wrapped the as-prepared LiFePO₄ material, and the optimized LiFePO₄/C composites displayed excellent cycle performance and long-term reliability.

Synthesis, Luminescence and Energy Transfer of Dy³⁺ and Eu³⁺ Co-doped LiGd(MoO₄)₂ Single-Phase Phosphors

YU Ting, GAO Ming-Yan, SONG Yan, LI Dan, LIU Gui-Xia, DONG Xiang-Ting, WANG Jin-Xian

DOI:10.11862/CJIC.2018.116

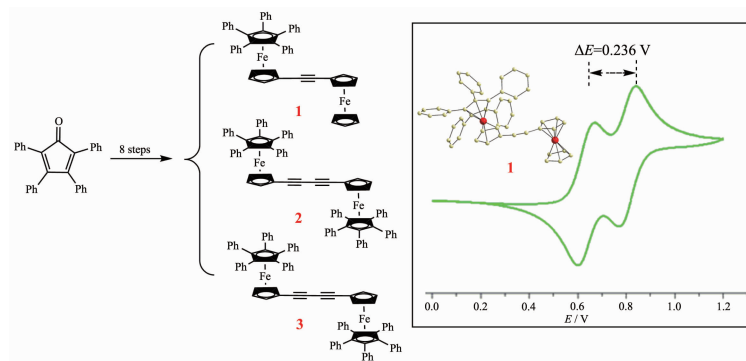
Chinese J. Inorg. Chem., **2018**,**34**(5):857-863



By adjusting the concentration of Eu³⁺ and Dy³⁺, the phosphors can emit warm-white-light, indicating that the synthesized phosphors have potential applications in the field of white LED.

Designed Syntheses and Electrochemistry Properties of Alkynyl-Bridged Asymmetric Phenyl Substituted Biferrocenyl Derivatives

ZHANG Xiao-Yong, HAN Li-Min,
GAO Yuan-Yuan, JIA Hui-Jie, SUO Quan-Ling



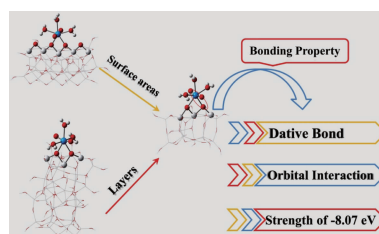
A stronger electrochemical interaction is observed in alkynyl-bridged asymmetric phenyl substituted biferrocenyl compounds **1-3**.

DOI:10.11862/CJIC.2018.109

Chinese J. Inorg. Chem., **2018**,**34**(5):864-873

Relativistic DFT Calculations of Interaction between Rutile TiO_2 Nanoparticle Clusters and Uranyl Species

ZHENG Ming, ZHANG Hong-Xing,
YUAN Fu-Long, PAN Qing-Jiang



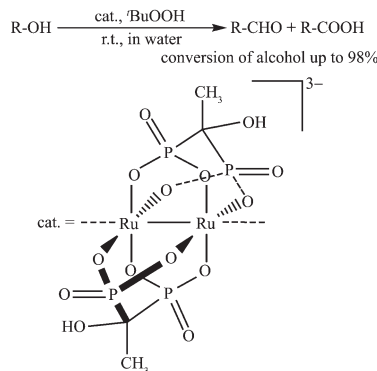
Relativistic DFT has been used to examine interfacial behaviors between rutile TiO_2 nanoparticle clusters (NPC) and aquouranyl species. With the two-layered NPC, the U-O_{surf} interaction is unraveled to be a dative bond per se. Behaving much narrower HOMO-LUMO gap than its NPC substrate, the complex system would present a visible light-harvesting capability, allowing for possible application as a photocatalyst from spectral perspective.

DOI:10.11862/CJIC.2018.120

Chinese J. Inorg. Chem., **2018**,**34**(5):874-882

tert-Butyl Hydroperoxide Oxygenation of Alcohol Catalyzed by Diruthenium Diphosphonate in Aqueous Solution

LIAO Hai-Shen, LI Chen, YI Xiao-Yi



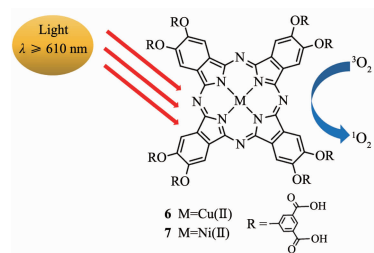
$(\text{NH}_4)_3[\text{Ru}_2(\text{hedp})_2] \cdot 2\text{H}_2\text{O}$ (hedp =1-hydroxyethylidenediphosphonate) with *t*-BuOOH as oxidant is proved to be highly effective in the catalytic oxidation of alcohol in aqueous solution at room temperature.

DOI:10.11862/CJIC.2018.128

Chinese J. Inorg. Chem., **2018**,**34**(5):883-888

Water Soluble Cu(II) and Ni(II) Phthalocyanine: Syntheses and *in Vitro* Synergistic Anticancer Activities of Photodynamic Therapy and Chemotherapy Effects

PAN Jia-Bao, CHEN Xi, FANG Wen-Juan,
LIU Wei, YU Guang-Wei



Water-soluble CuPc **6** and NiPc **7** have synergistic anticancer activities of photodynamic therapy and chemotherapy effects.

DOI:10.11862/CJIC.2018.127

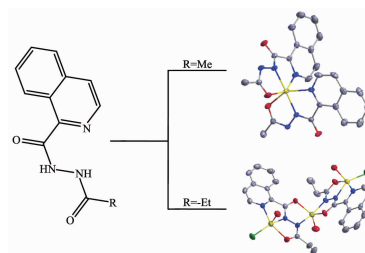
Chinese J. Inorg. Chem., **2018**,**34**(5):889-896

Syntheses, Crystal structures and Properties of Zinc Complexes Constructed with Isoquinoline Hydrazine

BA Dan, WU Wen-Shi, HUANG Miao-Ling, SHI Feng-Xiang

DOI:10.11862/CJIC.2018.129

Chinese J. Inorg. Chem., **2018**,**34**(5):897-905

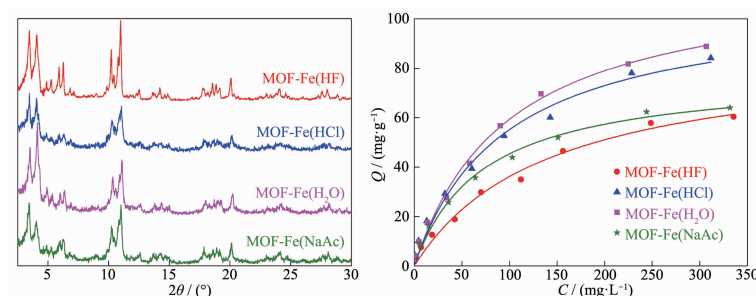


Characteristics and Adsorption Properties of Se(IV) for MOF-Fe Prepared with Different Conditioning Agents

WANG Rui, GONG Yong, XU Hai-Juan, WEI Shi-Yong, WU De-Yong

DOI:10.11862/CJIC.2018.110

Chinese J. Inorg. Chem., **2018**,**34**(5):906-916



Preparation and Drug Delivery Properties of Mg-Doped Hydroxyapatite Nanoparticles

MA Xiao-Yu, LIU Yong-Jia, ZHU Bang-Shang

DOI:10.11862/CJIC.2018.106

Chinese J. Inorg. Chem., **2018**,**34**(5):917-924



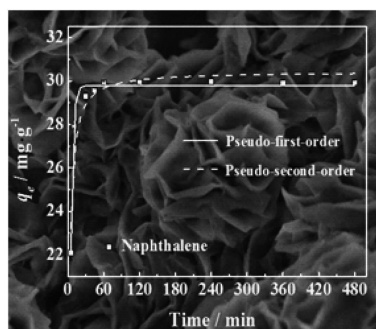
Magnesium-doped hydroxyapatites nanoparticles (Mg-HAs) were synthesized by step precipitation reaction and one pot reaction. The Mg-HA/cDDP has a inhibitory effect on cancer cells.

Preparation by Using Soft Template and Adsorption Properties of Three-Dimensional Flower-like MgAl-LDH

HUANG Yun, MA Ruo-Nan, ZENG Xian-Zhe, XIANG Ming-Xue, CUI Xi-Jun, ZHANG Ping

DOI:10.11862/CJIC.2018.132

Chinese J. Inorg. Chem., **2018**,**34**(5):925-932



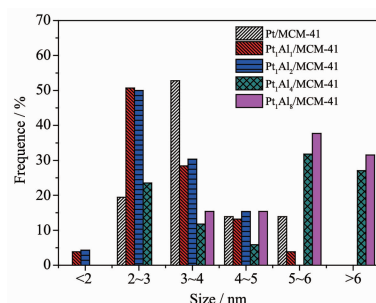
The three-dimensional flower-like MgAl LDH is synthesized via hydrothermal method and exhibits high efficiency for naphthalene removal.

Preparation of Pt-Al/MCM-41 Catalyst for Synthesis of Organosilicon Synergist

CHEN Xiu-Ying, XIE Hui-Lin, HU Wen-Bin, ZHOU Xin-Hua, ZHOU Hong-Jun, SHU Xu-Gang, SUN Yu-Qing

DOI:10.11862/CJIC.2018.114

Chinese J. Inorg. Chem., **2018**,**34**(5):933-941



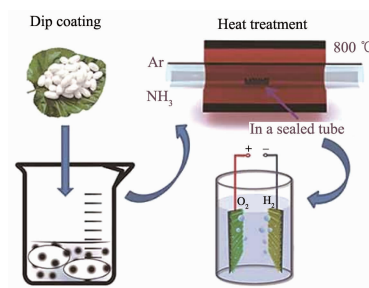
The introduction of appropriate amount of Al is beneficial to improve the dispersion and decrease size of platinum particle. The Pt₁Al₂/MCM-41 exhibits excellent catalytic activity and reusability for hydrosilylation of allyl polyether and heptamethyltrisiloxane.

Honeycomb-like Structured and Co-Mn Incorporated Carbon Materials Derived from *Bombyx mori* Cocoons Act as a Bifunctional Catalyst for Water Splitting (English)

ZHANG Ming, LI Tao, WANG Juan, PAN Yi, MA Shi-Jie, ZHU Han, DU Ming-Liang

DOI:10.11862/CJIC.2018.122

Chinese J. Inorg. Chem., **2018**,**34**(5):942-950



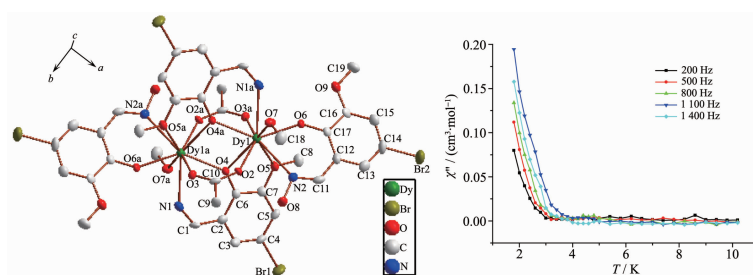
Mesoporous and graphene-like honeycomb-like structured N-doped and Co-Mn incorporated carbon materials derived from *Bombyx mori* silk cocoons by one-step thermal carbonization were synthesized and can act as a bifunctional catalyst for electrocatalytic water splitting.

Dinuclear Gd(III)/Dy(III) Complexes Based on Schiff base Ligands: Structures and Magnetic Properties (English)

JIN Ping-Ning, YAN Rui-Fang, HU Peng, WU Yan-Ni, GAO Yuan-Yuan, HUANG Ling-Zhu, ZHU Yi-Xuan, SU Yan, WANG Ying-Ling

DOI:10.11862/CJIC.2018.126

Chinese J. Inorg. Chem., **2018**,**34**(5):951-956



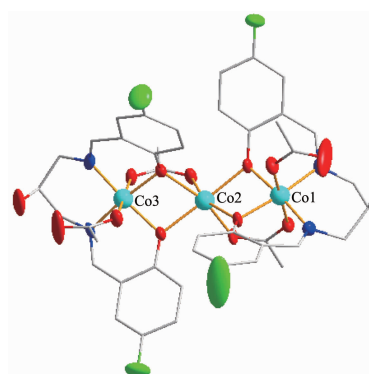
Two novel Schiff based dinuclear Ln(III) complexes show weak antiferromagnetic interaction and slow relaxation of magnetization, respectively.

Crystal Structures and Properties of Two Linear Trinuclear Complexes (English)

WANG Li-Wen, SHANG Qi-Gao, ZHOU Jing-Jing, ZHOU Hong, PAN Zhi-Quan, CHENG Qing-Rong

DOI:10.11862/CJIC.2018.105

Chinese J. Inorg. Chem., **2018**,**34**(5):957-966



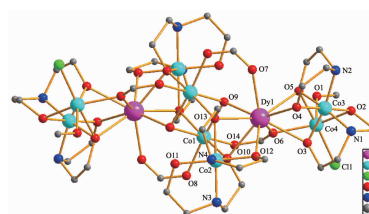
Two new linear trinuclear complexes, $[\text{Co}^{\text{III}}_2\text{Co}^{\text{II}}\text{L}_2(\mu\text{-OAc})_4]$ (**1**) and $[\text{Ni}_3\text{L}_2(\mu\text{-OAc})_2(\text{CH}_3\text{OH})_2] \cdot 2\text{H}_2\text{O}$ (**2**), were obtained. The ES-MS spectra of complexes **1** and **2** in methanol solution showed that they are stable in methanol solution. Absorption spectroscopic investigation reveals intercalative binding of Co complex with DNA. Fluorescence spectroscopy shows that complex **1** can displace ethidium bromide and bind to DNA. There are antiferromagnetic couplings between the three metal centers in both complexes.

Synthesis, Crystal Structure and Magnetism of a $[\text{Dy}_2\text{Co}_8]$ Core Complex with Diethanolamine Ligand (English)

YU You-Zhu, GUO Yu-Hua, SHEN Yan-Hong, YANG Li-Guo, NIU Yong-Sheng, ZHENG Xiao-Ming, ZHANG Hai-Hui, WANG Fang

DOI:10.11862/CJIC.2018.115

Chinese J. Inorg. Chem., **2018**,**34**(5):967-972



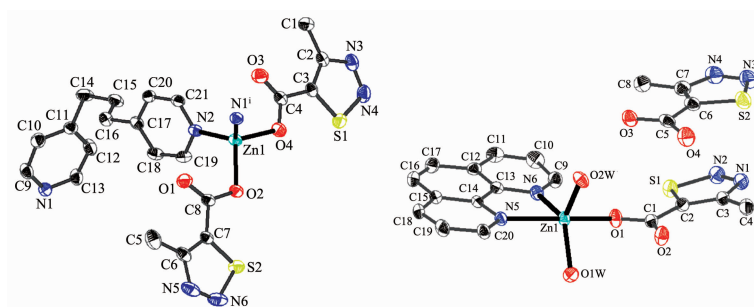
An unprecedented $[\text{Dy}_2\text{Co}_8]$ core complex was prepared at room temperature with diethanolamine as ligand. Magnetic properties was investigated and AC susceptibility measurement revealed that no in-phase and out-of-phase signal could be observed.

Syntheses, Crystal Structures and
DNA-Binding of Two Zinc(II) Complexes
Constructed by 4-Methyl-1,2,3-thiadiazol-
5-carboxylic Acid (English)

WU Da-Ling, ZHANG Min-Zhi, WU Xiao-Yong,
ZHAO Guo-Liang

DOI:10.11862/CJIC.2018.107

Chinese J. Inorg. Chem., **2018**,**34**(5):973-980

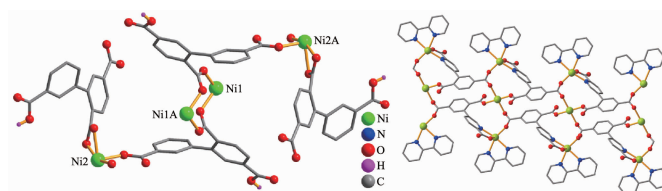


Syntheses, Crystal Structures, and
Magnetic Properties of 0D Tetranuclear
Nickel(II) Coordination Compound and 1D
Manganese(II) Coordination Polymer
Constructed from Biphenyl Tricarboxylic
Acid (English)

LI Yu, WEN Bing-Song, ZOU Xun-Zhong,
HUANG Bin, QIU Wen-Da, ZHANG Ze-Min,
YOU Ao, CHENG Xiao-Ling

DOI:10.11862/CJIC.2018.131

Chinese J. Inorg. Chem., **2018**,**34**(5):981-988



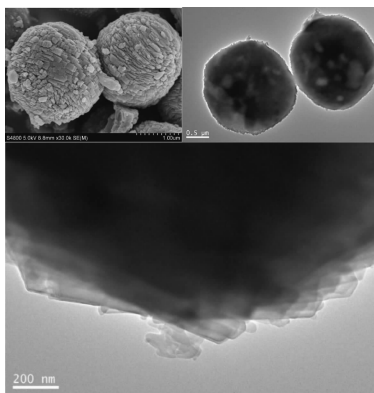
A 0D tetranuclear nickel(II) coordination compound $[\text{Ni}_2(\mu_3\text{-Hbptc})(\text{Hbptc})(\text{phen})_3(\text{H}_2\text{O})_2] \cdot 4\text{H}_2\text{O}$ (**1**) and a 1D manganese(II) coordination polymer $\{[\text{Mn}_3(\mu_4\text{-cptc})_2(2,2'\text{-bipy})_2(\text{H}_2\text{O})_4] \cdot 2\text{H}_2\text{O}\}_n$ (**2**) have been constructed and the structures and magnetic properties of the compounds were investigated.

Synthesis of Hierarchical ZSM-5 Zeolites
via Two Stage Varying Temperature
Crystallization with Enhanced Catalytic
Cracking Performance (English)

WANG You-He, SUN Hong-Man, PENG Peng,
BAI Peng, YAN Zi-Feng, Subhan Fazle,
JI Sheng-Fu

DOI:10.11862/CJIC.2018.124

Chinese J. Inorg. Chem., **2018**,**34**(5):989-996



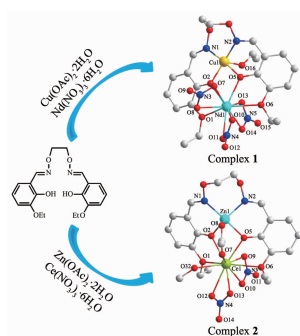
The hierarchical ZSM-5 zeolites with spherical structure synthesized via a facile two-step hydrothermal process exhibit an outstanding catalytic cracking performance.

Heterobimetallic Cu(II)-Nd(III) and Zn(II)-
Ce(III) Salamo-Type Complexes: Syntheses,
Crystal Structures and Fluorescence
Properties (English)

YANG Yu-Hua, ZHANG Yu, YU Meng,
ZHENG Shan-Shan, DONG Wen-Kui

DOI:10.11862/CJIC.2018.125

Chinese J. Inorg. Chem., **2018**,**34**(5):997-1006



Two new 3d-4f Salamo-type complexes have been synthesized and structurally characterized. Compared with the ligand H_2L , complex **1** showed fluorescence quenching, while complex **2** exhibited the fluorescence enhancement when the excitation wavelength is 318 nm.