

无机化学学报

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目 次

综 述

- 喹诺酮类-铜(II)-芳胺混配配合物的研究进展..... 咸永育 乐学义(529)
白光LED用Eu掺杂红色荧光粉..... 李硕 郭宁 梁启蒙 邓虹霄(543)

论 文

无溶剂研磨合成双核席夫碱配合物及多组分自分类行为

- 韩王康 田蕾 徐宗利 朱威 李志华 李涛 顾志国 李在均(550)
异腈氮杂配铜配合物的合成及光解水制氢性能

- 夏良敏 陈浩 吴庆安 王肖璟 娄文雅 徐斌 罗书平(560)
纳米银三角片的光诱导法可控制备及其抗菌活性

- 林璟 陈结形 何倩莹 白文丽 王伟 杨伟(569)
CuO-SiO₂和Cu₂O-SiO₂薄膜的制备及其光学性能..... 辜敏 陈应龙 吴亚珍(576)
超声辅助浸渍法制备高分散Pt/CMK-3-US加氢脱萘催化剂

- 李剑 武海顺 杨丽娜 杨肖嵘 马波(583)
两个二[氧合-二(取代苯甲酸二丁基锡)]的微波溶剂热合成、晶体结构和体外抗癌活性

- 冯泳兰 邝代治 张复兴 庾江喜 蒋伍玖 朱小明(589)
二硫化钼纳米片/碳纳米纤维杂化材料的制备及其析氢性能

- 万萌 虞丹妮 朱罕 张明 杜明亮(595)
联二噻吩稠合的近红外BODIPY染料的合成与光谱性质

- 杨永超 盖立志 张丹 闫婧 赵好力宝 沈珍(601)
碳纳米纤维负载Co₃S₄复合材料的合成及其在染料敏化太阳电池对电极的应用

- 李玲 张雪 李晶 王雪娇 詹淋中 肖俊莹 刘爽(607)
Au@ZrO₂空心纳米微球的制备及其催化性质..... 向迎巧 黎甜甜 徐庆红(615)
钴铁双金属氧化物多孔纳米棒的制备及其电解水析氧性能

- 高旭升 刘光 史沁芳 王开放 许丽娟 贺冬莹 李晋平(623)
基于水杨醛类席夫碱构筑的Fe(III)、Co(III)、混价Mn(II)/Mn(III)配合物的合成、晶体结构及磁性

- 高喜凤 刘敬松 杨培培 刘艳明 张喜琦 祝建华(630)
g-C₃N₄-TiO₂光催化电极耦合生物产电阻极还原硝酸根..... 李亮 柳丽芬 杨凤林(637)
三(3,5-二氟苄基)氯化锡和四(邻氯苄基)锡的合成、晶体结构及量子化学

- 张复兴 陶靖 唐丹丹 罗晶 汤鹏 邝代治 冯泳兰 朱小明(644)
基于双吡啶脲类Cd(II)、Zn(II)、Hg(II)配合物的合成及晶体结构
..... 董翊天 涂波 徐红 黄亚励 张奇龙 胡宗超 朱必学(651)

- Bi掺杂对 $\text{La}_{0.1}\text{Sr}_{0.9}\text{TiO}_3$ 陶瓷热电性能的影响.....王婷婷 孙秋宋英(659)
两种固体荧光有机-无机杂化物的合成、结构及强红光发射(英文)
.....田悦李飞张国翠周虹屏吴杰颖田玉鹏(664)
- 杂金属杯[4]配位聚合物的合成与表征(英文)
.....张夏薛军儒何站张淑芳梁月秦大斌敬林海(673)
- 水热纳米浇筑HNTs模板法制备碳纳米棒(英文).....刘贊刘盈盈程志林(679)
- 两个基于苯并咪唑席夫碱的镍(II)配合物的合成、晶体结构和抑菌活性(英文)
.....赵海燕杨晓东李娜(685)
- 喹啉-8-甲醛缩4-甲基氨基硫脲Ni(II)/Zn(II)/Cd(II)/Cu(II)配合物的合成、结构和DNA结合性质(英文)
.....毛盼东韩学锋李珊珊史琳莹王元吴伟娜(692)
- 吡嗪缩氨基脲配体铜/锌配合物的晶体结构及荧光性质(英文)
.....吴浩陈泽华于亚平赵玲玲吴伟娜王元(699)
- 2,2'-二硫代二苯甲酸、2,2'-二羧苯基硫醚及氮杂环配体的锌和钴配合物的合成、晶体结构与性质(英文)
.....刘继伟(705)

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CONTENTS

Cover



Self-Sorting of Binuclear Schiff-Base Complexes under Solvent-Free Grinding Conditions

HAN Wang-Kang, TIAN Lei, XU Zong-Li, ZHU Wei, LI Zhi-Hua, LI Tao, GU Zhi-Guo, LI Zai-Jun

DOI:10.11862/CJIC.2017.069

Chinese J. Inorg. Chem., **2017**,**33**:550-559

Reviews

Recent Progress on Research in Mixed-Ligand Copper(II) Complexes Containing Quinolones and Aromatic Amines

QI Yong-Yu, LE Xue-Yi

DOI:10.11862/CJIC.2017.063

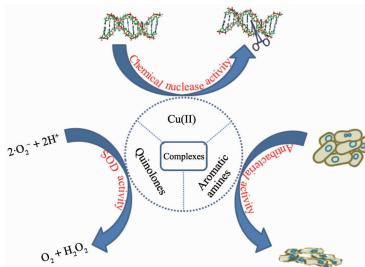
Chinese J. Inorg. Chem., **2017**,**33**:529-542

Red Phosphors Doped by Eu Used in White LED

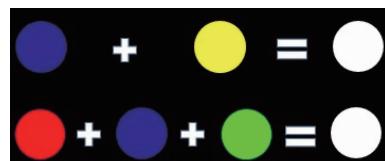
LI Shuo, GUO Ning, LIANG Qi-Meng, DENG Hong-Xiao

DOI:10.11862/CJIC.2017.044

Chinese J. Inorg. Chem., **2017**,**33**:543-549



The copper (II) complexes containing quinolones and aromatic amines used as chemical nucleases, SOD mimics and antibacterial agents.



The red line emission phosphors doped by Eu³⁺, the band red emission phosphors doped by Eu²⁺, and emphatically the narrow band red emission phosphors doped by Eu²⁺ have been introduced. Moreover, the development of Eu doped red phosphors and the methods to improve the deficiency of the phosphor have been reviewed.

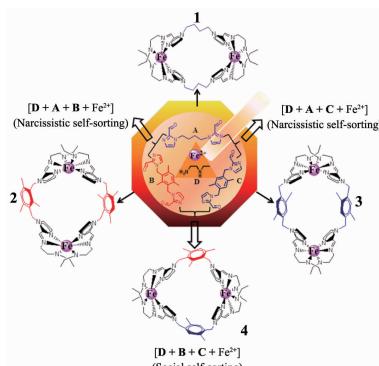
Articles

Self-Sorting of Binuclear Schiff-Base Complexes under Solvent-Free Grinding Conditions

HAN Wang-Kang, TIAN Lei, XU Zong-Li, ZHU Wei, LI Zhi-Hua, LI Tao, GU Zhi-Guo, LI Zai-Jun

DOI:10.11862/CJIC.2017.069

Chinese J. Inorg. Chem., 2017, 33:550-559



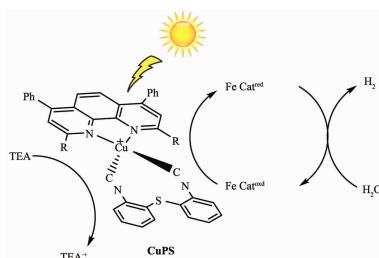
A series of binuclear iron(II) imidazole Schiff-base complexes were constructed by one-pot subcomponent assembly under solvent-free grinding conditions. Taking advantage of the facile approach, the assembling system was found to high-fidelity self-sorting, and a heteromer was obtained through social self-sorting.

Aza-Isocyanide Heteroleptic Copper Complexes: Synthesis and Application in Photocatalytic Hydrogen Evolution From Water

XIA Liang-Min, CHEN Hao, WU Qing-An, WANG Xiao-Jing, LOU Wen-Ya, XU Bin, LUO Shu-Ping

DOI:10.11862/CJIC.2017.075

Chinese J. Inorg. Chem., 2017, 33:560-568



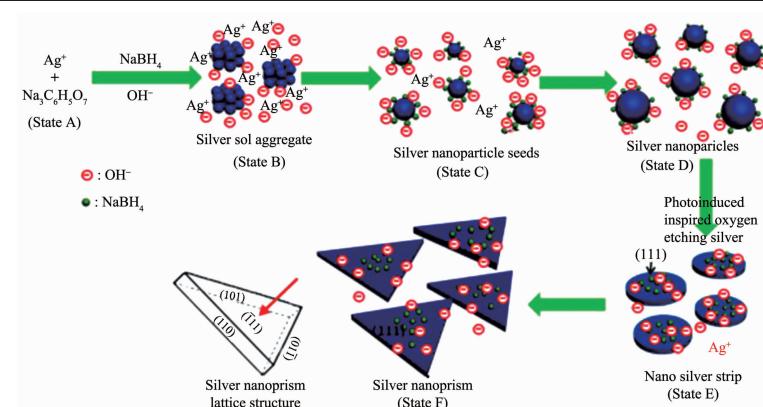
The heteroleptic copper complexes having isocyanide ligands and 1, 10-phenanthroline derivatives as N ligands displayed efficient photosensitive activities for water reduction reaction (TON was up to 168).

Triangular Silver Nanoprism: Morphology-Controlled Synthesis by a Photo-Mediated Method and Antimicrobial Property

LIN Jing, CHEN Jie-Xing, HE Qian-Yin, BAI Wen-Li, WANG Wei, YANG Wei, ZHENG Cheng, LIU Zi-Li, KE Guang-Yao, LI Xiao-Xin

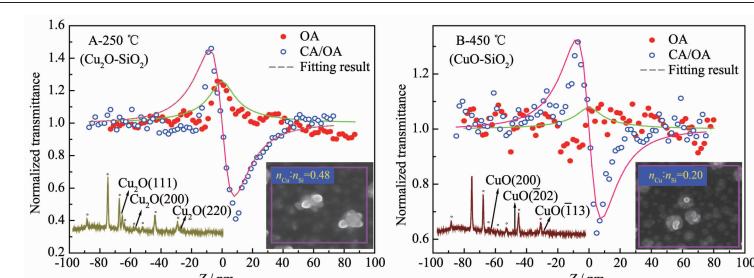
DOI:10.11862/CJIC.2017.065

Chinese J. Inorg. Chem., 2017, 33:569-575



Preparation and Optical Properties of CuO-SiO₂ and Cu₂O-SiO₂ Films

GU Min, CHEN Ying-Long, WU Ya-Zhen



Cu₂O-SiO₂ and CuO-SiO₂ composite films were transformed from films electrodeposited on ITO by heating. Their E_g and $\chi^{(3)}$ were influenced by the content and particle size of Cu₂O and CuO doped in SiO₂, respectively.

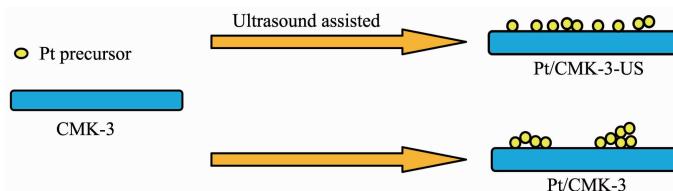
DOI:10.11862/CJIC.2017.077

Chinese J. Inorg. Chem., 2017, 33:576-582

Ultrasound Assisted Synthesis of Highly Dispersed Pt/CMK-3-US as Catalyst for Hydrogenation of Naphthalene

LI Jian, WU Hai-Shun, YANG Li-Na,
YANG Xiao-Rong, MA Bo

DOI:10.11862/CJIC.2017.072
Chinese J. Inorg. Chem., 2017, 33:583-588

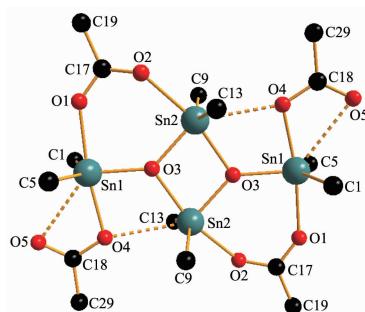


Pt/CMK-3-US were synthesized by ultrasound assisted impregnation method. Which method can improve the dispersion of Pt based on the maintenance of the pore structure and surface properties of CMK-3.

Microwave-Solvothermal Syntheses, Crystal Structures and *in Vitro* Antitumor Activities of Two Bis[oxo-bis(aromatic carboxylato dibutyltin)]

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

DOI:10.11862/CJIC.2017.071
Chinese J. Inorg. Chem., 2017, 33:589-594

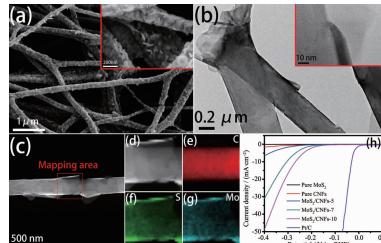


Two di-*n*-butyltin compounds with μ_3 -O bridging the framework were prepared under microwave solvothermal, and exhibited a strong anti-tumor activity *in vitro* against five human tumor cell lines, HT-29, HepG2, MCF-7, KB and A549.

Synthesis and Hydrogen Evolution Performance of Molybdenum Disulfide Nanosheets/Carbon Nanofibers Hybrid Materials

WAN Meng, YU Dan-Ni, ZHU Han,
ZHANG Ming, DU Ming-Liang

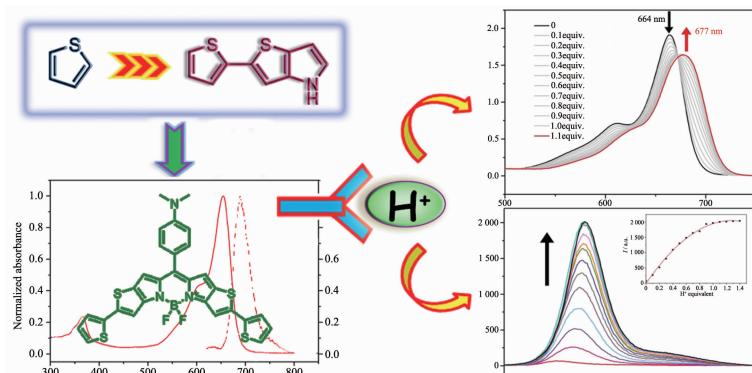
DOI:10.11862/CJIC.2017.081
Chinese J. Inorg. Chem., 2017, 33:595-600



The design of hierarchical structure based on two dimensional MoS₂ crystals and carbon nanofibers with thermo-dependent morphologies and related electrocatalytic activity towards hydrogen evolution reaction have been demonstrated. The best MoS₂/CNFs catalysts obtain the electrocatalytic activity with onset potential of 220 mV and Tafel slope of 110 mV·dec⁻¹.

Synthesis and Spectroscopic Properties of Bithiophene-Fused BODIPY

YANG Yong-Chao, GAI Li-Zhi, ZHANG Dan,
YAN Jing, ZHAO Hao-Li-Bao, SHEN Zhen



A NIR fluorescence probe for pH value has been designed based on bithiophene-fused BODIPY dye bearing electron-donating aniline moiety at *meso*-position.

DOI:10.11862/CJIC.2017.066

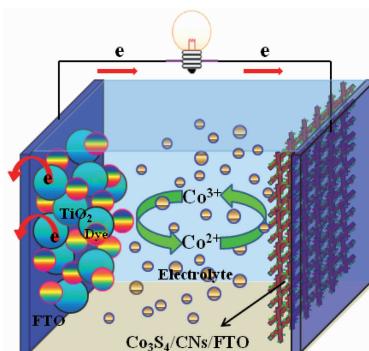
Chinese J. Inorg. Chem., 2017, 33:601-606

Co₃S₄ Supported by Carbon Nanofibers Composite: Preparation and Application in Counter Electrode for Dye-Sensitized Solar Cells

LI Ling, ZHANG Xue, LI Jing,
WANG Xue-Jiao, ZHAN Lin-Zhong,
XIAO Jun-Ying, LIU Shuang

DOI:10.11862/CJIC.2017.084

Chinese J. Inorg. Chem., 2017, 33:607-614



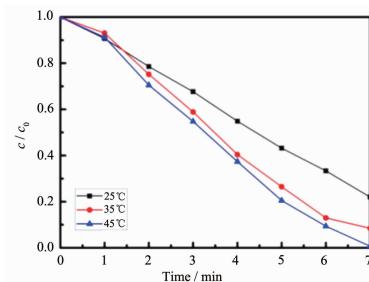
Co₃S₄ supported by electrospun carbon nanofibers (Co₃S₄/ECs) composites with different weight of Co₃S₄ on the surface of carbon nanofibers were synthesized by hydrothermal synthesis method and used as counter electrode for DSCs to study its photoelectric property.

Preparation and Catalytic Properties of Au@ZrO₂ Hollow Microspheres

XIANG Ying-Qiao, LI Tian-Tian,
XU Qing-Hong

DOI:10.11862/CJIC.2017.078

Chinese J. Inorg. Chem., 2017, 33:615-622



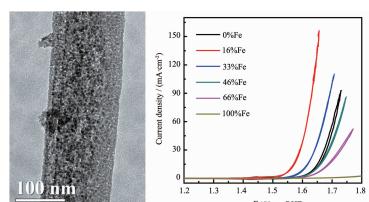
Using SiO₂ microspheres as hard template, Au@ZrO₂ hollow microspheres were prepared by deposition-precipitation method. *p*-Nitroaniline can be completely reduced to *p*-phenylenediamine in 7 minutes at 45 °C under the existence of the microspheres.

Porous Cobalt-Iron Binary Metal Oxides Nanorods as Efficient Oxygen Evolving Catalysts for Water Splitting

GAO Xu-Sheng, LIU Guang, SHI Qin-Fang,
WANG Kai-Fang, XU Li-Juan, HE Dong-Ying,
LI Jin-Ping

DOI:10.11862/CJIC.2017.080

Chinese J. Inorg. Chem., 2017, 33:623-629



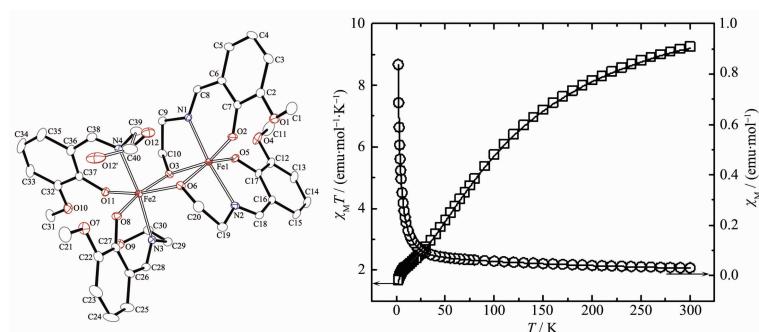
Mesoporous Cobalt-Iron binary oxides nanorods with tailoring of Fe-doping contents realize efficient water oxidation activity in alkaline medium.

Syntheses, Crystal Structures and Magnetic Properties of Fe(III), Co(III) and Mixed Valence Mn(II)/Mn(III) Complexes Based on a Schiff Base Ligand Derived From Salicylaldehyde

GAO Xi-Feng, LIU Jing-Song, YANG Pei-Pei,
LIU Yan-Ming, ZHANG Xi-Qi, ZHU Jian-Hua

DOI:10.11862/CJIC.2017.074

Chinese J. Inorg. Chem., 2017, 33:630-636

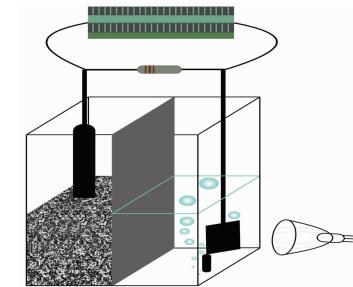


Reduction of Nitrate by g-C₃N₄-TiO₂ Photocatalyst on Electrode Coupled with Electricity Generating Bio-anode

LI Liang, LIU Li-Fen, YANG Feng-Lin

DOI:10.11862/CJIC.2017.082

Chinese J. Inorg. Chem., 2017, 33:637-643

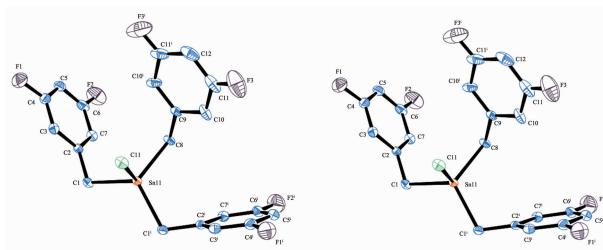


Photocatalysis supported by microbial electricity generation could greatly improve the reduction efficiency of nitrate. The result shows that this research could achieve synchronous implementation of biodegradation of sewage, electricity production and nitrate reduction with lower cost and better treatment effect.

Syntheses, Crystal Structures and Quantum Chemistry of Tri(3,5-difluorobenzyl)tin Chloride and Tetra(o-chlorobenzyl)tin

ZHANG Fu-Xing, TAO Jing, TANG Dan-Dan, LUO Jing, TANG Peng, KUANG Dai-Zhi, FENG Yong-Lan, ZHU Xiao-Ming

DOI:10.11862/CJIC.2017.073
Chinese J. Inorg. Chem., 2017, 33:644-650

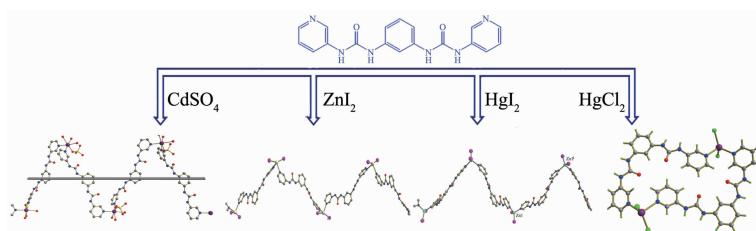


The tin atoms in tri(3,5-difluorobenzyl)tin chloride (**1**) and tetra(o-chlorobenzyl)tin(**2**) have a distorted tetrahedral geometry.

Syntheses and Crystal Structures of Cd(II), Zn(II) and Hg(II) Complexes Base on Bis(pyridylurea) Ligand

DONG Yi-Tian, TU Bo, XU Hong, HUANG Ya-Li, ZHANG Qi-Long, HU Zong-Chao, ZHU Bi-Xue

DOI:10.11862/CJIC.2017.088
Chinese J. Inorg. Chem., 2017, 33:651-658

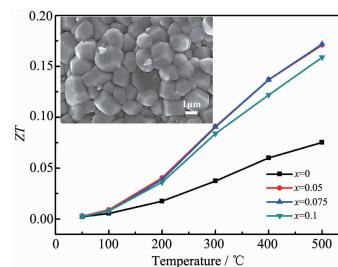


The urea-based pyridyl ligand L (1,1'-(1,3-phenylene)bis(3-(pyridin-3-yl)urea)) were designed to promote non-discrete complex formation on reaction with $\text{CdSO}_4 \cdot 8\text{H}_2\text{O}$, ZnI_2 , HgI_2 , HgCl_2 , and yielded three coordination polymers (CPs) and a complex with 32-membered ring structure, which exhibit a variety of structures.

Effects of Bi Doping on Thermoelectric Properties of $\text{La}_{0.1}\text{Sr}_{0.9}\text{TiO}_3$ Ceramics

WANG Ting-Ting, SUN Qiu, SONG Ying

DOI:10.11862/CJIC.2017.083
Chinese J. Inorg. Chem., 2017, 33:659-663

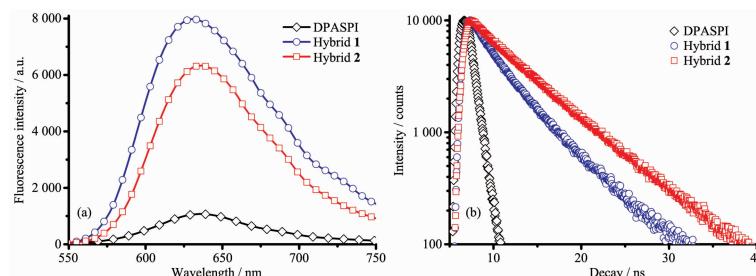


Bi doping is helpful for the sintering of $\text{La}_{0.1}\text{Sr}_{0.9}\text{TiO}_3$ ceramics and make the grain fully developed, regularly shaped and combined closely. A remarkable *ZT* of 0.172 at 500 °C was obtained for the sample with $x = 0.075$, which was increased by 130% compared with that of the sample without Bi.

Two Solid Fluorescent Organic-Inorganic Hybrids: Synthesis, Crystal Structures and Strong Red Fluorescence Emissions (English)

TIAN Yue, LI Fei, ZHANG Guo-Cui, ZHOU Hong-Ping, WU Jie-Ying, TIAN Yu-Peng

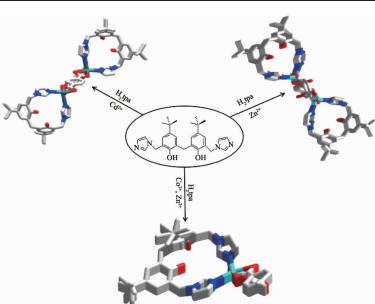
DOI:10.11862/CJIC.2017.060
Chinese J. Inorg. Chem., 2017, 33:664-672



Syntheses and Characterization of Metal Hybrid Calix[4]arene Coordination Polymers (English)

ZHANG Xia, XUE Jun-Ru, HE Zhan, ZHANG Shu-Fang, LIANG Yue, QIN Da-Bin, JING Lin-Hai

DOI:10.11862/CJIC.2017.070
Chinese J. Inorg. Chem., 2017, 33:673-678



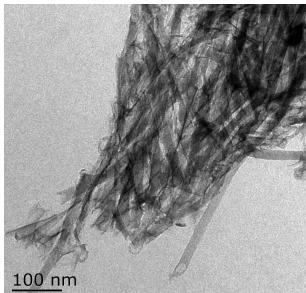
Four 1D coordination polymers, contained metal hybrid calix[4]arene, were obtained based on rigid imidazole ligand and different organic acids. Four complexes have good thermal stability.

HNTs-Templated Preparation of Carbon Nanorods by Hydrothermal Nanocasting Method (English)

LIU Zan, LIU Ying-Ying, CHENG Zhi-Lin

DOI:10.11862/CJIC.2017.032

Chinese J. Inorg. Chem., **2017**,**33**:679-684



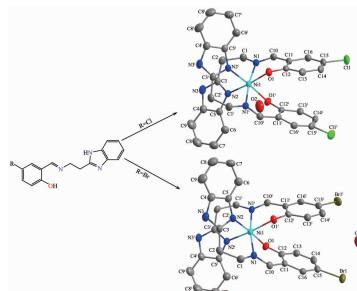
The carbon nanorods with *ca.* 20 nm in diameter and 200 ~800 nm in length were prepared through HNTs-templated nanocasting method, and mainly possessed two types of mesopores at 3.9 nm and 13.5 nm, respectively.

Two Ni(II) Complexes of Schiff Base Ligands Containing Benzimidazole Ring: Syntheses, Crystal Structures and Antibacterial Properties (English)

ZHAO Hai-Yan, YANG Xiao-Dong, LI Na

DOI:10.11862/CJIC.2017.064

Chinese J. Inorg. Chem., **2017**,**33**:685-691



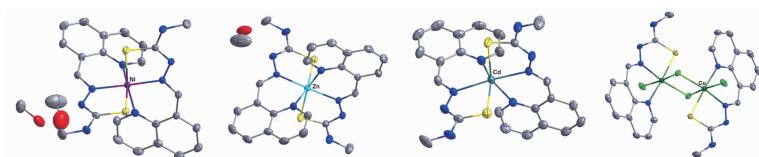
In the two complexes $[\text{Ni}(\text{L}^1)_2] \cdot 2\text{H}_2\text{O}$ (**1**) and $[\text{Ni}(\text{L}^2)_2] \cdot 2\text{H}_2\text{O}$ (**2**), each Ni(II) cation adopts a distorted octahedral arrangement with a N_4O_2 donor set in trichelated fashion of the Schiff base ligands. The complexes have stronger antibacterial activities against *S. aureus* and *E. coli* than the corresponding Schiff bases.

Syntheses, Crystal Structures and DNA-Binding Properties of Ni(II)/Zn(II)/Cd(II)/Cu(II) Complexes with 4-Methyl-1-((quinolin-8-yl)methylene)-thiosemicarbazide(English)

MAO Pan-Dong, HAN Xue-Feng, LI Shan-Shan, SHI Lin-Ying, WANG Yuan, WU Wei-Na

DOI:10.11862/CJIC.2017.067

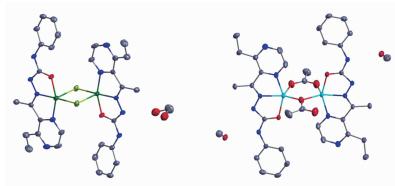
Chinese J. Inorg. Chem., **2017**,**33**:692-698



Four complexes $[\text{NiL}_2] \cdot 2\text{CH}_3\text{OH}$, $[\text{ZnL}_2] \cdot \text{CH}_3\text{OH}$, $[\text{CdL}_2] \cdot \text{CH}_3\text{CH}_2\text{OH}$ and $[\text{Cu}_2\text{L}_2\text{Cl}_2]$ with a thiosemicarbazone ligand bearing quinoline unit have been synthesized and characterized. All complexes, especially the Cu(II) dimer can bind to DNA and have potential pharmaceutical activity.

Crystal Structures and Fluorescence Properties of Cu(II)/Zn(II) Complexes with a Semicarbazone Ligand Bearing Pyrazine Unit

WU Hao, CHEN Ze-Hua, YU Ya-Ping, ZHAO Ling-Ling, WU Wei-Na, WANG Yuan



Two binuclear complexes $[\text{Cu}_2(\text{L})_2\text{Br}_2] \cdot \text{CH}_3\text{OH}$ and $[\text{Zn}_2(\text{L})_2(\text{CH}_3\text{COO})_2] \cdot 2\text{CH}_3\text{OH}$ have been synthesized and characterized. In methanol solution, both complexes exhibit the intra-ligand emission.

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Syntheses, Crystal Structures and Properties of Zinc(II) and Cobalt(II) Complexes Constructed by 2,2'-Dithiosalicylic Acid, Bis(2-carboxyphenyl) Sulfide and N-Donor Ligands (English)

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