

无机化学学报

2019 年

第 35 卷

第 10 期

目 次

综 述

细胞表面壳化的研究进展

..... 苏 慧 许 浩 张利闯 徐双梦 魏 延 杜晶晶 黄 棣(1713)

论 文

基于 2,4-氧基双(苯甲酸)和含氮配体的四种过渡金属配合物的合成、结构与性能(英文)

..... 唐 龙 殷思煜 王滢璐 史德倩 侯向阳 王 潇 王记江(1728)

双(取代水杨醛)缩卡巴肼及其苄基锡配合物的合成、表征、荧光性质和除草活性

..... 冯泳兰 杨春林 张复兴 邝代治(1737)

不同 Co 含量对纳米多孔 Ni-Co 结构及析氢催化性能的影响..... 冯基伟

周 琦(1746)

埃洛石基离子印迹材料的制备及其镉离子传感性能

..... 胡莹露 卢闻君 郭 明 王 珏(1755)

掺氮石墨烯-铜基催化剂的制备及催化性能..... 唐晓宁

邵姣婧(1767)

二元 ZnCo-LDH 助催化剂对 BiVO₄ 光电化学性能的促进

..... 李 娜 王慕恒 赵 勇 姚 瑞 刘 光 李晋平(1773)

氮掺杂高比表面多孔碳的一步化学活化法制备及其超电容性能

..... 辛冉冉 缪杭锦 姜 伟 胡庚申(1781)

多卤素取代的 salamo 型锰(II)配合物:合成、晶体结构、Hirshfeld 分析及荧光性质(英文)

..... 王 岚 魏治利 于 盟 潘迎旗 张 阳 董文魁(1791)

两个基于[SMo₁₂O₄₀]²⁻和冠醚基超分子阳离子的无机-有机杂化晶体的合成及晶体结构(英文)

..... 熊 俊 谭茂坤 吕少仿 李 明 杨水彬(1805)

基于柔性苯二乙酸构筑的三个钴配合物的晶体结构和电化学性质(英文)

..... 张美丽 郑艳金 刘 敏 任宜霞 王记江 崔华莉 刘 琳(1813)

大柴旦富硼浓缩盐卤中硼酸镁盐稀释结晶动力学(英文)

..... 彭姣玉 张 波 陈 婧 董亚萍 李 武(1821)

金属有机框架衍生的高性能锂离子电池负极 Co₃O₄/C 复合材料(英文)

..... 苟 蕾 赵少攀 刘鹏刚 杨江帆 樊小勇 李东林(1834)

两个金属有机框架化合物对硝基芳香化合物在气/液相的荧光传感(英文)

..... 李 江 韩 森 陈团结 苟召曦 张 琦 聂晓双 曹海如(1843)

由吡啶-三羧酸配体构筑的锌(II)和锰(II)配合物的合成、晶体结构、荧光及磁性质(英文)

..... 黎 或 潘光敏 邹训重 冯安生 游 遨 邱文达(1853)

蜂窝状 Ag 纳米颗粒膜制备及应用于表面增强拉曼散射基底(英文)

..... 刘元君 叶 芬 王 威 张俊豪 晏 超 袁爱华(1861)

基于香豆素的增强型铜离子荧光探针及其在细胞成像中的应用(英文)	张长丽 张 虹 何风云 杨 慧 刘少贤 柳闽生(1869)
基于双(苯并咪唑)桥联配体构筑的三个配位聚合物的合成、晶体结构及荧光识别性能(英文)	牛宇岚 翟丽军 郝小艳 贾焦焦 范黎明(1877)
不同氧化硅前驱体熔盐反应制备莫来石晶须(英文)	马雪冬 韩霖昌 杜 炜 王 伟(1885)
两个基于柔性双苯并咪唑配体的锌配位聚合物的合成、晶体结构和荧光性质(英文)	兰红红 李小童 楚文娟 许春莺 吉保明(1896)
《无机化学学报》投稿须知	(1903)

CHINESE JOURNAL OF INORGANIC CHEMISTRY

Vol.35

No.10

Oct. 2019

CONTENTS

Cover



Syntheses, Structures and Properties of Four Transition Metal Complexes with 2,4-Oxybis(benzoic acid) and N-Donor Ligands (English)

TANG Long, YIN Si-Yu, WANG Ying-Lu, SHI De-Qian, HOU Xiang-Yang, WANG Xiao, WANG Ji-Jiang

DOI:10.11862/CJIC.2019.170

Chinese J. Inorg. Chem., **2019**,**35**(10):1728-1736

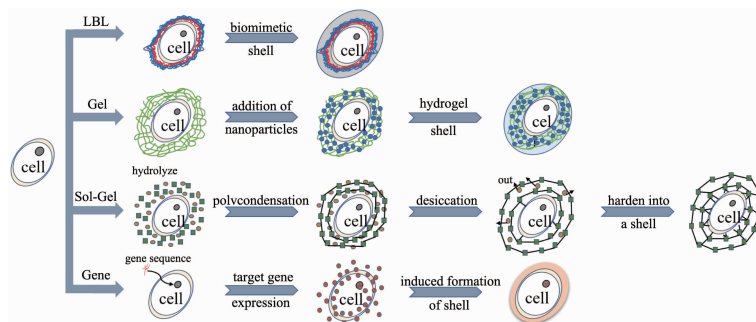
Reviews

Advances in Cell Surface Shellization

SU Hui, XU Hao, ZHANG Li-Chuang,
XU Shuang-Meng, WEI Yan, DU Jing-Jing,
HUANG Di

DOI:10.11862/CJIC.2019.211

Chinese J. Inorg. Chem., **2019**,**35**(10):1713-1727



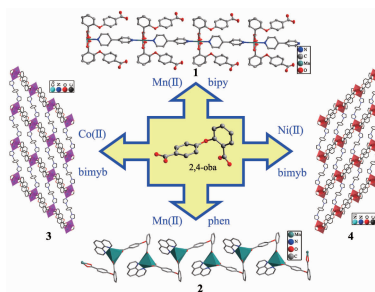
Articles

Syntheses, Structures and Properties of Four Transition Metal Complexes with 2,4-Oxybis(benzoic acid) and N-Donor Ligands (English)

TANG Long, YIN Si-Yu, WANG Ying-Lu,
SHI De-Qian, HOU Xiang-Yang, WANG Xiao,
WANG Ji-Jiang

DOI:10.11862/CJIC.2019.170

Chinese J. Inorg. Chem., **2019**,**35**(10):1728-1736



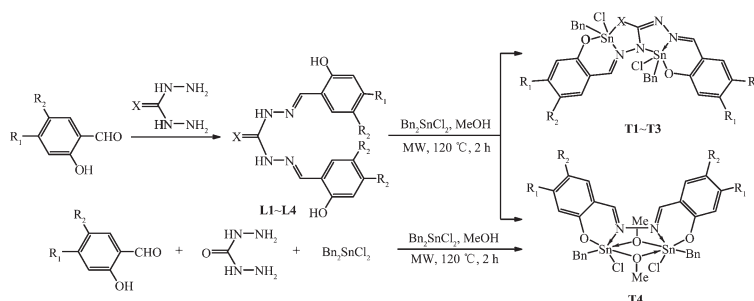
The flexible dicarboxylate ligands can be employed in transitional metal M(II) salts/aromatic chelate ligand/linear ligand systems to generate two 1D chains and two 2D layer structures. Moreover, magnetic properties of complexes **2~4** have also been investigated. According to the crystal structures, the DFT-B3 approach was applied to study the magnetic coupling behavior for complexes **2~4**.

Synthesis, Characterization, Fluorescence Properties and Herbicidal Activity of Bis(Substituted Salicylaldehyde) Carbohydrazone and Its Benzyltin Complexes

FENG Yong-Lan, YANG Chun-Lin,
ZHANG Fu-Xing, KUANG Dai-Zhi

DOI:10.11862/CJIC.2019.205

Chinese J. Inorg. Chem., 2019,35(10):1737-1745



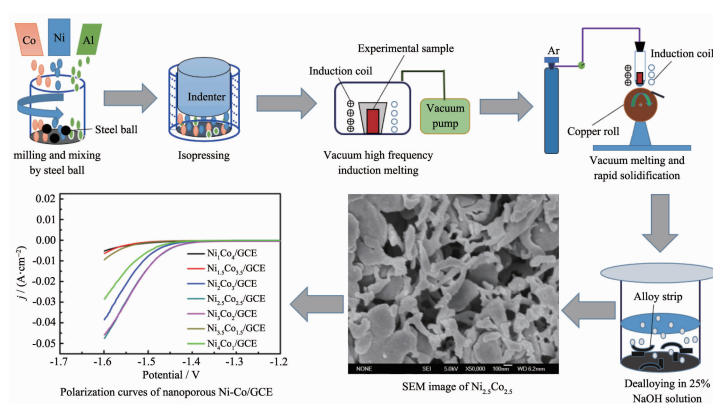
Four bis(substituted salicylaldehyde) carbohydrazone benzyltin complexes have been prepared by microwave-assisted solvothermal reaction and characterized by EA, IR, NMR and single-crystal XRD.

Effect of Different Co contents on Structure of Nanoporous Ni-Co and Catalytic Performance of Hydrogen Evolution

FENG Ji-Wei, ZHOU Qi

DOI:10.11862/CJIC.2019.215

Chinese J. Inorg. Chem., 2019,35(10):1746-1754

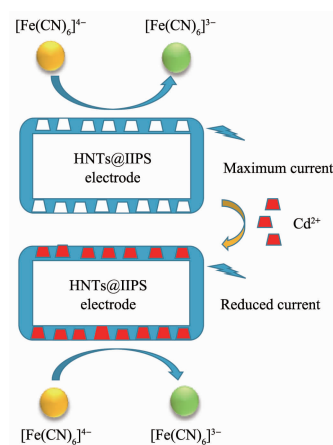


Preparation and Cadmium Ion Sensing Properties of Ionic Imprinted Materials Based on HNTs

HU Ying-Lu, LU Wen-Jun, GUO Ming,
WANG Jue

DOI:10.11862/CJIC.2019.213

Chinese J. Inorg. Chem., 2019,35(10):1755-1766



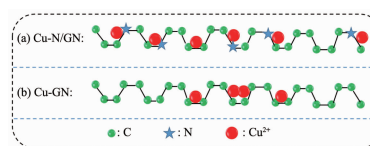
The ion imprinting material HNTs@IIPS has been prepared as a sensor for the detection of cadmium ions in aqueous solution. The cadmium ions recognition properties and its dynamic mechanism of HNTs@IIPS sensor were investigated.

Preparation and Catalytic Properties of Nitrogen Doped Graphene/Copper-Based Catalyst

TANG Xiao-Ning, SHAO Jiao-Jing

DOI:10.11862/CJIC.2019.219

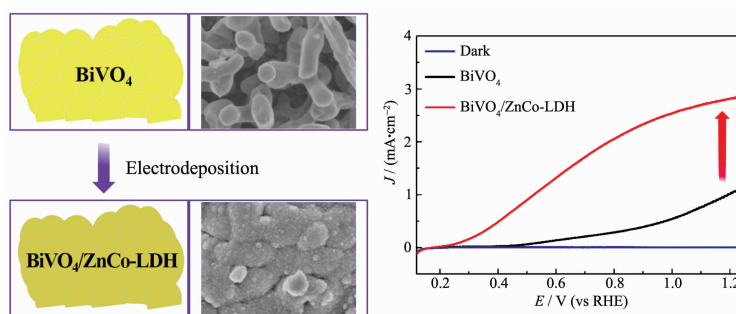
Chinese J. Inorg. Chem., 2019,35(10):1767-1772



Nitrogen doped graphene/copper-based catalyst (Cu-N/GN) was fabricated for acetylene hydrochlorination. The addition of nitrogen can make Cu species disperse well and inhibit the reduction of active Cu species during the reaction, consequently increasing the activity and long-term stability of Cu-N/GN catalyst.

Promotion of Photoelectrochemical Performance of BiVO₄ by Binary ZnCo-LDH Co-catalyst

LI Na, WANG Mu-Heng, ZHAO Yong, YAO Rui, LIU Guang, LI Jin-Ping



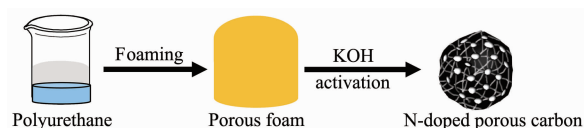
The ZnCo-LDH co-catalyst, which has been successfully decorated on BiVO₄ photoanode via a facile electrodeposition method, displays excellent photoelectrochemical properties than BiVO₄ photoanode, and exhibits higher photocurrent density and lower onset potential.

DOI:10.11862/CJIC.2019.218

Chinese J. Inorg. Chem., **2019**,**35**(00):1773-1780

N-Doped Porous Carbons with High Surface Areas Prepared Through One-Step Chemical Activation and Their Application for Supercapacitors

XIN Ran-Ran, MIAO Hang-Jin, JIANG Wei, HU Geng-Shen

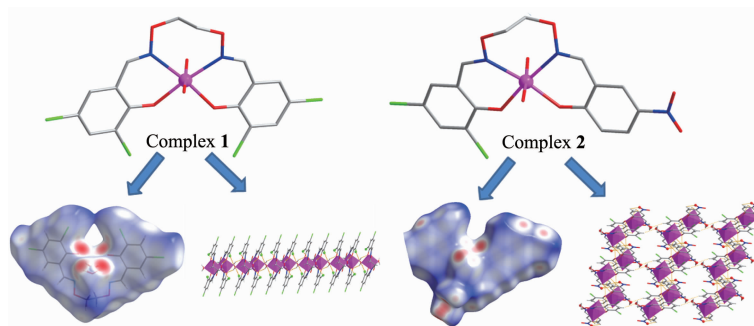


DOI:10.11862/CJIC.2019.222

Chinese J. Inorg. Chem., **2019**,**35**(10):1781-1790

Multihalogen-Substituted Salamo-Type Mn(II) Complexes: Syntheses, Crystal Structures, Hirshfeld Analyses and Fluorescence Properties (English)

WANG Lan, WEI Zhi-Li, YU Meng, PAN Ying-Qi, ZHANG Yang, DONG Wen-Kui

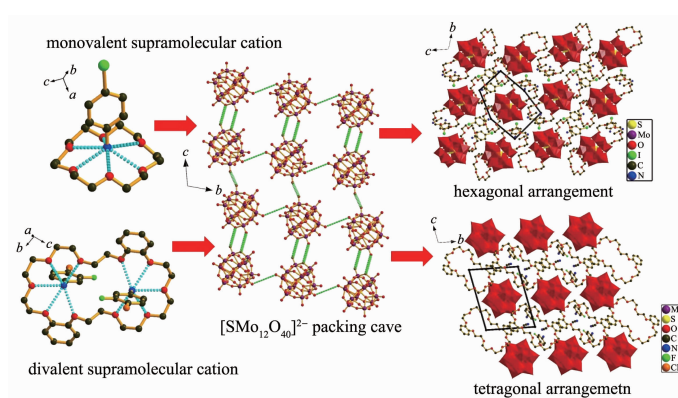


DOI:10.11862/CJIC.2019.212

Chinese J. Inorg. Chem., **2019**,**35**(10):1791-1804

Two Inorganic-Organic Hybrid Crystals Based on [SMo₁₂O₄₀]²⁻ Polyoxometallates and Supramolecular Cation: Syntheses and Crystal Structures (English)

XIONG Jun, TAN Mao-Kun, LÜ Shao-Fang, LI Ming, YANG Shui-Bin



DOI:10.11862/CJIC.2019.208

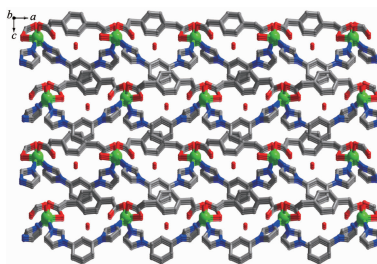
Chinese J. Inorg. Chem., **2019**,**35**(10):1805-1812

Crystal Structure and Electrochemistry Properties of Three Co(II) Complexes Based on Flexible Phenylenediacetate Ligands (English)

ZHANG Mei-Li, ZHENG Yan-Jin, LIU Min, REN Yi-Xia, WANG Ji-Jiang, CUI Hua-Li, LIU Lin

DOI:10.11862/CJIC.2019.214

Chinese J. Inorg. Chem., **2019**,**35**(10):1813-1820



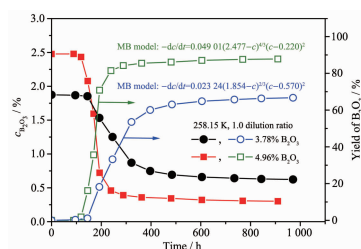
The diverse structures of three new cobalt (II) coordination complexes are significantly affected by the coordination geometries of the central cobalt (II) cations, coordination modes and conformations of the flexible phenylenediacetic acid and bis(imidazole) ligands.

Crystallization Kinetics of Mg-Borates Precipitating from Diluted Boron-Containing Brine of Da Qaidam Saline Lake (English)

PENG Jiao-Yu, ZHANG Bo, CHEN Jing, DONG Ya-Ping, LI Wu

DOI:10.11862/CJIC.2019.209

Chinese J. Inorg. Chem., **2019**,**35**(10):1821-1833



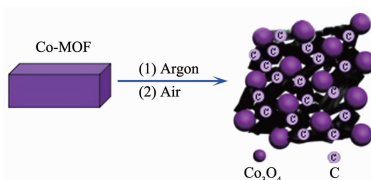
Low temperature, high boron concentration and medium dilution ratio favored the Mg-borates crystallization with a high boron yield (>88%) in B₂O₃. The crystallization mechanism is also dominated by polynuclear (MA) and mononuclear (MB) layer controlling growth.

Metal-Organic Framework Derived Co₃O₄/C Composite as High-Performance Anode Material for Lithium-Ion Batteries (English)

GOU Lei, ZHAO Shao-Pan, LIU Peng-Gang, YANG Jiang-Fan, FAN Xiao-Yong, LI Dong-Lin

DOI:10.11862/CJIC.2019.182

Chinese J. Inorg. Chem., **2019**,**35**(10):1834-1842



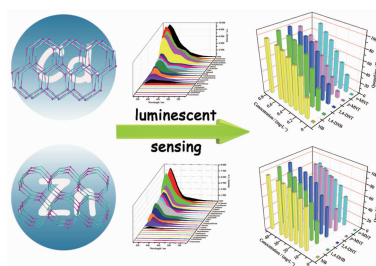
Co₃O₄/C composite with superior electrochemical performance was synthesized by the judicious selection of MOF precursor and two step calcination process that contributed more carbon content.

Two Homologous Metal-Organic Frameworks Based on Zn(II) and Cd(II): Luminescent Sensors for Nitro Aromatic Compounds in Solution and Vapor Medium (English)

LI Jiang, HAN Sen, CHEN Tuan-Jie,
GOU Zhao-Xi, ZHANG Qi, NIE Xiao-Shuang,
CAO Hai-Ru

DOI:10.11862/CJIC.2019.204

Chinese J. Inorg. Chem., **2019**,**35**(10):1843-1852



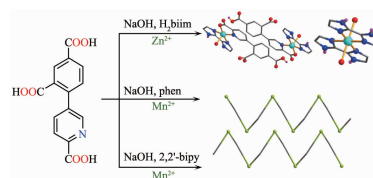
Two novel luminescent MOFs exhibit significant luminescent sensitivity to nitro aromatic compounds in gas and solution-based phase.

Syntheses, Crystal Structures, Luminescent and Magnetic Properties of One 0D Zinc(II) and Two 1D Manganese(II) Coordination Compounds Assembled from Pyridine-Tricarboxylate Blocks (English)

LI Yu, PAN Guang-Min, ZOU Xun-Zhong,
FENG An-Sheng, YOU Ao, QIU Wen-Da

DOI:10.11862/CJIC.2019.206

Chinese J. Inorg. Chem., **2019**,**35**(10):1853-1860



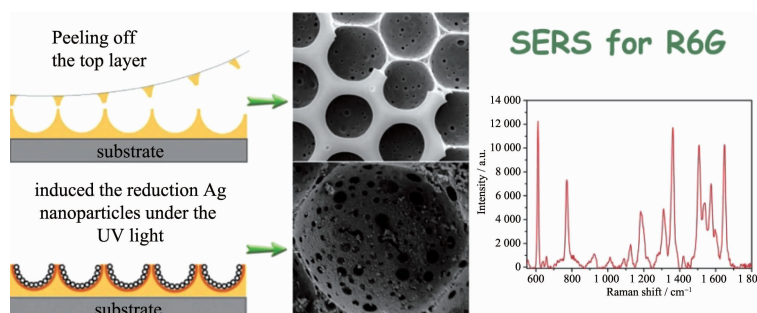
One 0D $[\text{Zn}(\text{H}_2\text{bim})_2(\text{H}_2\text{O})_2][\text{Zn}(\text{HL})(\text{Hbim})(\text{H}_2\text{O})_2] \cdot 8\text{H}_2\text{O}$ (**1**) and two 1D chain, $[\text{Mn}(\mu\text{-HL})(\text{phen})(\text{H}_2\text{O})]_n$ (**2**) and $[\text{Mn}(\mu\text{-HL})(2,2'\text{-bipy})(\text{H}_2\text{O})] \cdot 0.5(2,2'\text{-bipy})_n$ (**3**), have been constructed and the structures, luminescent and magnetic properties of the compounds were investigated.

Fabrication of Honeycomb-like Ag Nanoparticles Film Used as Surface Enhanced Raman Scattering Substrate (English)

LIU Yuan-Jun, YE Fen, WANG Wei,
ZHANG Jun-Hao, YAN Chao, YUAN Ai-Hua

DOI:10.11862/CJIC.2019.221

Chinese J. Inorg. Chem., **2019**,**35**(10):1861-1868



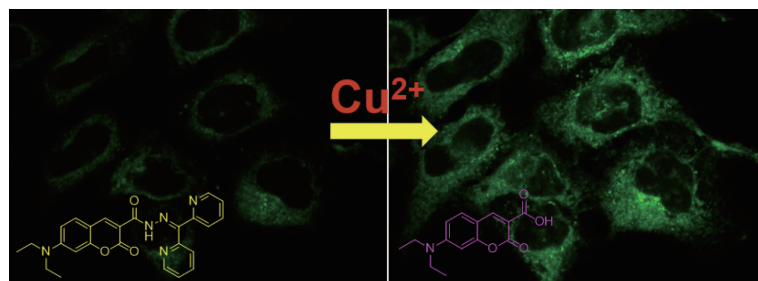
Honeycomb-like Ag nanoparticles array film was prepared with a polymer template route. The particle film shows excellent SERS performance with lower limit of detection and favorable uniformity.

Coumarin-Based Turn-on Fluorescent Probe for Copper(II) Detection and Its Application in Cell Imaging (English)

ZHANG Chang-Li, ZHANG Hong, HE Feng-Yun, YANG Hui, LIU Shao-Xian, LIU Min-Sheng

DOI:10.11862/CJIC.2019.207

Chinese J. Inorg. Chem., **2019**,**35**(10):1869-1876



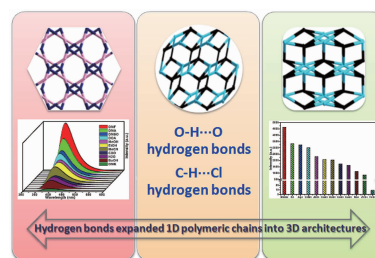
A new coumarin-based fluorescent turn-on sensor for Cu^{2+} sensing has been developed and its application for the intracellular Cu^{2+} sensing has been investigated.

Syntheses, Crystal Structures, and Luminescence Sensing of Three Coordination Polymers Based on Bis(benzimidazole) Bridging Linkers (English)

NIU Yu-Lan, ZHAI Li-Jun, HAO Xiao-Yan, JIA Jiao-Jiao, FAN Li-Ming

DOI:10.11862/CJIC.2019.217

Chinese J. Inorg. Chem., **2019**,**35**(10):1877-1884



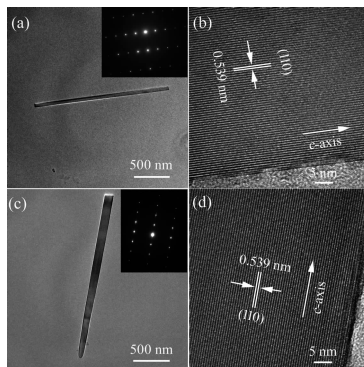
Three 1D coordination polymers expanded by hydrogen bonds into 3D architectures have highly sensitivity and selectively sensing of Fe^{3+} ion in aqueous solution.

Preparation and Characterization of Mullite Whiskers from Different Silica Sources via Molten Salt Reaction (English)

MA Xue-Dong, HAN Ji-Chang, DU Wei, WANG Wei

DOI:10.11862/CJIC.2019.216

Chinese J. Inorg. Chem., **2019**,**35**(10):1885-1895



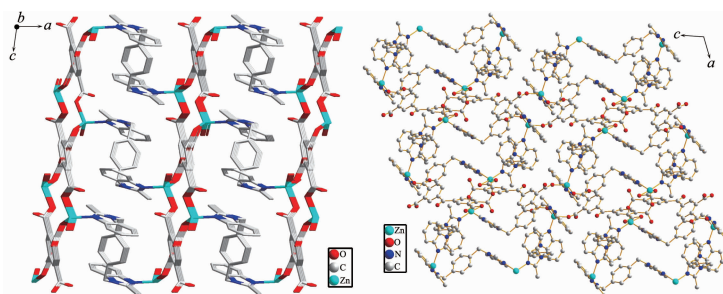
The selected-area electron diffraction patterns from the whiskers can be indexed to the orthorhombic structure, which indicates that the mullite crystal grows along c -axis firstly.

Syntheses, Crystal Structures and Luminescence Properties of Two Zn(II) Coordination Polymers Based on Flexible Bisbenzimidazole Ligand (English)

LAN Hong-Hong, LI Xiao-Tong, CHU Wen-Juan, XU Chun-Ying, JI Bao-Ming

DOI:10.11862/CJIC.2019.210

Chinese J. Inorg. Chem., **2019**,**35**(10):1896-1902



Two Zn(II) coordination polymers constructed by benzimidazole and polycarboxylate ligands exhibit different three-dimensional framework and show luminescence properties.