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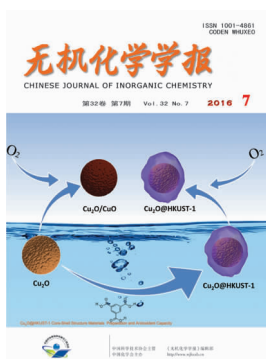
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Cu₂O@HKUST-1 Core-Shell Structure Materials: Preparation and Antioxidant Capacity

KOU Bo-Yu, CHEN Chao, CHI Jia, CHEN Heng-Ze, ZHANG Ning

DOI:10.11862/CJIC.2016.148

Chinese J. Inorg. Chem., **2016**,**32**:1149-1153

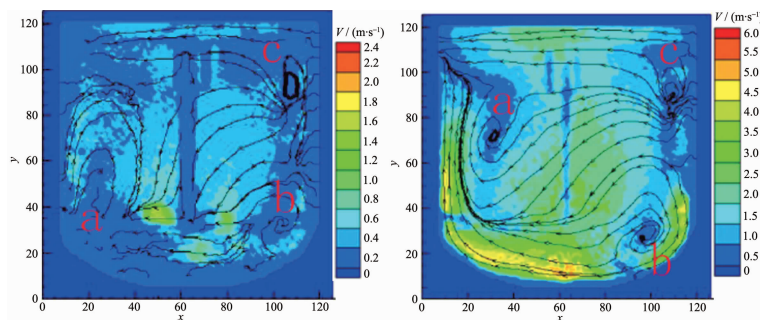
Articles

Influence of Flow Field Distribution on the Crystallization of Spherical Nickel Hydroxide in Reactor (English)

TANG Jun-Jie, LIU Yan, TIAN Lei, WANG Dong-Xing, ZHANG Ting-An

DOI:10.11862/CJIC.2016.156

Chinese J. Inorg. Chem., **2016**,**32**:1127-1134



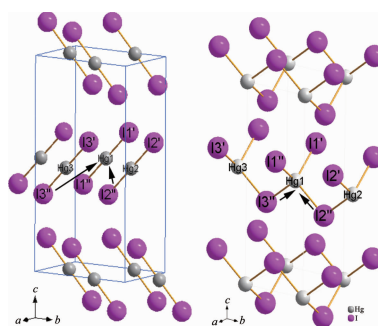
In the same retention time and chemical condition, more uniform flow field distribution in the reactor and higher velocity vector can lead to more complete Ni(OH)₂ crystals, higher relative crystallinity and higher degree of sphericity.

Growth and Phase Transformation of Metastable β -HgI₂^M

XU Gang, LI Jun-Ying, GU Zhi, NAN Rui-Hua, FENG Ya-Xi

DOI:10.11862/CJIC.2016.158

Chinese J. Inorg. Chem., **2016**,**32**:1135-1140



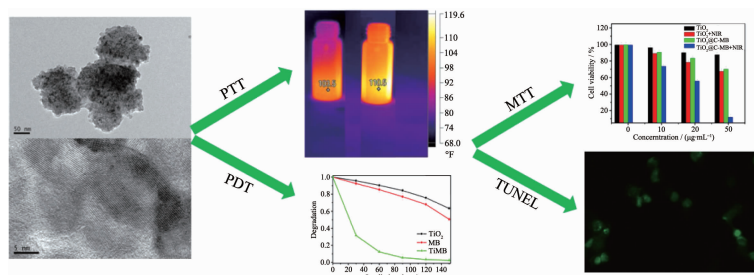
The iodide ions diffusing in short range in β -HgI₂^M coordinates with mercuric ions in another HgI₂ molecular, and form [HgI₄]²⁻ complex, leading to the transformation of β -HgI₂^M→ α -HgI₂, which is the first-order transition of structure reconstruction.

Application of Mesoporous Titanium Composite Nanoclusters in Photothermal/Photodynamics Therapy

CHANG Guan-Ru, LU Xin-Yong, PEI Chun, CHEN Long, LI Zhao

DOI:10.11862/CJIC.2016.161

Chinese J. Inorg. Chem., 2016,32:1141-1148

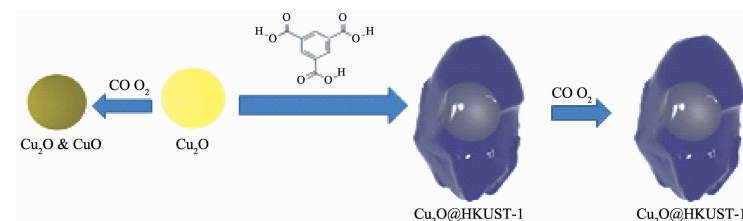


Cu₂O@HKUST-1 Core-Shell Structure Materials: Preparation and Antioxidant Capacity

KOU Bo-Yu, CHEN Chao, CHI Jia, CHEN Heng-Ze, ZHANG Ning

DOI:10.11862/CJIC.2016.148

Chinese J. Inorg. Chem., 2016,32:1149-1153



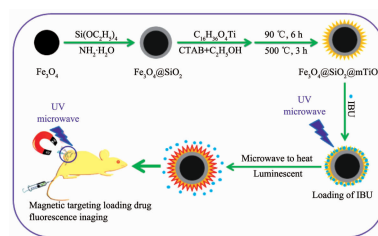
Cu₂O@HKUST-1 core-shell structure material was obtained by reaction of the spherical Cu₂O partly self-sacrificing on its surface and the H₃BTC ligand. HKUST-1 can protect the inner Cu₂O from oxidation by the Oxidation reaction of CO.

Synthesis of Mesoporous Fe₃O₄@SiO₂@mTiO₂ Multifunctional Nanoparticles with the Capability for Drug Loading

PENG Hong-Xia, HU Chuan-Yue, WU Teng-Yan, HU Ji-Lin, TIAN Xiu-Ying

DOI:10.11862/CJIC.2016.159

Chinese J. Inorg. Chem., 2016,32:1154-1160



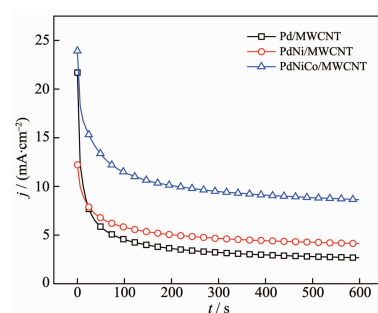
Fe₃O₄@SiO₂@mTiO₂ nanoparticles have mesoporous structure and show luminescent, magnetic and microwave to heat responsive properties, which may lead to potential for applications in biomedical and water treatment field.

In Situ Formation of Ternary Pd-Ni-Co Nanocatalyst on MWCNT for Ethanol Electro-oxidation in Alkaline Media

CHEN Qing-Hua, YI Qing-Feng, YANG Zheng, ZHOU Xiu-Lin, LIU Xiao-Ping, NIE Hui-Dong, XU Guo-Rong

DOI:10.11862/CJIC.2016.163

Chinese J. Inorg. Chem., 2016,32:1161-1169



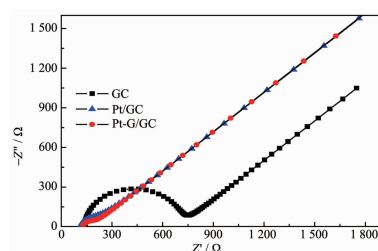
Ternary PdNiCo nano-catalyst *in situ* deposited on MWCNT exhibits high electroactivity for ethanol oxidation.

Nano-Pt/Graphene: One Step Synthesis and Characterization by AC Impedance and Diffusion Coefficient for Electrocatalysis of Methanol

LIU Wen-Chao, LÜ Gui-Qin

DOI:10.11862/CJIC.2016.149

Chinese J. Inorg. Chem., 2016,32:1170-1176



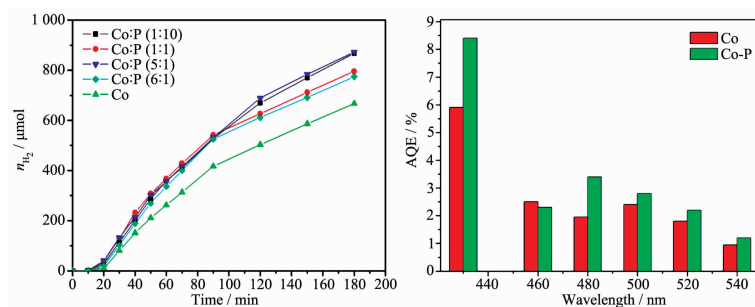
A simple method of nano-Pt/graphene *in situ* reduction by ascorbic acid was realized. Impedance spectrum shows transfer resistance of nano-Pt/graphene decreases by 34.8% than Pt nanoparticles, and the diffusion coefficient of methanol on Pt-G/GC is $1.42 \times 10^{-9} \text{ cm}^2 \cdot \text{s}^{-1}$ by chronocoulometry (CC).

In Situ Synthesis of Co-P/GP Photocatalysts for H₂ Evolution from Water

GUO Yue-Ping, LÜ Gong-Xue

DOI:10.11862/CJIC.2016.152

Chinese J. Inorg. Chem., **2016**,**32**:1177-1182

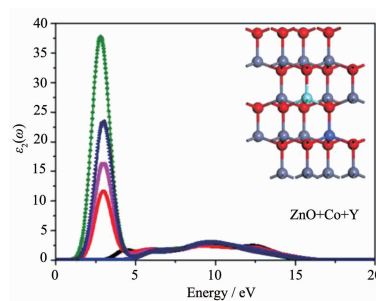


First-Principles Calculations of the Electronic Structure and Optical Properties of Co-Y Co-doped ZnO

FAN Tao-Jian, YUAN Jun-Hui,
YANG Yong-Yong, YU Nian-Nian,
WANG Jia-Fu

DOI:10.11862/CJIC.2016.162

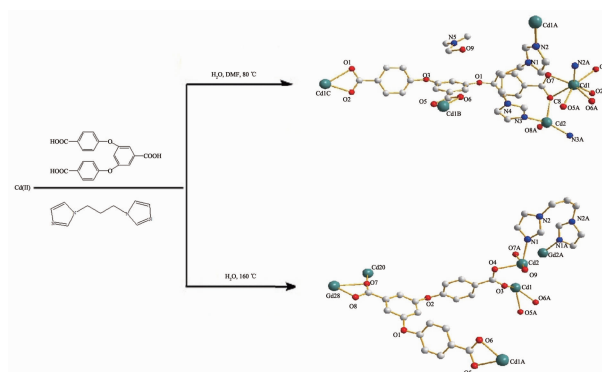
Chinese J. Inorg. Chem., **2016**,**32**:1183-1189



Co-Y co-doped ZnO is a promising material to fabricate the opto-electronic devices.

Syntheses, Characterizations and Luminescence Properties of Two Cd(II) Metal-Organic Frameworks Based on 3,5-Bis(4-carboxy-phenoxy)benzoic Acid with N-donor Ligand 1,3-Bis (imidazolyl)propane (English)

ZHAO Lun, CHEN Rui-Zhan, WANG Zi-Chen



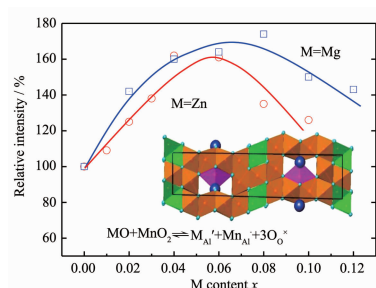
Two metal-organic frameworks have been synthesized under hydrothermal/solvothermal conditions with different reaction temperatures and decreasing temperature rates. The N-donor ligands in compound **1** join all infinite 1D double chains into a 2D sheets. Trinuclear Cd(II) SBUs in Compound **2** are basket-shaped with the BCPBA³⁻ ligands acting as linkers to form a 2D layered network.

DOI:10.11862/CJIC.2016.144

Chinese J. Inorg. Chem., **2016**,**32**:1190-1198

Doping and Replacing Effects on the Luminescent Properties of SrAl₁₂O₁₉: Mn⁴⁺ Red Phosphor

XIN Xiao-Dong, WEI Heng-Wei,
ZHAO Wen-Hui, LIU Zhong-Shi,
LI Wen-Xian, JIAO Huan, JING Xi-Ping



SrAl₁₂O₁₉:Mn⁴⁺ would be a red phosphor candidate for high Ra white LEDs. Its PL intensity can be improved by doping Mg²⁺ or Zn²⁺ on Al³⁺ site, which assists Mn⁴⁺ to enter the lattice.

DOI:10.11862/CJIC.2016.169

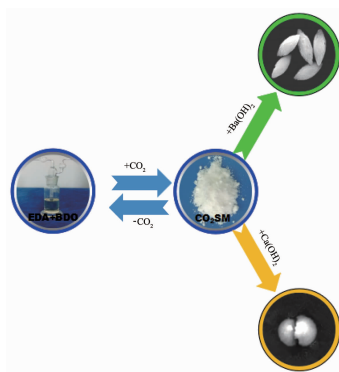
Chinese J. Inorg. Chem., **2016**,**32**:1199-1206

A CO₂ Capture and Utilization Approach Using the System 1,4-Butanediol and 1,2-Ethanediamine (English)

SHA Feng, GUO Bo, ZHANG Fei,
ZHAO Tian-Xiang, LI Qiang,
ZHANG Jian-Bin

DOI:10.11862/CJIC.2016.167

Chinese J. Inorg. Chem., **2016**,**32**:1207-1214



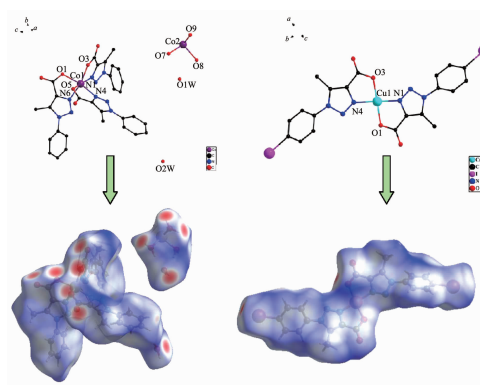
CO₂ was efficiently fixed as CO₂SM, and CO₂SM was used to prepare controllable morphologies CaCO₃ and BaCO₃. As a result, a green CCU approach featuring high efficiency and low cost was developed.

A Synthetic Strategy for Two Complexes with 1, 2, 3-Triazole Derivatives: Crystal Structures and Hirshfeld Surface Analysis (English)

FENG Chao, ZHANG Duo, ZHOU Shi-Yan,
CHEN Jin-Mei, ZUO Ze-Hao, ZHAO Hong

DOI:10.11862/CJIC.2016.147

Chinese J. Inorg. Chem., **2016**,**32**:1215-1222



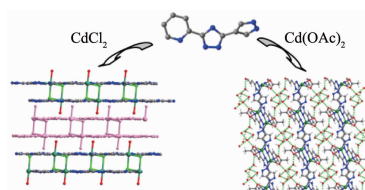
Two complexes were synthesized by 1*H*-1,2,3-triazole acid derivatives under various reaction conditions, and Hirshfeld surfaces analysis for the complexes were investigated.

Syntheses, Crystal Structures and Luminescent Properties of Two Cd(II) Complexes Based on 4-(5-(1*H*-Pyrazol-4-yl)-4*H*-1,2,4-triazol-3-yl)pyridine (English)

XU Zhou-Qing, WANG Xiao-Ning,
LI Hui-Jun, JIA Lei, ZHAO Hui-Zi,
LI Shou-Jie, MA Lu-Fang, ZHANG Pei-Ling

DOI:10.11862/CJIC.2016.150

Chinese J. Inorg. Chem., **2016**,**32**:1223-1230



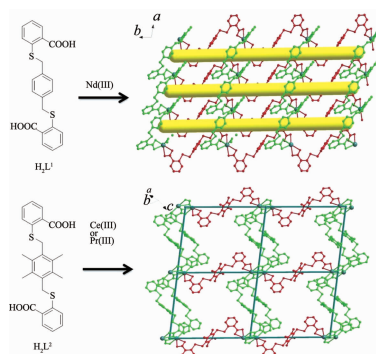
Two Cd(II) MOFs were constructed by a rigid asymmetric triazole derivatives and Cd(II) salts. Water chains comprised of double pentanuclear water clusters presence in **1**. Hydrogen bonds play important role in the framework construction of complexes **1** and **2**.

Three Lanthanide-Carboxylate Coordination Polymers with Conformation Variation Based on Flexible Ligands: Syntheses, Structures and Photoluminescence Properties (English)

CUI Pei-Pei, CUI Lun-Feng, FU Ai-Yun

DOI:10.11862/CJIC.2016.155

Chinese J. Inorg. Chem., **2016**,**32**:1231-1238



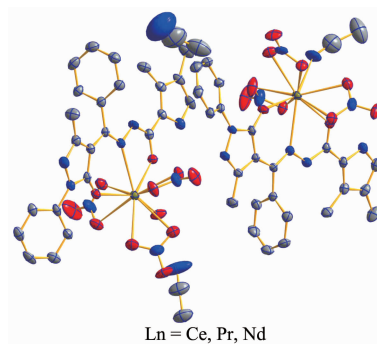
Three two-dimensional (2D) lanthanide-organic coordination polymers (CPs) have been synthesized based on two flexible dicarboxylate ligands. In them, the ligands display interesting conformation and coordination modes.

Lanthanide Complexes (Ce, Pr, Nd) with an Acylhydrazone Derived from 3,4-Dimethylpyrrole-2-carbohydrazide and PMBP: Syntheses, Crystal Structures and Fluorescence Properties (English)

CHANG Hui-Qin, CHEN Liang, WU Wei-Na, WANG Yuan

DOI:10.11862/CJIC.2016.146

Chinese J. Inorg. Chem., **2016**,**32**:1239-1245



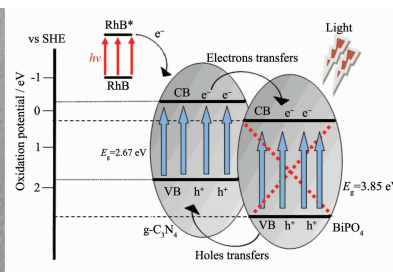
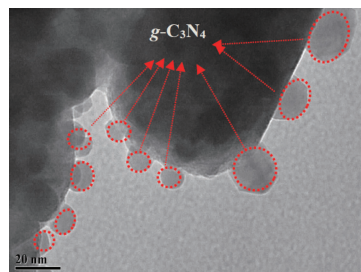
Three lanthanide(III) complexes, $[\text{LnL}(\text{NO}_3)_3(\text{H}_2\text{O})][\text{LnL}(\text{NO}_3)_3(\text{CH}_3\text{CN})] \cdot 2\text{CH}_3\text{CN}$ ($\text{Ln} = \text{Ce}$ (**1**), Pr (**2**) and Nd (**3**)) with a hydrazone ligand have been synthesized and characterized. All complexes exhibit different fluorescence emission from that of the ligand **L** probably due to a CHEF (chelation enhancement of the fluorescence emission) effect.

Synthesis of Monodispersed $g\text{-C}_3\text{N}_4$ Quantum Dots(QDs) Decorated on the Surface of 1D Rod-like BiPO_4 with Enhanced Photocatalytic Activities (English)

WANG Dan-Jun, SHEN Hui-Dong, GUO Li, YUE Lin-Lin, FU Feng

DOI:10.11862/CJIC.2016.170

Chinese J. Inorg. Chem., **2016**,**32**:1246-1254



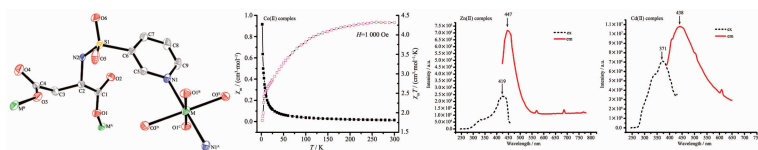
$g\text{-C}_3\text{N}_4$ quantum dots (QDs) was decorated on the surface of BiPO_4 to form a novel $g\text{-C}_3\text{N}_4/\text{BiPO}_4$ heterojunction. The heterojunctions between $g\text{-C}_3\text{N}_4$ QDs and BiPO_4 suppresses the recombination of photogenerated electron-holes, thus improving the photocatalytic efficiency.

Co(II), Zn(II) and Cd(II) Coordination Polymers Based on *N*-3-Pyridinesulfonyl Amino Acid: Syntheses, Magnetic and Fluorescence Properties (English)

LIAO Bei-Ling, LI Shi-Xiong, YIN Xiu-Ju, JIA Jing-Jing, JIANG Yi-Min

DOI:10.11862/CJIC.2016.157

Chinese J. Inorg. Chem., **2016**,**32**:1255-1260

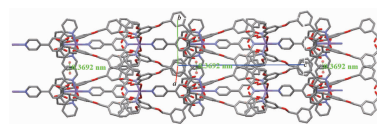


Hydrothermal Syntheses and Crystal Structures of Two Complexes Constructed from 3,5-Bis((4'-carboxylbenzyl)oxy)benzoic Acid and 4'-(4-Pyridyl)-2,2':6',2''-terpyridine Mixed Ligands (English)

QIAO Yu, WEI Bing, WANG Lu-Yao, LI Xiu-Ying, CHE Guang-Bo, LIU Chun-Bo, ZHANG Xing-Jing

DOI:10.11862/CJIC.2016.164

Chinese J. Inorg. Chem., **2016**,**32**:1261-1266



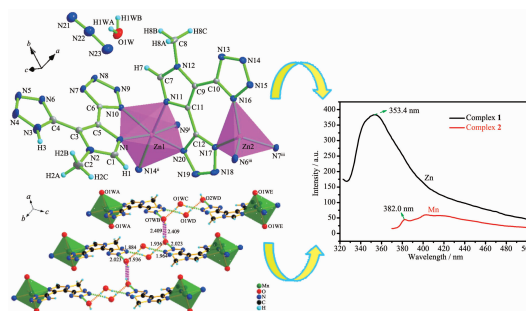
Complexes **1** and **2** exhibit one-dimensional chain structures, respectively. The $\pi\text{-}\pi$ stacking interactions between the neighboring chains develop the chains into two dimensional layer structures.

In Situ Syntheses, Diversified Coordination Modes and Strong Photo-Luminescent Properties of Two Tetrazole Complexes (English)

GAO Ji-Xing, XU Qing, TAN Yu-Hui, LIU Yi, WEN He-Rui, TANG Yun-Zhi

DOI:10.11862/CJIC.2016.165

Chinese J. Inorg. Chem., **2016**,**32**:1267-1274

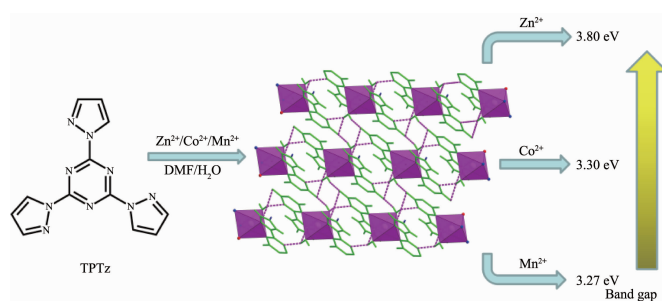


Three Hydrogen-Bonded Metal-Organic Networks with Tunable Semiconductor Properties (English)

CHEN Fei-Jian, LIN Qing-Fang, WANG Tian-Yan, SHEN Fu-Zhi, WEI Zheng-You, LIANG Li-Li

DOI:10.11862/CJIC.2016.153

Chinese J. Inorg. Chem., **2016**,**32**:1275-1282

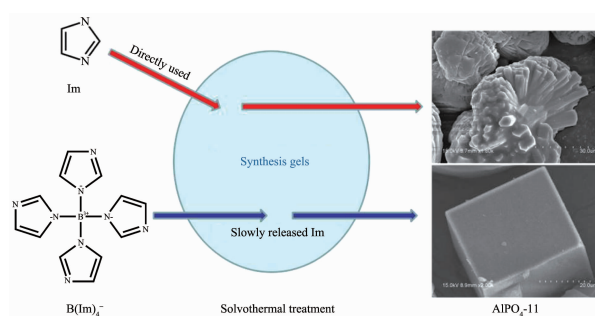


Synthesis of Large Zeolite Crystals Through Slow Release of Structure-Directing Agents (English)

CHEN Fei-Jian, LIN Qing-Fang, GAO Zi-Hao, SHEN Fu-Zhi, LIANG Li-Li, YANG Zhen, DU Hong-Bin

DOI:10.11862/CJIC.2016.168

Chinese J. Inorg. Chem., **2016**,**32**:1283-1292

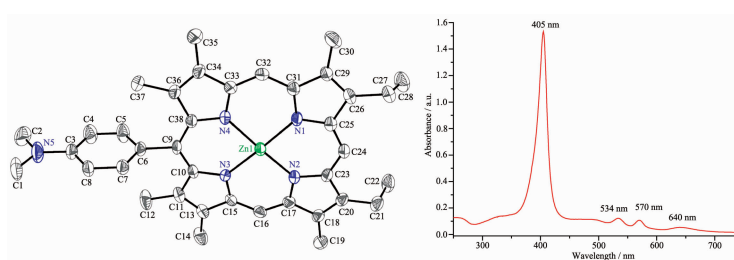


Syntheses, Characterizations, Spectroscopic Properties of *Meso*-mono-substituted Porphyrins and Their Metal Complexes (English)

SHA Qiu-Yue, YUAN Xue-Mei, WANG Xiao-Yu, CHEN Ji-Chao, XU Li, XU Hai-Jun

DOI:10.11862/CJIC.2016.166

Chinese J. Inorg. Chem., **2016**,**32**:1293-1302



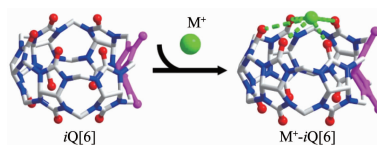
A series of *meso*-mono-substituted porphyrin derivatives and their zinc complexes with *N,N*-dimethylphenylamine phenyl and *N*-phenyl-carbazole exhibit intense absorption in the UV-Vis region and emit red light. In addition, they show high thermal stability.

Supramolecular Assemblies Formed by Coordination of Alkali Metal Ions with Inverted Cucurbit[6]uril in the Presence of Tetrachlorozincate (English)

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Coordination in supramolecular assemblies formed in aqueous HCl solution was investigated by reacting alkali cations (M^+) and inverted cucurbit[6]uril ($iQ[6]$) in the presence of the structure-directing agent tetrachloride zincate anion ($[ZnCl_4]^{2-}$).