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DOI:10.11862/CJIC.2017.105

Chinese J. Inorg. Chem., **2017**,**33**:713-737

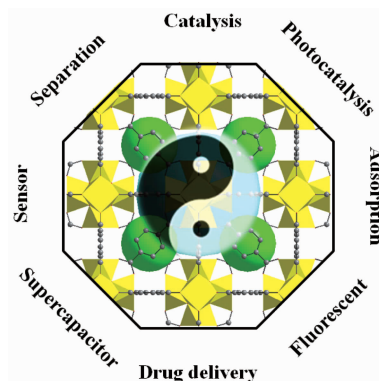
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Syntheses and Applications of UiO Series of MOFs

WANG Fu-Xue, WANG Chong-Chen,
WANG Peng, XING Bi-Cong

DOI:10.11862/CJIC.2017.105

Chinese J. Inorg. Chem., **2017**,**33**:713-737



The syntheses methods and the wide applications of UiO series of MOFs were reviewed and their future research trends were prospected.

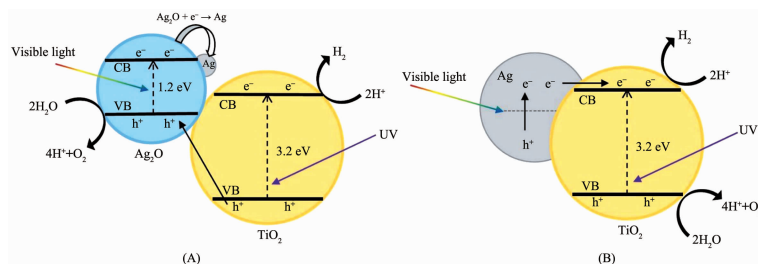
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Facile Synthesis and Photocatalytic Activity for Hydrogen Evolution of $\text{Ag}_2\text{O}/\text{TiO}_2$

ZHAO Zhi-Hao, Lee Jordan, CHEN Yang,
CUI Xiao-Li

DOI:10.11862/CJIC.2017.098

Chinese J. Inorg. Chem., **2017**,**33**:738-744



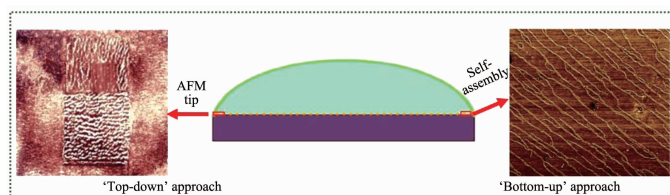
Prepared $\text{Ag}_2\text{O}/\text{TiO}_2$ composites show enhanced photocatalytic H_2 evolution rate, 15 times as high as that of P25, owing to the formation of heterojunction and presence of photo-induced Ag.

Creating Collagen Nanowire Arrays by ‘Bottom-Up’ and ‘Top-Down’ Approaches on Mica Lattice Planes

LI Li, ZHANG Lei, YANG De-Liang,
SUN Ming, ZENG Fan-Xi, GU Wen-Hua

DOI:10.11862/CJIC.2017.100

Chinese J. Inorg. Chem., **2017**,**33**:745-752



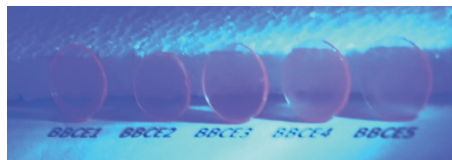
Rat tail type I collagen nanowire arrays were created by ‘bottom-up’ and ‘top-down’ approaches on mica lattice plane, with the ‘bottom-up’ self-assembly guided by the reverse-phase biomineralization mechanism and the ‘top-down’ manipulation achieved by AFM tip as a molecular broom.

Structure Analysis and Optical Properties of Europium Doped Calcium Bismuth Borate Glasses for WLED

XIA Li-bin, XIAO Qing-Hui, LI Zi-Cheng,
WU Dun-Cai, YOU Wei-Xiong

DOI:10.11862/CJIC.2017.103

Chinese J. Inorg. Chem., **2017**,**33**:753-760



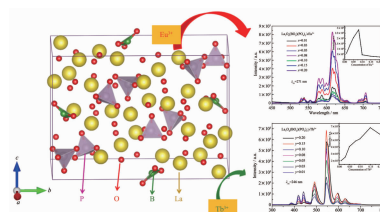
The PL spectra intensity as well as tightness and symmetries of glass structure for Eu^{3+} doped calcium bismuth borate glasses with emitting red light exhibit different variation as n_D/n_B and CaO concentration varying. The glasses are expected to good candidates applied for WLED glass ceramic in the future.

Preparation and Luminescence Properties of $\text{La}_7\text{O}_6(\text{BO}_3)(\text{PO}_4)_2\cdot\text{Tb}^{3+}/\text{Eu}^{3+}$ Phosphors

LI Shi-Long, LÜ Chao, MIN Xin,
FANG Ming-Hao, HUANG Zhao-Hui,
LIU Yan-Gai

DOI:10.11862/CJIC.2017.086

Chinese J. Inorg. Chem., **2017**,**33**:761-768



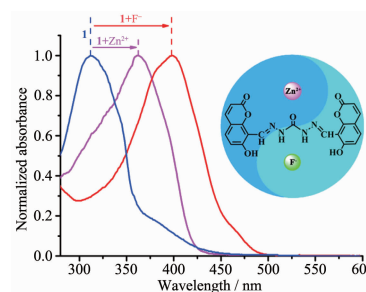
Red phosphors $\text{La}_7\text{O}_6(\text{BO}_3)(\text{PO}_4)_2\cdot\text{Eu}^{3+}$ and green phosphors $\text{La}_7\text{O}_6(\text{BO}_3)(\text{PO}_4)_2\cdot\text{Tb}^{3+}$ were proposed with excellent PL properties and thermal stability, which indicated to be good candidates of trichromatic phosphors for w-LED.

A Readily Accessible Difunctional Probe: Simultaneous Recognition of Cation Zn^{2+} and Anion F^- via Distinguishable Wavelengths (English)

ZENG Li, ZHAO Jiang-Lin, MU Lan,
ZENG Xi, WEI Gang, Redshaw Carl,
JIN Zongwen

DOI:10.11862/CJIC.2017.076

Chinese J. Inorg. Chem., **2017**,**33**:769-778

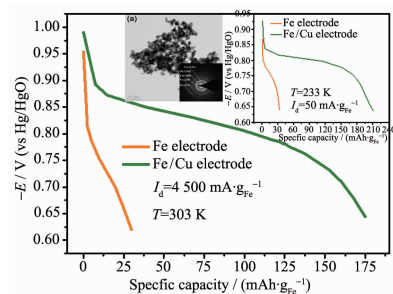


Electrochemically Self-Assembled Fe/Cu Nanocomposite with Improved High-Rate and Low-Temperature Performances for Nickel-Iron Alkaline Battery (English)

LIU Ping, ZHU Ding, YANG Jun,
HUANG Lan-Xiang, CHEN Yun-Gui

DOI:10.11862/CJIC.2017.089

Chinese J. Inorg. Chem., **2017**,**33**:779-786



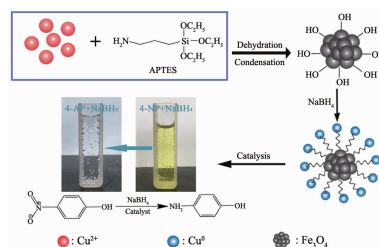
Fe/Cu nanocomposites endow excellent performance for nickel-iron batteries, significantly improve high-rate and low-temperature performance.

Ultrasonic Synthesis and Application in Catalytic 4-Nitrophenols Reduction of Au/Fe₃O₄

GU Yan, LIU Guan-Ting, ZOU Cheng-Heng, ZHANG Zhen, LIU Juan, SUN Ming, CHENG Gao, YU Lin

DOI:10.11862/CJIC.2017.102

Chinese J. Inorg. Chem., 2017,33:787-795



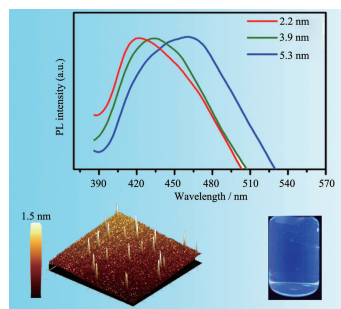
Au⁰ nanoparticles were supported on the surface of Fe₃O₄ by APTES as organic bridge to obtain the Au/Fe₃O₄, and the catalyst had excellent catalytic activity for the reduction of *p*-nitrophenol.

Size-Controlled MoS₂ Nanodots for Luminescent Property

SUN Wei-Yi, LI Pan, TAO Zhan-Liang, CHEN Jun

DOI:10.11862/CJIC.2017.111

Chinese J. Inorg. Chem., 2017,33:796-800



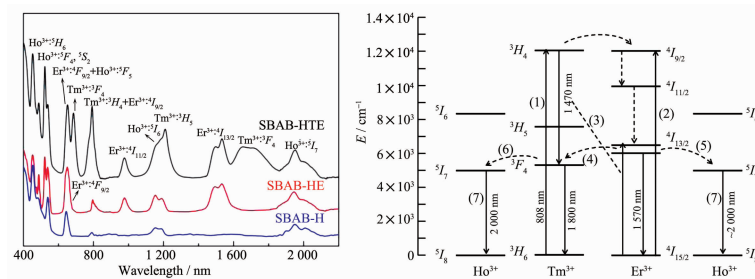
Monolayer MoS₂ is the two-dimensional material which has the direct band gap, and has the excellent photoelectric properties. We have developed a heat-up route in oleylamine for the size-controlled synthesis of MoS₂ QDs and investigate the size effect of MoS₂ on the fluorescence properties.

Spectroscopic Properties of Tm³⁺/Er³⁺/Ho³⁺ Co-doped SiO₂-Bi₂O₃-AlF₃-BaF₂ Glasses

LI Yu-Xiang, DENG Sheng-Yu, FAN Ya-Lei, WANG De-Qiang

DOI:10.11862/CJIC.2017.106

Chinese J. Inorg. Chem., 2017,33:801-808

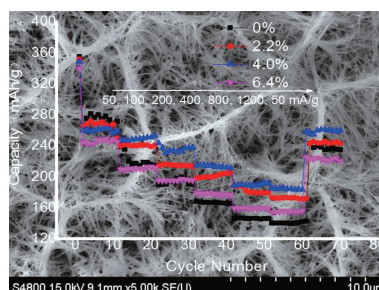


Effect of Loading Content of Silver on Lithium Storage for TiO₂ Net-Work Flexible Film Electrode

ZHANG Ying-Jie, LIU Jia-Ming, ZHAO Jin-Bao, HUANG Ling, LI Xue

DOI:10.11862/CJIC.2017.087

Chinese J. Inorg. Chem., 2017,33:809-816



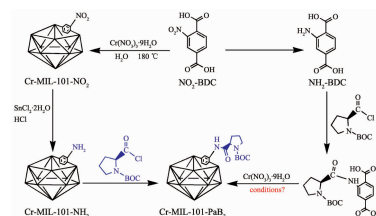
A series of silver-modified TiO₂ film electrodes with nano-network structure are synthesized in this work. The Ag@TiO₂ electrode with 4.0%(w/w) silver exhibits a much better electrochemical performance than the pristine one.

Chiral Postsynthetic Modification of Cr-MIL-101-NH₂

WANG Ping-Ping, CHEN Dan-Ping, WANG Shu-Hua, CHEN Chao

DOI:10.11862/CJIC.2017.095

Chinese J. Inorg. Chem., 2017,33:817-822



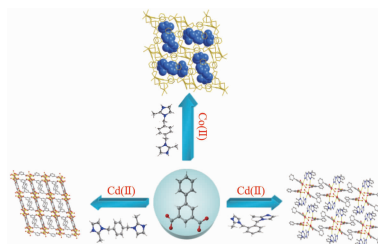
By postsynthetic modification method, the *L*-proline derivative (Boc-*L*-ProCl) was anchored on the pore of Cr-MIL-101-NH₂ to gain a chiral MOFs (Cr-MIL-101-PaB₂). postsynthetic modification method can avoid the self-assembly uncertainty of MOFs, it was great potential and efficient synthetic method.

Syntheses, Structures and Luminescence Properties of Coordination Polymers in Mixed-Ligand System

WANG Xin-Ping, LI Ying-Ying, LIU Yong, SUN Jing, LIU Kang, WANG Lei

DOI:10.11862/CJIC.2017.104

Chinese J. Inorg. Chem., 2017,33:823-829



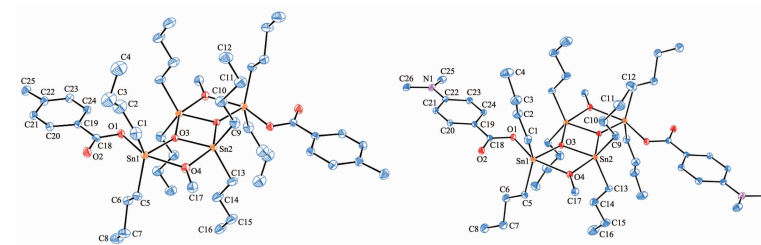
Three coordination polymers constructed by the usage of 5-phenylisophthalic acid and bis-imidazole containing ligands show rich structural chemistry from 3D supramolecular to anionic framework.

Two Di-*n*-butyltin Carboxylates with a Sn₄O₄ Ladder-like Framework: Microwave Solvothermal Syntheses, Structures and *in Vitro* Antitumor Activities

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

DOI:10.11862/CJIC.2017.107

Chinese J. Inorg. Chem., 2017,33:830-836



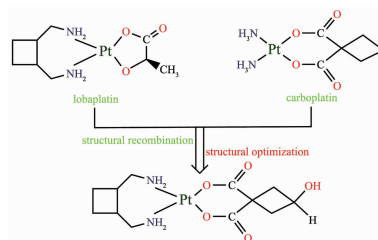
Two di-*n*-butyltin carboxylates with a Sn₄O₄ ladder-like framework, $[(\mu_3\text{-O})(\mu_2\text{-OMe})(n\text{-Bu}_2\text{Sn})_2(\text{O}_2\text{CR})_2]_2$ (R=4-methylphenyl (1), 4-(dimethylamino)phenyl (2)), were prepared under microwave-assisted solvothermal conditions with di-*n*-butyltin oxide and 4-methylbenzoic acid, 4-dimethylaminobenzoic acid. The compounds exhibited strong *in vitro* anti-tumor activity against five human tumor cell lines, HT-29, HepG2, MCF-7, KB and A549.

Synthesis and Anticancer Activity of *cis*-[Pt(II)(*trans*-1,2-bis(methylamino)cyclobutane)(3-hydroxyl-1,1-cyclobutanedicarboxylate)]

GAO An-Li, QIU Jie, HOU Shu-Qian, JIANG Jing, LOU Li-Guang, LIU Wei-Ping

DOI:10.11862/CJIC.2017.096

Chinese J. Inorg. Chem., 2017,33:837-842



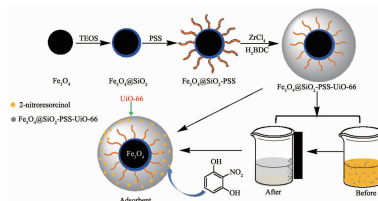
An analogue of lobaplatin, derived from the hybrid of lobaplatin and carboplatin, has good water-solubility and improved aqueous stability, and displays *in vivo* anticancer activity comparable to that of its parent lobaplatin.

Synthesis of Magnetic UiO-66 Composites for the Adsorption of Nitro Phenol Organic Molecules in Water

YANG Qing-Xiang, REN Shuang-Shuang, ZHAO Qian-Qian, CHEN Zhi-Jun

DOI:10.11862/CJIC.2017.108

Chinese J. Inorg. Chem., 2017,33:843-852



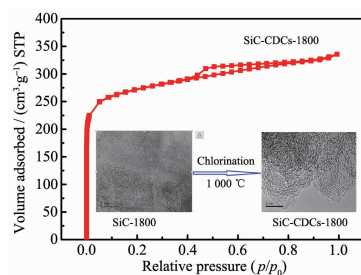
Magnetic UiO-66 composites with well-defined structure were constructed by dispersing Fe₃O₄@SiO₂ in a DMF solution containing two MOF precursors, ZrCl₄ and H₂BDC. And the higher adsorption performance of 2-nitroresorcinol on Fe₃O₄@SiO₂-PSS@UiO-66 may be due to the electrostatic attraction interactions and π - π interaction of phenyl ring between UiO-66 and 2-nitroresorcinol. In addition, the maximum adsorption capacity is 161.36 mg·g⁻¹.

Preparation and Supercapacitive Performances of SiC-CDCs

YU Yan-Yan, GUAN Yun-Feng, CONG Ye, YUAN Xiu-Lan, LI Xuan-Ke, ZHANG Jiang

DOI:10.11862/CJIC.2017.085

Chinese J. Inorg. Chem., **2017**,**33**:853-859



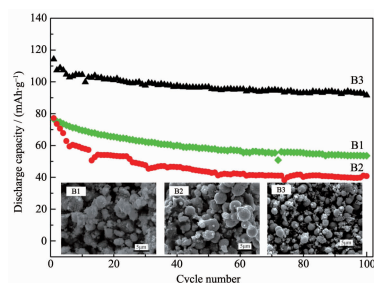
Silicon carbide-derived carbons (SiC-CDCs), with tunable specific surface area and unique hierarchical porous structure (mesopores and micropores less than 1 nm), are used as the electrode materials of supercapacitors.

Microstructure and Electrochemical Properties of Co-precipitation Prepared $\text{LiMn}_x\text{Co}_y\text{O}_2$

WANG Chen, ZHANG Meng-Qin, XIAO Wen-Hao, AI Yan-Ling

DOI:10.11862/CJIC.2017.112

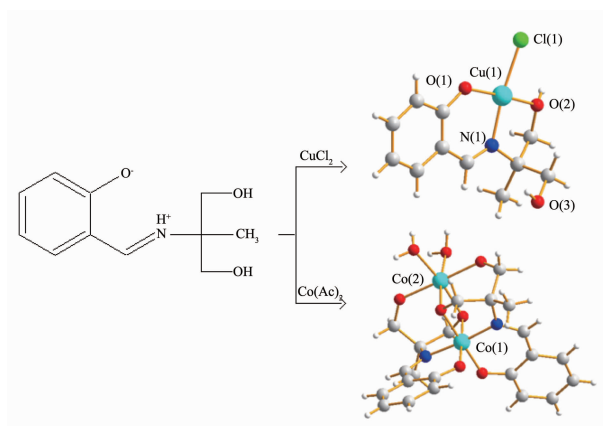
Chinese J. Inorg. Chem., **2017**,**33**:860-866



Layered $\text{LiMn}_x\text{Co}_y\text{O}_2$ was prepared by co-precipitation of precursor, and sintered under 900 °C with different time. The samples with longer sintering time and higher relative content of Mn has a better spherical morphology, initial charge-discharge capacity and cycle performance.

Syntheses, Structures and Characterization of Cu(II) and Co(III) Complexes Formed by a Tripodal Tetradentate Schiff Base

XIE Qing-Fan, YAO Yong-Gang, JIANG Yan, HONG Si-Yu, CHEN Yan-Min



A tripodal tetradentate [NOOO] Schiff base (H_3Lds), derived from the condensation of salicylaldehyde and 2-Amino-2-methyl-1,3-propanediol, reacted with copper(II) chloride or cobalt(II) acetate to yield complexes $[\text{CuCl}(\text{H}_3\text{Lds})] \cdot \text{H}_2\text{O}$ and $[\text{Co}_2(\text{H}_3\text{Lds})_2(\text{Lds})_2] \cdot 5\text{H}_2\text{O}$.

DOI:10.11862/CJIC.2017.101

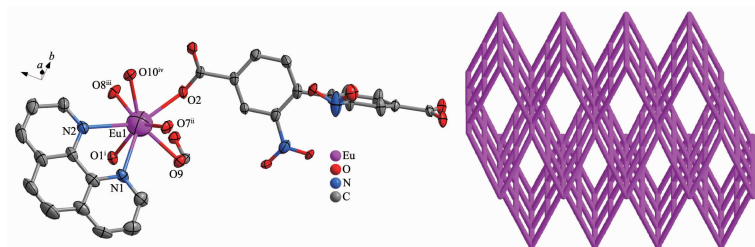
Chinese J. Inorg. Chem., **2017**,**33**:867-873

Syntheses, Characterization and Fluorescence Properties Analysis of Two Lanthanide Coordination Polymers Based on Axial Chirality Ligand 2,2'-Dinitro-4,4'-biphenyldicarboxylic Acid (English)

JI Qin, CHEN Li-Zhuang

DOI:10.11862/CJIC.2017.099

Chinese J. Inorg. Chem., **2017**,**33**:874-880



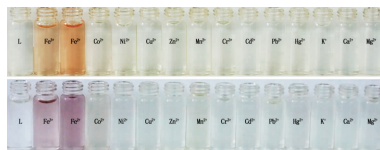
Two lanthanide coordination polymers based on axial chirality ligand 2,2'-dinitro-4,4'-biphenyldicarboxylic acid have the same topological type. Fluorescent analysis of complexes **1** and **2** showed an intense emission band at 606 nm ($\lambda_{\text{ex}}=495$ nm) and 615.5 nm ($\lambda_{\text{ex}}=395.5$ nm), respectively.

Two Tetrapodal Schiff Bases Acting as Colorimetric Sensors for Iron in Environmental Water Samples (English)

WANG Ruo, JIANG Guang-Qi

DOI:10.11862/CJIC.2017.079

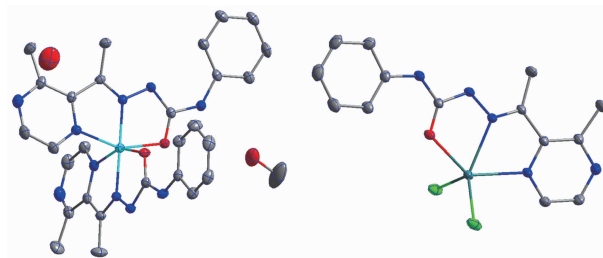
Chinese J. Inorg. Chem., **2017**,**33**:881-889



Two colorimetric sensors showed selective colorimetric sensing ability for Fe(II) and Fe(III) by changing color from light yellow to either orange or purple when immersed in water samples.

Crystal Structures and DNA Interaction Properties of Ni(II) and Cd(II) Complexes with a Semicarbazone Ligand Bearing Pyrazine Unit(English)

MAO Pan-Dong, ZHAO Xiao-Lei,
SHAO Zhi-Peng, LI Min, WU Wei-Na,
WANG Yuan



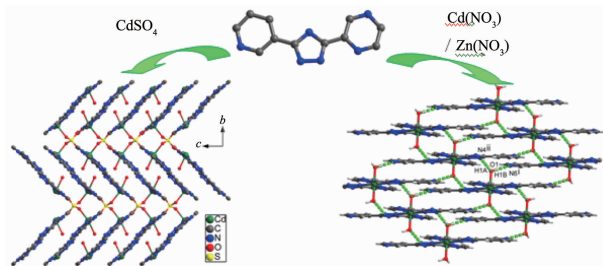
Two complexes $[\text{NiL}_2] \cdot \text{CH}_3\text{OH} \cdot 0.5\text{H}_2\text{O}$ and $[\text{Cd}(\text{HL})\text{Cl}_2]$ with a semicarbazone ligand can bind to DNA and thus have potential pharmaceutical activity.

DOI:10.11862/CJIC.2017.109

Chinese J. Inorg. Chem., **2017**,**33**:890-896

Three Coordination Complexes Based on an Asymmetric Triazole Derivative Ligand: Syntheses, Structures and Photocatalytic Properties (English)

XU Zhou-Qing, HE Ya-Ling, LI Hui-Jun,
ZHANG Pei-Ling, WANG Yuan,
WANG Qi, ZHONG Run-Bin, JIA Lei



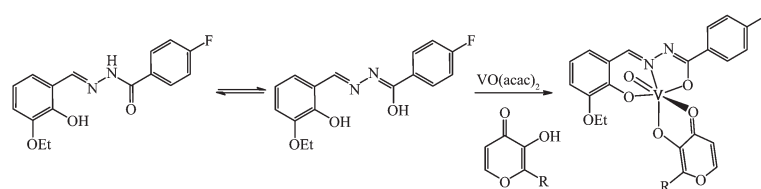
Three complexes, which have good photocatalytic activities for degradation of methylene blue, were constructed by a novel rigid asymmetric triazole derivatives and transition metal ion.

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Syntheses, Crystal Structures and Insulin-like Activity of Maltolato- and Ethylmaltolato-Coordinated Oxovanadium(V) Complexes Derived from 4-Fluoro-*N'*-(3-ethoxy-2-hydroxybenzylidene)benzohydrazide (English)

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A maltolato- and an ethylmaltolato-coordinated oxovanadium(V) complexes with with aroylhydrazone ligands are reported. The complexes have effective insulin-like activity.

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