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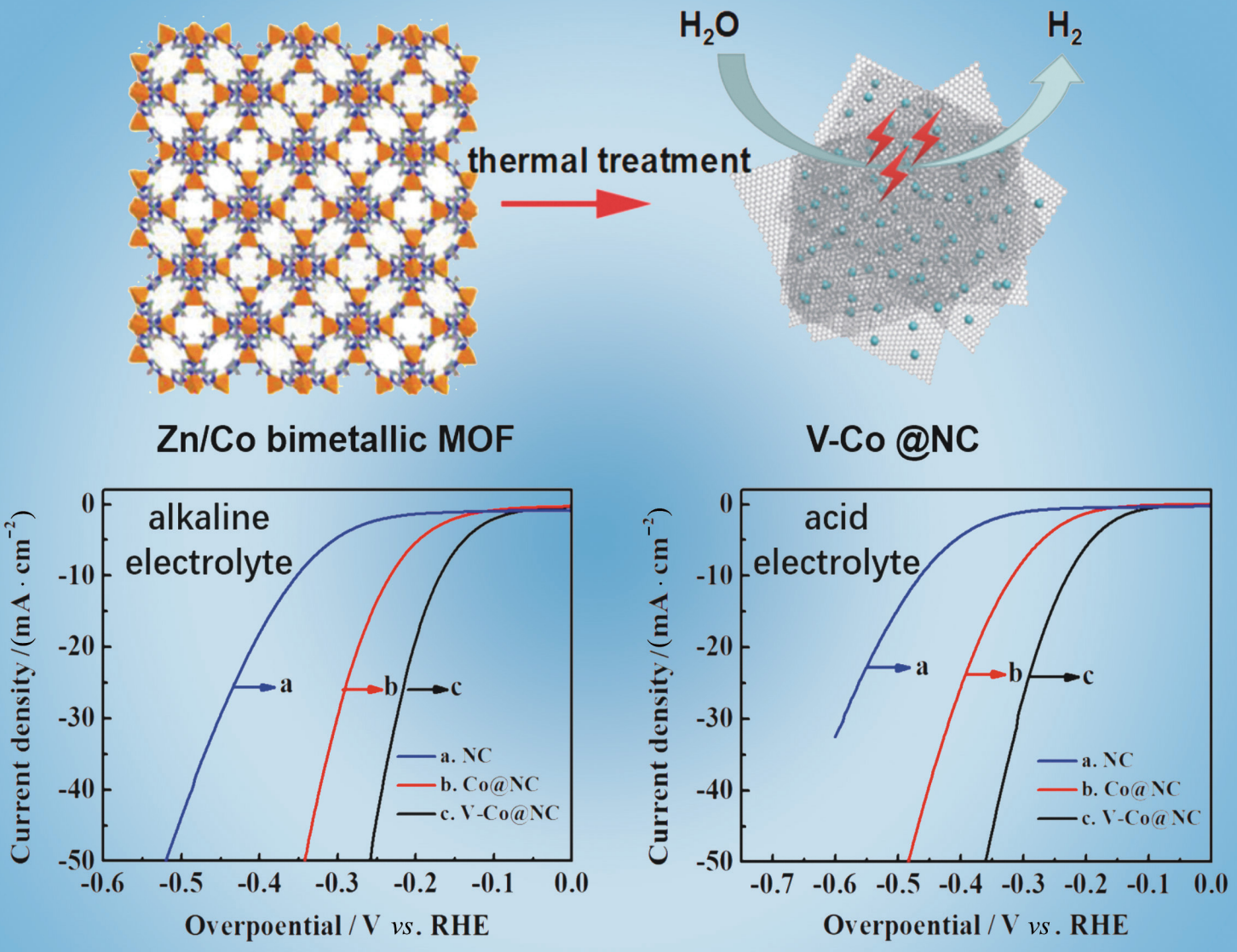

Nitrogen-doped graphitic carbon coated and evenly distributed cobalt nanoparticles catalysts prevented direct contact between cobalt active site and electrolyte, which effectively contributed to the HER activity greatly in both alkaline and acid electrolytes.

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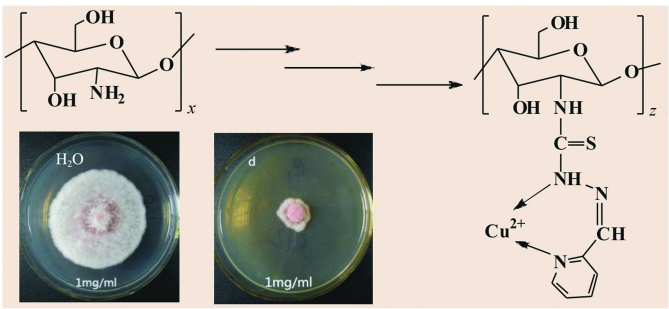
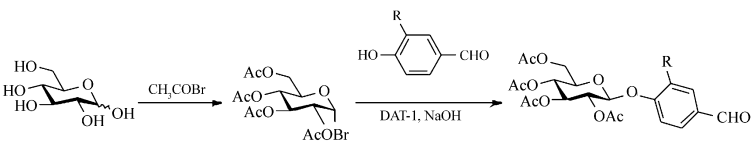


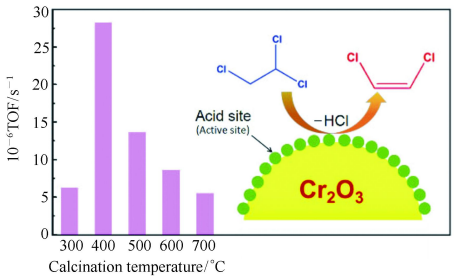
Compared with chitosan oligosaccharide, novel chitosan oligosaccharide thiosemicarbazone Cu(Ⅱ) complex showed higher activities against *F. graminearum*.



4-Formylphenyl(2,3,4,6-*O*-tetraacetyl)-β-*D*-glucoside derivatives were obtained *via* glycosylation reaction between 2,3,4,6-*O*-tetraacetyl- α-*D*-glucopyranosyl bromide and 4-hydroxybenzaldhyde derivatives in the presence of phase transfer catalyst, TDA-1. The yield of products reached 61%~69%.

Gas Phase Dehydrochlorination of 1,1,2-Trichloroethane over Cr_2O_3 Catalysts

DONG Zhaoxia, SONG Tongyang, LU Jiqing, XIE Guanqun *, LUO Mengfei *

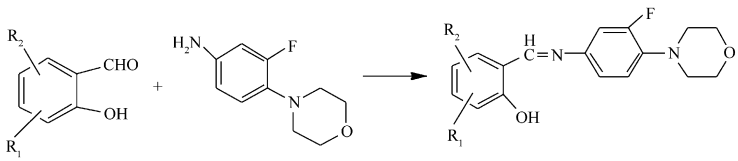


The highest TOF obtained on the catalysts calcined at 400 ℃ shows that the surface Cr_2O_3 species and the Cr species with an average valence of 3.2 are appropriate for the reaction.

2019,**36**(5):515-523

Synthesis and 1,1-Diphenyl-2-Picrylhydrazyl Radical Quenching Activity of Salicylaldehyde Schiff Bases Containing Morpholine Fragments

SUN Fengmei *, HAN Qiong, ZHAO Panxiang, WANG Jia, RUI Jiayi, XU Jiming



Ia-In

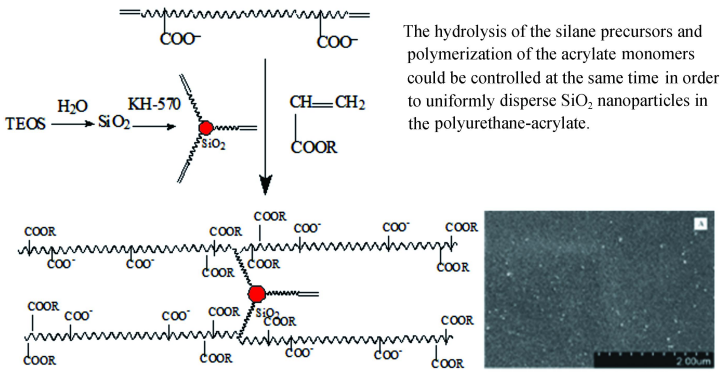
Ia: R_1=H, R_2=H; Ib: R_1=H, R_2=5-OCH_3; Ic: R_1=H, R_2=5-CH_3; Id: R_1=H, R_2=5-Cl; Ie: R_1=H, R_2=5-NO_2; If: R_1=H, R_2=5-Br; Ig: R_1=H, R_2=3-Br; Ih: R_1=H, R_2=4-Br; Ii: R_1=H, R_2=3-Cl; Ij: R_1=3-Cl, R2=5-Cl; Ik: R_1=3-Br, R_2=5-Br; Il: R_1=3-I, R_2=5-I; Im: R_1=3-OCH_3, R_2=5-Br; In: R_1=3-NO_2, R_2=5-Br

Fourteen kinds of salicylaldehyde Schiff bases containing morpholinyl fragments show DPPH radical quenching activities at mass concentrations of 0.02 to 0.10 g/L.

2019,**36**(5):524-531

Preparation and Properties of Polyurethane Modified by Acrylate/Nano-SiO_2 Composites

CHEN Guangmei *, WANG Zhikun, WU Lixia, HUANG Yiping

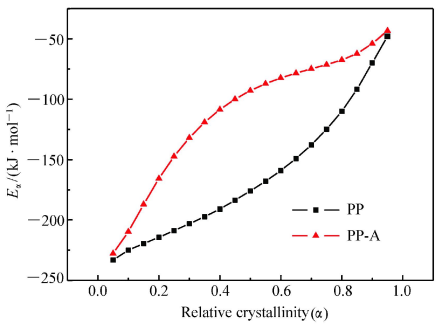


The hydrolysis of the silane precursors and polymerization of the acrylate monomers could be controlled at the same time in order to uniformly disperse SiO_2 nanoparticles in the polyurethane-acrylate.

2019,**36**(5):532-538

Effect of Poly(4-ethylphenol) Antioxidant on Non-isothermal Crystallization Behavior of Polypropylene

ZHANG Yudong, GAO Yun, ZHANG Lei, LI Qinghua *

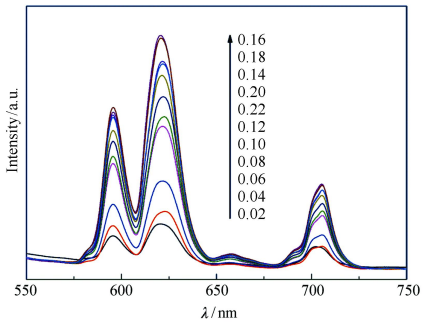


The relationship of crystallization avtivity energy(E_a) and relative crystallinity(α) for polypropylene(PP) and PP-antioxidant(PP-A) samples indicates that poly(4-ethylphenol) antioxidant inhibits the crystallization of PP.

2019,**36**(5):539-547

Preparation and Luminescence Property of $Ba_{5-3x/2}B_4O_{11}:xEu^{3+}$ Phosphor

HAO Bin, ZHAO Wenwu, YU Jianyuan,
LIU Jinqiang, LIU Jian*,
DONG Xiuzhen, WANG Xiuwen

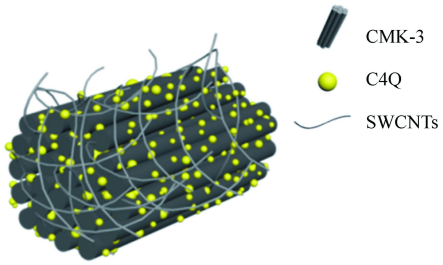


A series of $Ba_{5-3x/2}B_4O_{11}:xEy^{3+}$($x$=0.02~0.22) red phosphors was prepared. The intensity of emission initially increases with increase of Eu^{3+} content until a maximum intensity is reached when x=0.16.

2019,**36**(5):548-553

Single-Walled Carbon Nanotubes Enhanced Electrochemical Performance of High-Capacity Organic Cathode Composites Calix[4]quinone/Mesoporous Carbon CMK-3 for Li-Ion Batteries

YAN Bing, XIONG Wenxu, ZHENG Shibing,
ZHANG Xueqian, HUANG Weiwei*

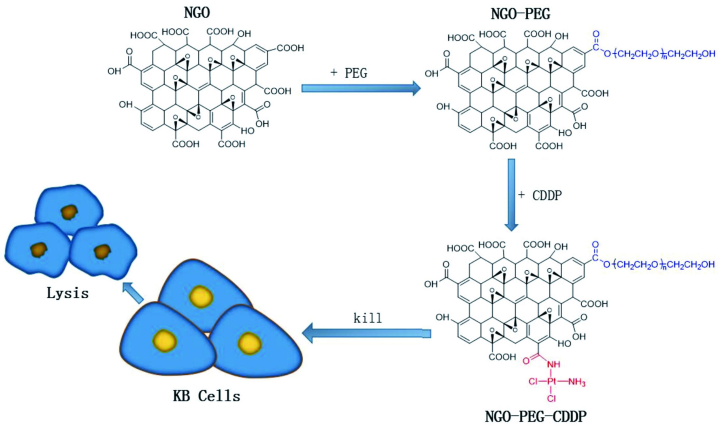


The SWCNTs constructed a three-dimensional conductive network in the C4Q/CMK-3 composite electrode, reduced the internal resistance of the battery, improved the rate and cycle performance.

2019,**36**(5):554-563

Preparation of Graphene Nano Drug-Loading Systemand Its Killing Effect on Human Oral Squamous Cell Carcinoma Cells

ZHANG Yajing, JI Peng, HAN Deming,
ZHAO Lihui*, XU Yajuan*, LIU Wenshu

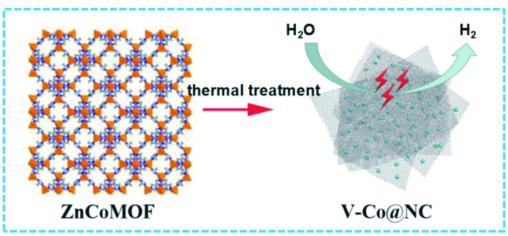


Polyethylene glycol modified nano-graphene oxide loaded with cisplatin has a double killing effect on KB cells.

2019,**36**(5):564-570

Nitrogen-Doped Graphitic Carbon Coated Cobalt Nanocatalysts for Highly Efficient and Durable Hydrogen Evolution Reaction

LI Xinjie, XU He, YU Mei, ZHANG Chao,
GUO Anru, LIU Chang*

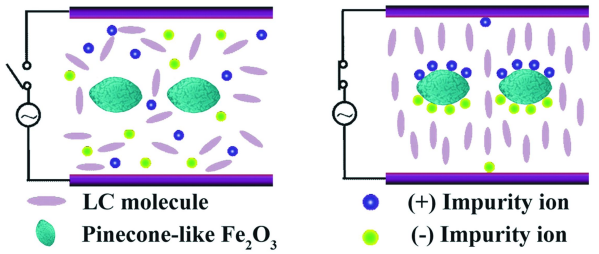


Nitrogen-doped graphitic carbon coated, evenly distributed cobalt nanoparticles show significantly promoted HER activity and durability by preventing direct contact between cobalt active site and electrolyte.

2019,**36**(5):571-576

Influence of Pinecone-Like Ferric Oxide on the Electro-Optical Properties of Nematic Liquid Crystals

WANG Meng*, WANG Yan*, WEI Dequan, LIANG Lanju, WANG Yueping, ZHANG Bin

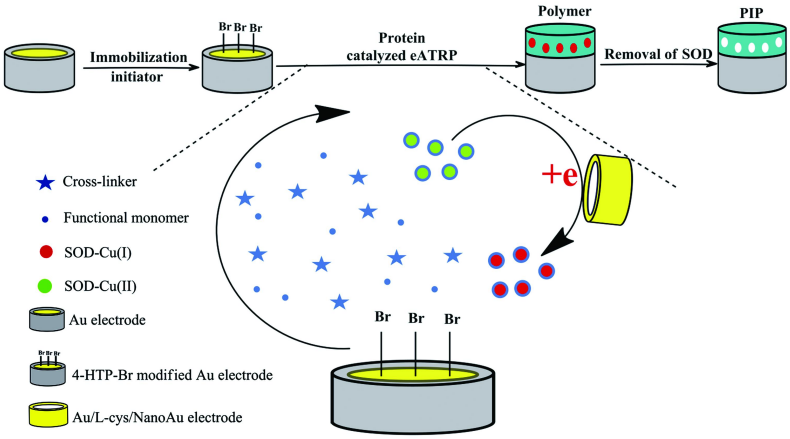


Pinecone-like Fe_2O_3 nanoparticles dispersed in 5CB could improve the electro-optical properties, which is attributed to the adsorption of impurity ions by the rough surface of Fe_2O_3 abating the shielding effect.

2019,**36**(5):578-584

Preparation of Molecularly Imprinted Polymers by Superoxide Dismutase-Catalyzed Electrochemically-Mediated Atom Transfer Radical Polymerization

LIU Yutong, ZHAO Mengyuan, LI Siyu, YANG Yifei, SUN Yue*

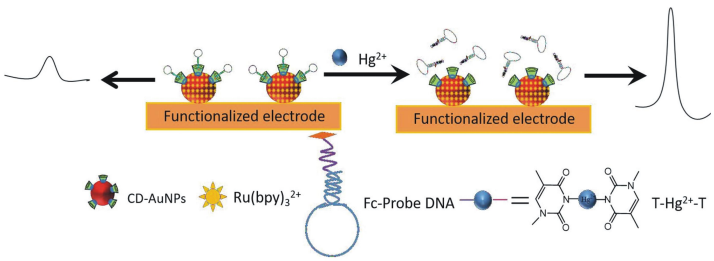


The SOD was used for eATRP reaction to prepare PIPs without transition metal ions. This method shows advantages of simple preparation, reagent saving, environmental protection.

2019,**36**(5):585-594

A New Type of Electrochemiluminescence Sensor for Detection of Mercury Ion in Chinese Medicinal Materials Danshen Based on Host-Guest Interaction

WEI Guobing, KONG Derong, XU Huihui, YIN Zhaojiang, ZHANG Jing, CUI Hanfeng, HONG Nian, YANG Jie, XIONG Wei, LIU Wenming, GUO Qianwen, CHENG Lin*, FAN Hao*

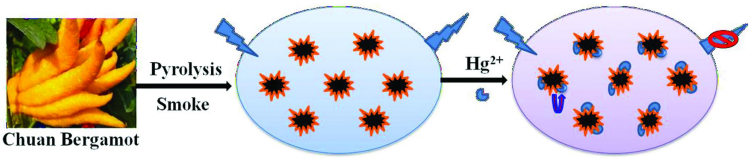


A novel Off-On electrochemiluminescence(ECL) biosensor has been developed for the detection of mercury(Ⅱ) in Chinese medicinal materials Danshen based on the molecular recognition technique and specific T-Hg(Ⅱ)-T interaction.

2019,**36**(5):595-602

Preparation of New Photoluminescent Carbon Dots and Its Application in Hg^{2+} Detection

HUANG Xiaomei*, DENG Xiang



Photoluminescnet carbon dots synthesized *via* high temperature pyrolysis of Chuan Bergamot were used for the sensitive detection of Hg^{2+}.

2019,**36**(5):603-610

* To whom correspondence should be addressed