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ACTA PHYSICO-CHIMICA SINICA

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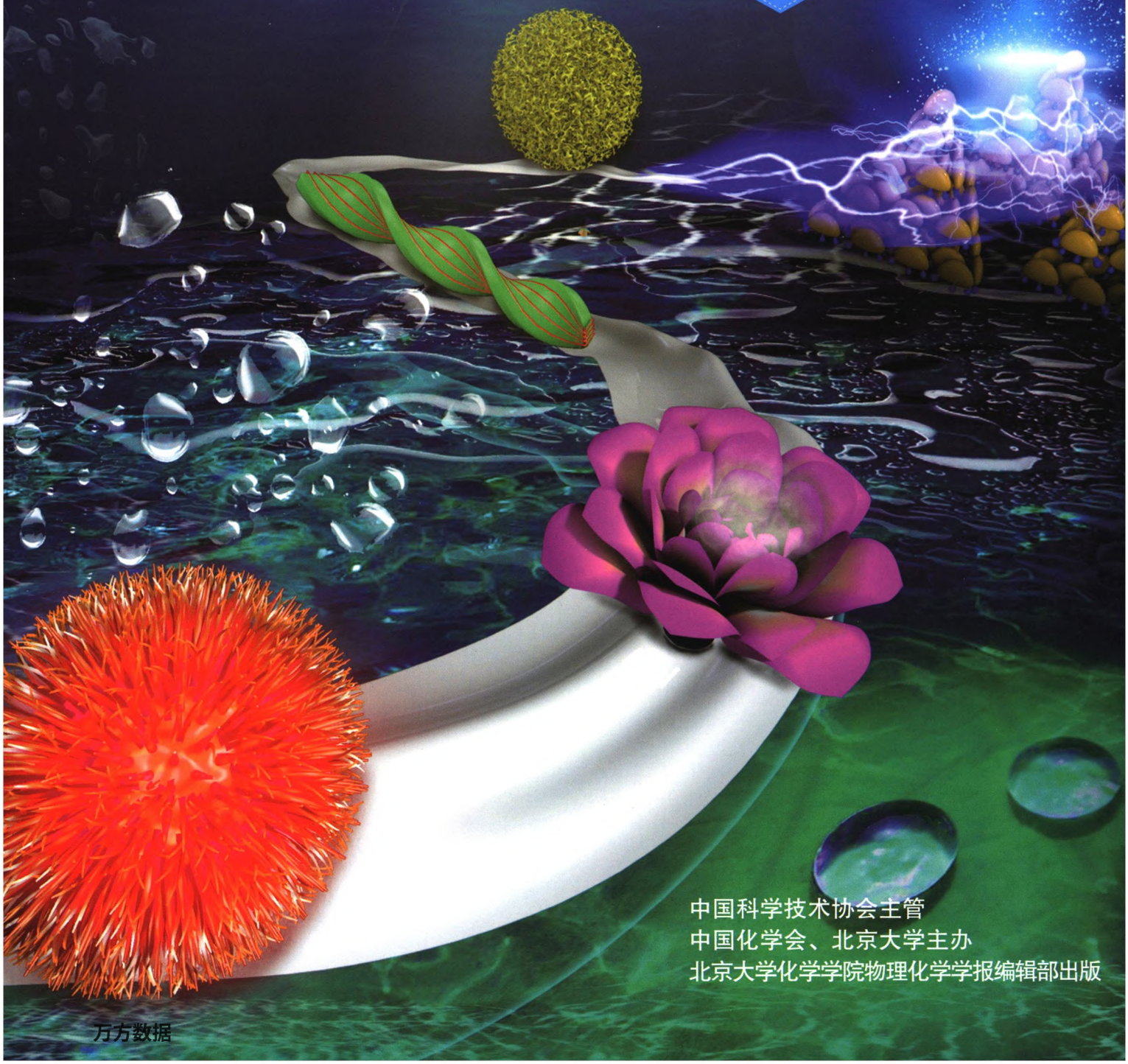

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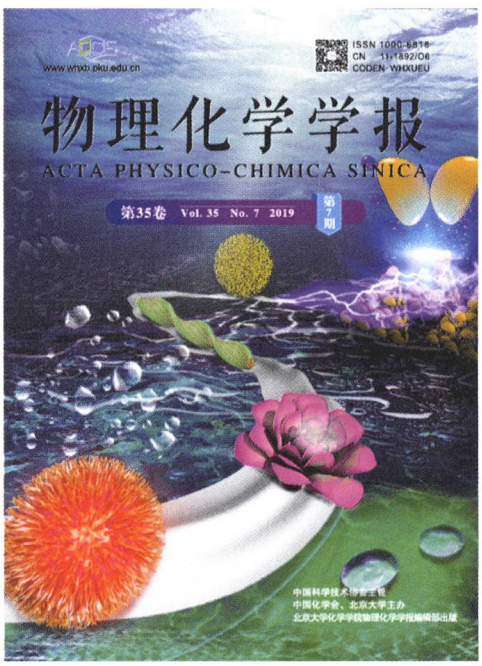
ACTA PHYSICO-CHIMICA SINICA, Vol. 35, No. 7

COVER



The cover image presents different supramolecular assemblies constructed by bile salts and other small molecules. On page 684, JIAO *et al.* introduced the influence of amino acids on the aggregation behavior of bile salts and the formation of supermolecular gels or micro-/nanomaterials constructed by bile salts.

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陈东，岳昕阳，李琎琭，吴晓京，周永宁

Research Progress of Cathode Materials for Lithium-Selenium Batteries

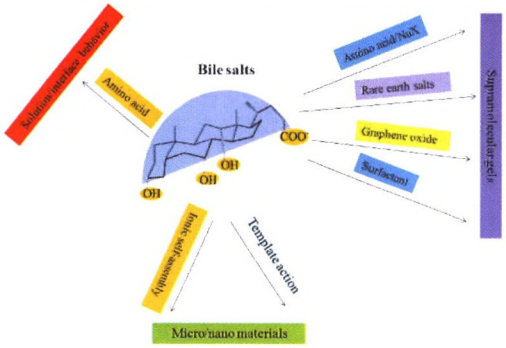
CHEN Dong, YUE Xinyang, LI Xunlu, WU Xiaojing, ZHOU Yongning

Acta Phys. -Chim. Sin. **2019,** *35* (7), 667–683

This review summarizes the recent progress in the research of selenium-based cathode materials for lithium-selenium batteries.

胆酸盐参与的自组装及微纳米材料制备

焦建梅，徐桂英，辛霞



Effect of Bile Salts on Self-Assembly and Construction of Micro-/nanomaterials

JIAO Jianmei, XU Guiying, XIN Xia

Acta Phys. -Chim. Sin. **2019,** *35* (7), 684–696

Influence of small-molecule amino acids on aggregation behavior of cholate, supermolecular gel, and micro-/nanomaterials constructed by bile salts has been reviewed.

同核铁系双金属络合物及其在均相催化体系中的应用

王露，孙威，刘超

Homodinuclear Ferrous Group Metal Complexes and Their Application in Homogeneous Catalysis

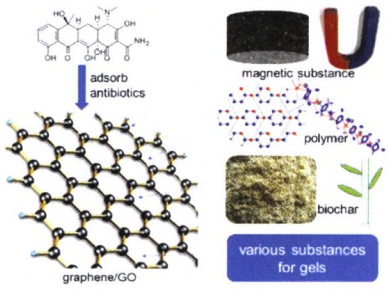
WANG Lu, SUN Wei, LIU Chao

Acta Phys. -Chim. Sin. **2019,** *35* (7), 697–708

Homodinuclear ferrous group metal complexes have broad prospects in homogeneous catalysis. They are applied in a wide variety of reactions, including hydroboration, hydrosilylation, cross-coupling reactions, asymmetric 1,4-addition, copolymerization, and alkyne cyclotrimerizations.

石墨烯基吸附剂的设计及其对水中抗生素的去除

姜哲，于飞，马杰



Design of Graphene-based Adsorbents and Its Removal of Antibiotics in Aqueous Solution

JIANG Zhe, YU Fei, MA Jie

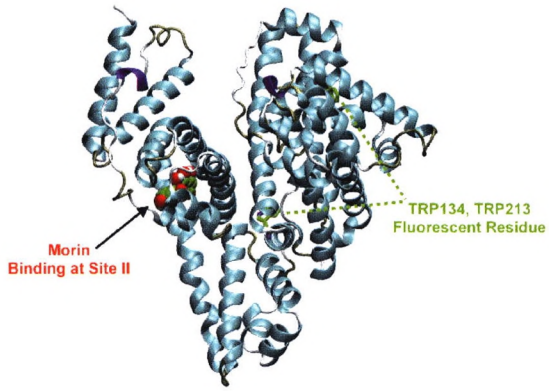
Acta Phys. -Chim. Sin. **2019,** *35* (7), 709–724

This review has significance for guiding the design of graphene-based adsorbents and the removal of antibiotics.

论文　ARTICLE

桑色素与血清白蛋白相互作用热力学行为

谢文，何欢，董家新，郭清莲，刘义



Thermodynamics of the Interaction of Morin with Bovine Serum Albumin

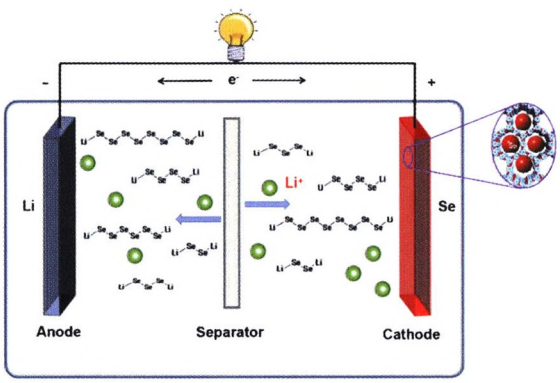
XIE Wen, HE Huan, DONG Jiaxin, GUO Qinglian, LIU Yi

Acta Phys. -Chim. Sin. **2019,** *35* (7), 725–733

Morin, a natural flavonoid compound, binds at Site II in the hydrophobic cavity of BSA through hydrogen bonds and van der Waals force.

基于共价有机框架复合材料的锂硒电池应用

李路路，姚路，段力



Application of Lithium-Selenium Batteries Using Covalent Organic Framework Composite Cathodes

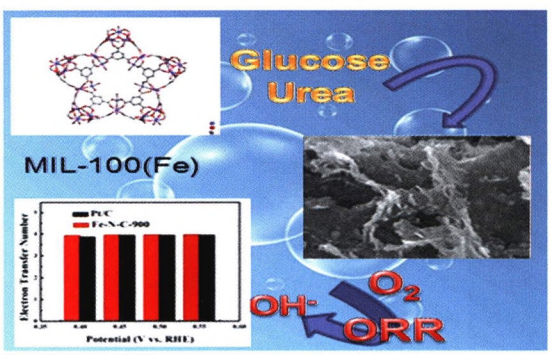
LI Lulu, YAO Lu, DUAN Li

Acta Phys. -Chim. Sin. **2019,** *35* (7), 734–739

Covalent organic framework composite material is used as lithium-selenium batteries cathode.

基于金属有机框架衍生的 Fe-N-C 纳米复合材料作为高效的氧还原催化剂

王倩倩，刘大军，何兴权



Metal-Organic Framework-Derived Fe-N-C Nanohybrids as Highly-Efficient Oxygen Reduction Catalysts

WANG Qianqian, LIU Dajun, HE Xingquan

Acta Phys. -Chim. Sin. **2019,** *35* (7), 740–748

Metal-organic framework-derived Fe-N-C nanohybrids are demonstrated as highly-efficient oxygen reduction catalysts.

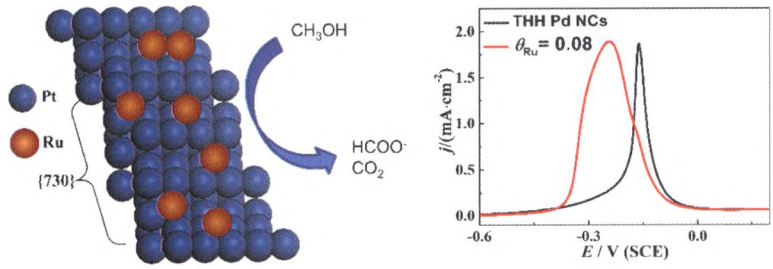
Ru 修饰 Pd 二十四面体纳米晶的合成及其甲醇电催化氧化性能

郭锦成，林燕芬，田娜，孙世刚

Modification of Tetrahexahedral Pd Nanocrystals with Ru and Their Performance for Methanol Electro-oxidation

GUO Jincheng, LIN Yanfen, TIAN Na, SUN Shigang

Acta Phys. -Chim. Sin. **2019,** *35* (7), 749–754



Low-coverage Ru modification on high-index faceted tetrahexahedral Pd nanocrystals promotes the electro-oxidation of methanol by enhancing the formate path.

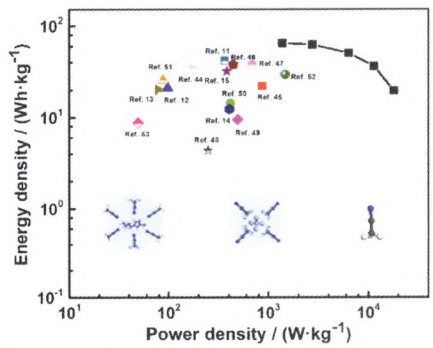
基于室温离子液体的活化石墨烯粉末超级电容储能性能

杨康，帅骁睿，杨化超，严建华，岑可法

Electrochemical Performance of Activated Graphene Powder Supercapacitors Using a Room Temperature Ionic Liquid Electrolyte

YANG Kang, SHUAI Xiaorui, YANG Huachao, YAN Jianhua, CEN Kefa

Acta Phys. -Chim. Sin. **2019,** *35* (7), 755–765



Solvent could effectively decrease the viscosity of room temperature ionic liquids, improving the energy and power density of supercapacitors.

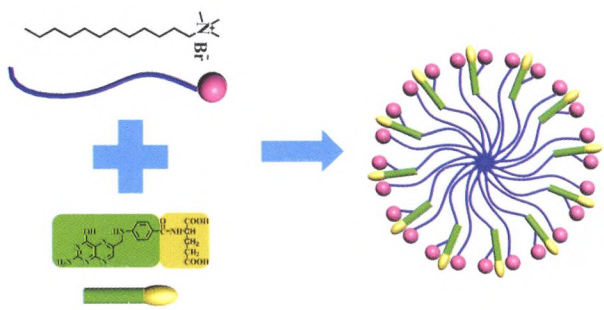
表面活性剂与叶酸的相互作用及其对光氧化降解的影响

罗思琪，王美娜，赵微微，王毅琳

Interactions between Surfactants and Folic Acid and the Effects of Surfactants on the Photodegradation of Folic Acid

LUO Siqi, WANG Meina, ZHAO Weiwei, WANG Yilin

Acta Phys. -Chim. Sin. **2019,** *35* (7), 766–774



Folic acid can significantly enhance the surface activity of cationic surfactants, which in turn improves the stability of folic acid.

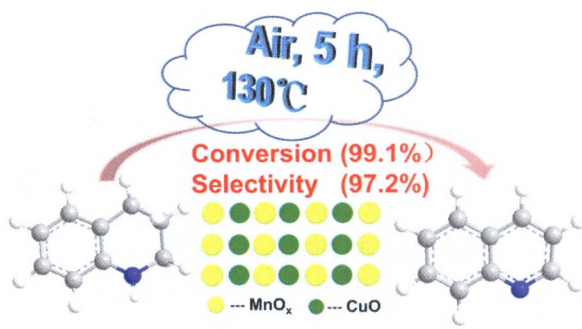
Cu2-MnO_x 高效催化 1,2,3,4-四氢喹啉氧化脱氢芳构化

陈福山，赵松林，杨涛，江涛涛，倪珺，张群峰，李小年

Highly Efficient Oxidative Dehydrogenation Aromatization of 1,2,3,4-Tetrahydroquinoline by Cu2-MnO_x Catalyst

CHEN Fushan, ZHAO Songlin, YANG Tao, JIANG Taotao, NI Jun, ZHANG Qunfeng, LI Xiaonian

Acta Phys. -Chim. Sin. **2019,** *35* (7), 775–786



The amorphous nature, Mn^{3+} and adsorbed oxygen content, Mn^{3+}/Mn^{4+} ratio, lattice oxygen mobility, and synergistic effect between CuO and MnO_x were found to play key roles in catalytic performance.

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