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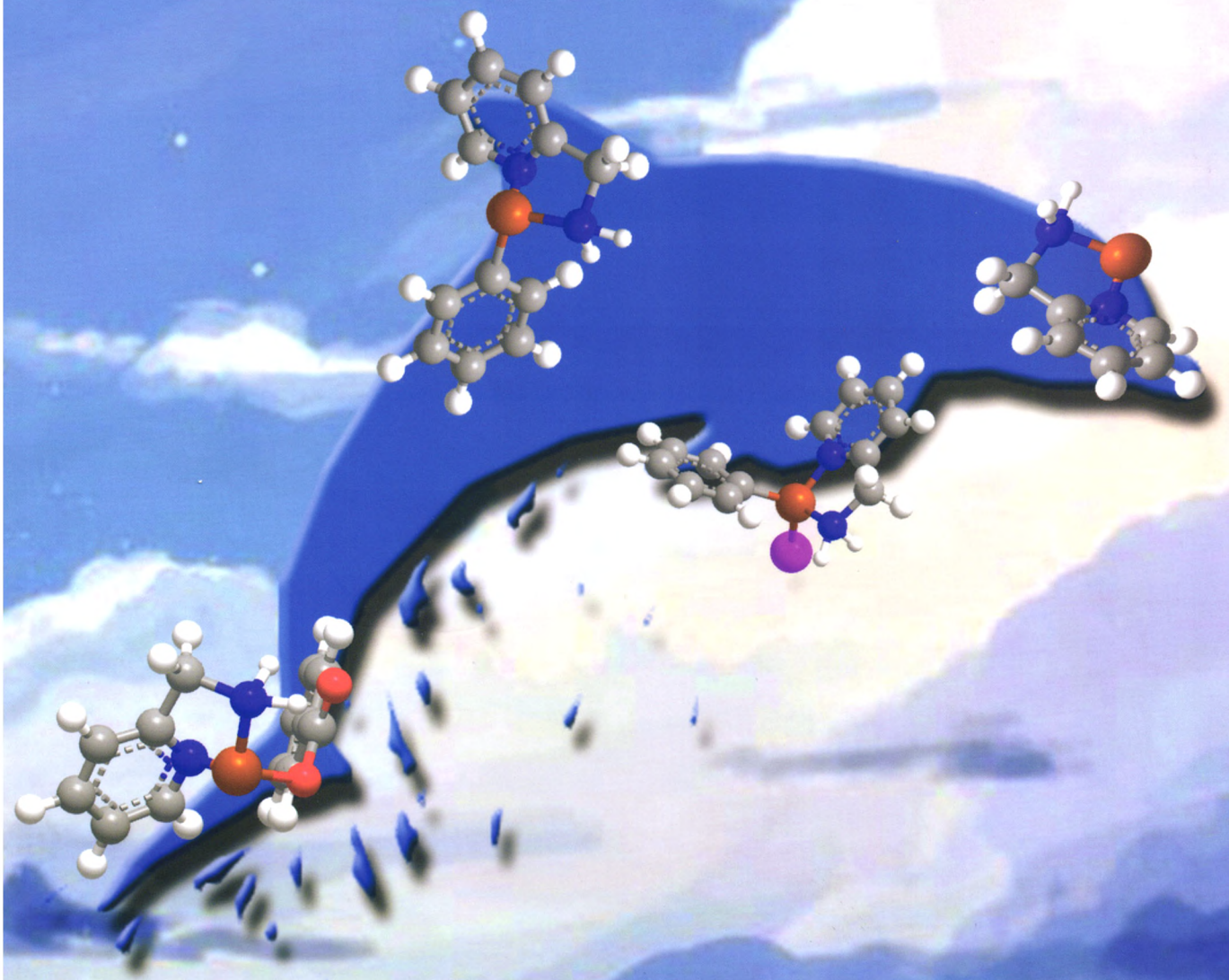

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目　次

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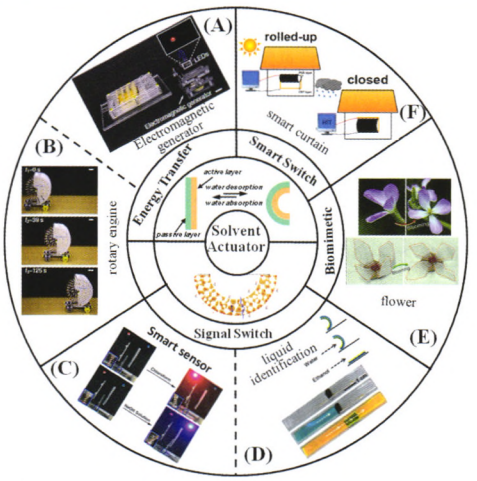
Contents

On the cover: Organocopper complexes were synthesized in the electrospray ionization mass spectrometry. Gas phase decarboxylative iodination reactions were carried out by collision-induced dissociation and ion-molecule reactions. During these processes, the valence state change of copper was observed, and the mechanism of copper-catalyzed decarboxylative iodination was examined. [Pan, Yuanjiang *et al.* on page 436-439.]

Review

Research Progress of Solvent-based Smart Actuator Materials



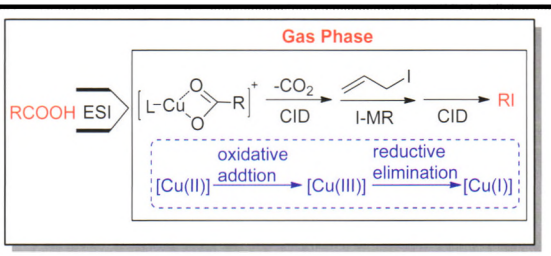
Zhang, Dajie; Liu, Jie; Chen, Bo*; Wang, Jingxia*; Jiang, Lei

Acta Chim. Sinica **2018**, *76*(6), 425-435

The concept, fabrication approach and the relative applications of solvent-responsive actuating materials are reviewed, it is of significance for the development of novel actuator devices.

Communication

Copper-Catalyzed Decarboxylative Iodination Reaction in the Gas Phase

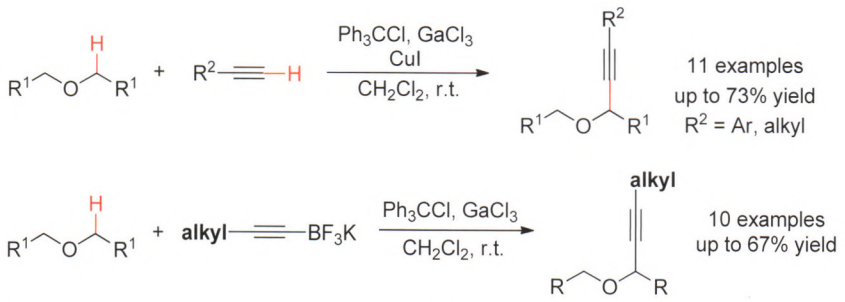


Yin, Xinchi; Jiang, You; Chu, Shiying; Weng, Guofeng; Fang, Xiang*; Pan, Yuanjiang*

Acta Chim. Sinica **2018**, *76*(6), 436-439

Carboxylic acid was introduced to electrospray ionization mass spectrometry in methanol with Cu^{2+} and bidentate nitrogen ligand to generate the Cu(II) complex ion in the gas phase. With collision-induced dissociation and ion-molecule reaction with allyl iodide, the decarboxylative iodination reaction was carried out to produce iodohydrocarbon. The valence state change of central metal copper was observed.

Oxidative C—H Alkynylation of Unactivated Acyclic Ethers



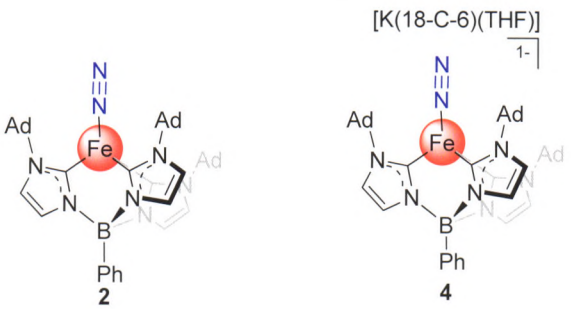
The first cross-dehydrogenative coupling (CDC) of unactivated acyclic ethers and terminal alkynes promoted by $Ph_3CCl/GaCl_3$ is reported. The mild reaction proceeded at room temperature in CH_2Cl_2. The $Ph_3CCl/GaCl_3$ mediated oxidative C—H alkynylation of unactivated acyclic ethers with alkyl substituted alkynylboranes was further established to overcome the relative low efficiency for the CDC reaction involving alkyl substituted terminal alkynes.

Guan, Honghao; Chen, Lei; Liu, Lei*

Acta Chim. Sinica **2018**, *76*(6), 440-444

Article

Iron Dinitrogen Complexes Supported by Tris(NHC)borate Ligand: Synthesis, Characterization, and Reactivity Study

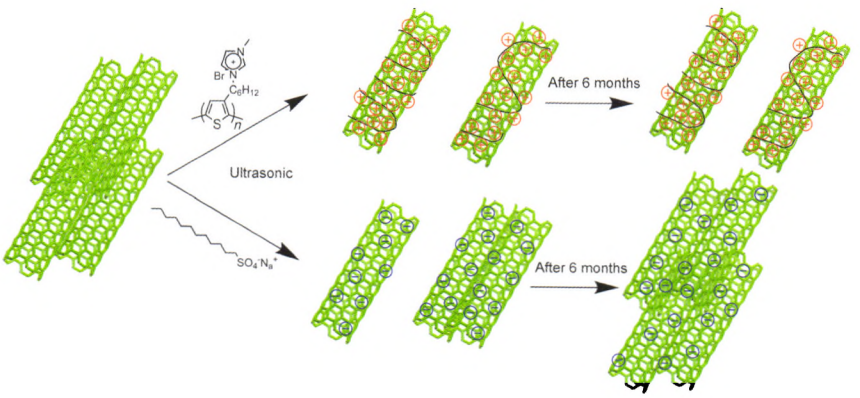


N_2 activation: the high-spin tetrahedral iron(I)- and iron(0)-N_2 complexes **2** and **4** based on tris(NHC)borate ligand were prepared, which can catalyze the reductive silylation of N_2 by KC_8 and $ClSiMe_3$ to afford $N(SiMe_3)_3$ with TON up to 87.

Fan, Yiming; Cheng, Jun; Gao, Yafei; Shi, Min*; Deng, Liang*

Acta Chim. Sinica **2018**, *76*(6), 445-452

Preparation and Characterization of Highly Stable and Aqueous Dispersion of Conjugated Polyelectrolyte/Single-Walled Carbon Nanotube Nanocomposites

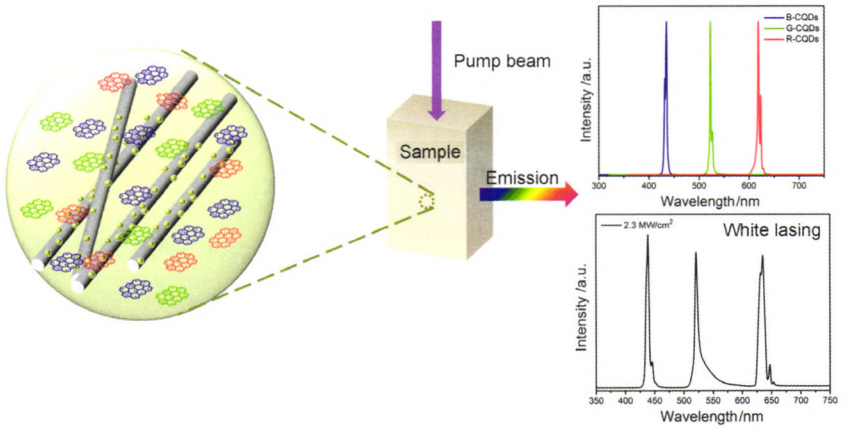


Poly[3-[6-(*N*-methylimidazolium)-hexyl]thiophene] (P3MHT) was designed and used to disperse SWNTs through non-covalent strategy. The P3MHT backbones were wrapped around individual SWNTs via π-π interactions to form the charge-transfer complexes. The ionic side chains of P3MHT not only made the nanocomposites dispersed in water, but also prevented the aggregation of SWNTs by electrostatic repulsion, resulting in aqueous dispersion of P3MHT/SWNTs nanocomposites. Such P3MHT/SWNTs nanocomposite solution exhibited high stability which remained almost unchanged after 6 months while SDS/SWNTs nanocomposite had already precipitated then.

Zhu, Mingjing; Peng, Juan*; Tang, Ping; Qiu, Feng

Acta Chim. Sinica **2018**, *76*(6), 453-459

Highly Efficient and Stable Full-Color Random Lasing Emission Based on Carbon Quantum Dots

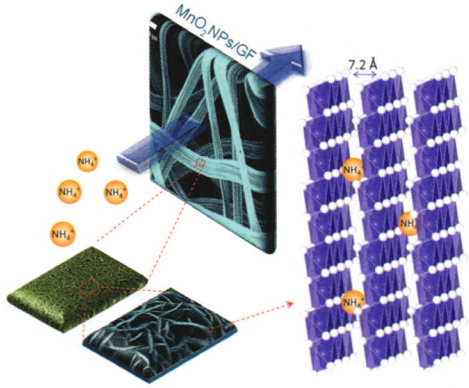


Xi, Zifan; Yuan, Fanglong; Wang, Zifei; Li, Shuhua; Fan, Louzhen*

Acta Chim. Sinica **2018**, *76*(6), 460-466

The monochrome CQDs-based random lasing with low excitation threshold have been realized by using Au-Ag bimetallic porous nanowires as scatterers for the first time. Furthermore, white lasing was first demonstrated by combining red, green, blue fluorescent CQDs.

Research on High Performance Ammonium Removal Materials Based on δ-MnO_2 Nanoplate Arrays Decorated Graphite Felt

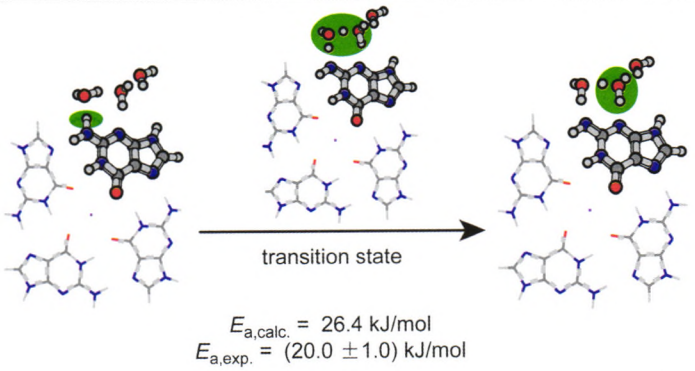


Sun, Mengjia; Wu, Tianyi; Li, Tianyu; Guo, Fengqiao; Tang, Yang; Mo, Hengliang; Yang, Zhitao; Wan, Pingyu*

Acta Chim. Sinica **2018**, *76*(6), 467-474

Composite material with hierarchical structure of ultra-thin δ-MnO_2 nanoplate arrays decorated 3D graphite felt (MnO_2NPs/GF) was prepared by a facile *in-situ* redox reaction of $KMnO_4$ solution and GF. The 7.2 Å interlayer spacing of δ-MnO_2 and the vertical growth of interlaced δ-MnO_2 nanoplate arrays on the GF, prompt MnO_2NPs/GF as a competent candidate material for ultrafast removal of NH_4^+.

Deprotonation of Guanine Radical Cation in G-Quadruplex: A Combined Experimental and Theoretical Study

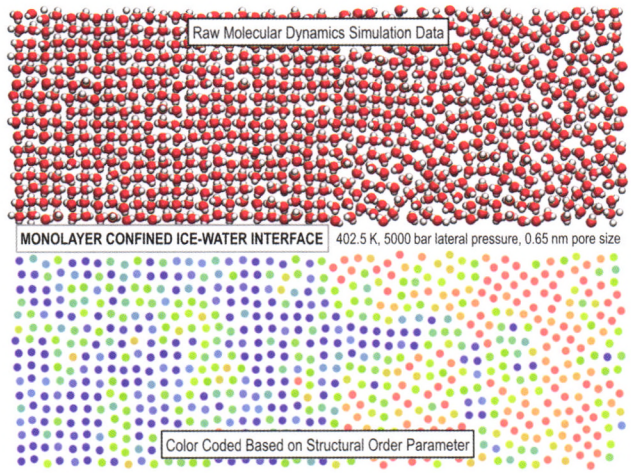


Wang, Yinghui; Jie, Jialong; Zhao, Hongmei; Bai, Yu; Qin, Peixuan; Song, Di*

Acta Chim. Sinica **2018**, *76*(6), 475-482

The $G^{\bullet+}$ deprotonation in G-quadruplex $AG_3(T_2AG_3)_3$ has been investigated experimentally and theoretically. The time-resolved absorption spectra and formation kinetics of deprotonation product are measured at different temperatures, from which deprotonation activation energy is determined to be 20.0±1.0 kJ/mol. By carefully considering hydration environment of $G^{\bullet+}$ deprotonation in the G-quadruplex, the potential energy profile for this process is calculated at the M062X/6-31G(d) level. The calculated energy barrier of 26.4 kJ/mol matches with the measured value.

Molecular Dynamics Simulation of Monolayer Confined Ice-Water Phase Equilibrium



Du, Han; Liang, Hongtao; Yang, Yang*

Acta Chim. Sinica **2018**, *76*(6), 483-490

A methodology for studying the coexistences of two confined phases of water, based on equilibrium molecular-dynamics (MD) simulations, is presented. The methodology is applied to the coexistence of the monolayer ice and water (described with a simple water model) confined in the 0.65 nm size pore under a lateral pressure of 5000 bar, yielding a direct determination of the melting point and extensive atomic-scale characterization for the mono-molecular layer containing the confined ice-water coexistence line.

喜讯

《化学学报》2018年编辑委员会全体会议成功召开暨“《化学学报》2016年度最有影响力论文奖”揭晓

5月4日晚，“《化学学报》2018年编辑委员会全体会议”在杭州召开。《化学学报》主编：周其林；副主编：丁奎岭、孙世刚、田禾、赵宇亮；以及陈军等72位编委老师出席了会议。优秀论文奖作者曾毅、任旻等，《化学学报》编辑部杨侠、潘冰峰、丁卫锋、孙贺平等也参加了会议。

会议首先由周其林主编致辞，对新老编委表示感谢，感谢大家一直以来对《化学学报》的支持和贡献，同时也对《化学学报》近年取得的进步表示了肯定。《化学学报》主管杨侠博士向各位主编、副主编和编委老师们介绍了《化学学报》的历史，汇报了从2012年下半年改版以来的工作进展情况，以及取得的成绩和存在的问题。接下来各位老师相继发言，对期刊的发展建言献策并进行了热烈的讨论。

此次编委会议总结了上一届编委会的工作情况，完成了编委的换届工作，强调了办好中文期刊历史使命和重大意义，确立了“促进中国化学、传承中国文化”的办刊宗旨，制定了期刊发展的新目标，并讨论了提高期刊学术质量、影响力的措施和办法、期刊宣传的重要性及策略、提高编委活跃度的措施，通过了组建编委会微信群、开设《化学学报》研究生论坛等决议，为《化学学报》今后的发展指明了方向。

会议期间还进行了“《化学学报》2016年最有影响力论文奖”颁奖典礼，江海龙、叶轩立、朱晨等作者的9篇文章分别获奖(见封三)，周其林、丁奎岭、孙世刚、田禾、赵宇亮分别向获奖作者颁奖并合影留念。

万方数据
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