

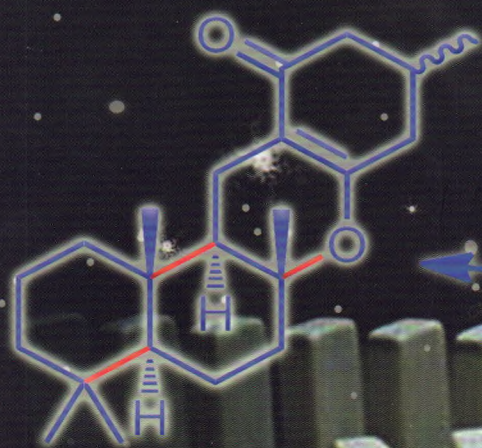


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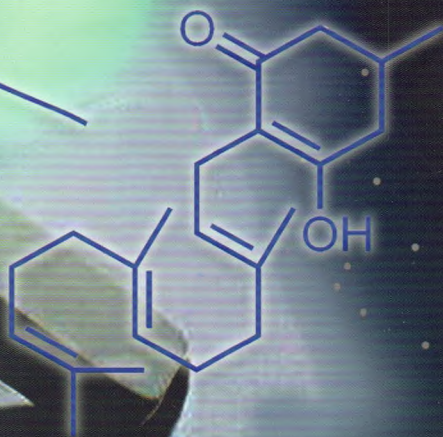
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*Visible-Light-Mediated
Organocatalytic
Polyene Cyclization*



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万方数据



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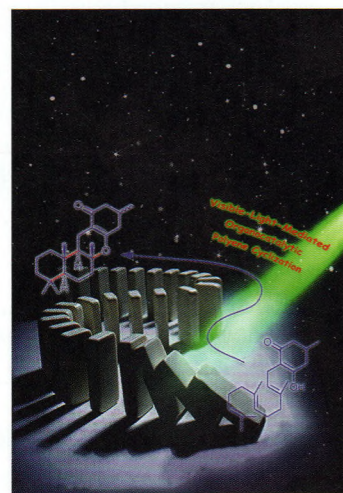
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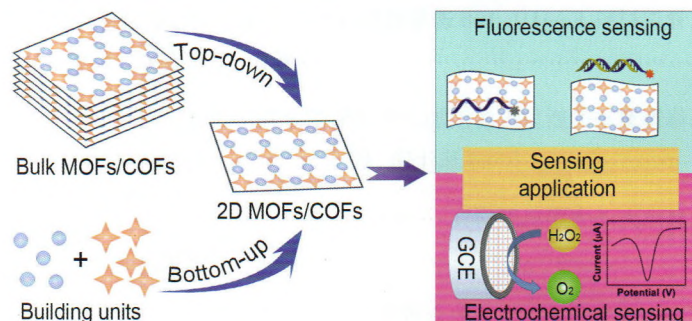
* 通信联系人.

On the cover: Visible-light-mediated radical cascade methodology (domino reaction) has been successfully applied in the total synthesis of terpenes. (±)-Hongoquercin A has been synthesized starting from *trans,trans*-farnesol using polyene cyclization as the key step to construct multiple ring-fused skeleton in one step. The natural product is synthesized in overall 7 steps with 14% overall yield. [Luo, Sanzhong *et al.* on page 351-354.]



Review

Controllable Preparation of Two Dimensional Metal- or Covalent Organic Frameworks for Chemical Sensing and Biosensing



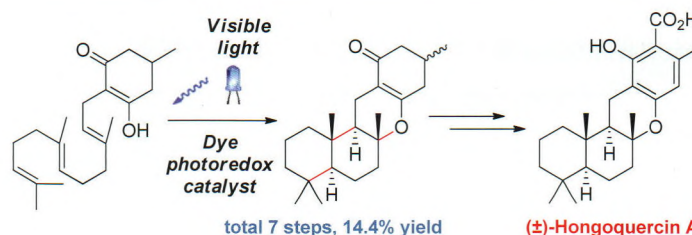
Yang, Tao; Cui, Yanan; Chen, Huaiyin; Li, Weihua*

Acta Chim. Sinica **2017**, 75(4), 339-350

At present, “bottom-up” strategy and “top-down” strategy are used for preparing 2D MOFs or COFs nanomaterials. 2D MOFs and COFs nanomaterials have been used in chemical sensing and biosensing fields, which are commonly based on fluorescence and electrochemistry, such as the fluorescence detection of DNA and electrochemical detection of H₂O₂.

Communication

Total Synthesis of (±)-Hongoquercin A via Visible-Light-Mediated Organocatalytic Polyene Cyclization



Yang, Zhongbo; Li, Sujia; Luo, Sanzhong*

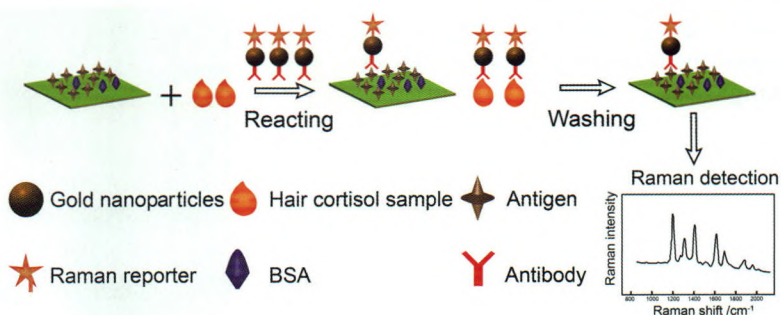
Acta Chim. Sinica **2017**, 75(4), 351-354

(±)-Hongoquercin A (**1**), the racemate of an antibacterial, has been synthesized starting from *trans,trans*-farnesol (**4**) in 7 steps. Our developed visible-light-mediated organocatalytic polyene cyclization is employed to construct ring-fused skeleton of **1** in one step.

Ultrasensitive Detection of Hair Cortisol Based on Portable Raman Spectrometer and Double-layer Paper Microdevice

Gao, Zhigang; Zheng, Tingting; Deng, Jiu; Li, Xiaorui; Qu, Yueyang; Lu, Yao; Liu, Tingjiao; Luo, Yong*; Zhao, Weijie; Lin, Bingcheng

Acta Chim. Sinica **2017**, 75(4), 355-359



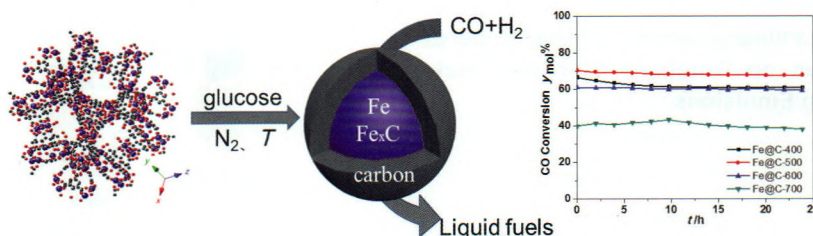
A competitive SERS-immunoassay for hair cortisol was developed on a paper microdevice, of which the LOD was 1 pg/mL.

Article

Synthesis and Catalytic Properties of Iron Based Fischer-Tropsch Catalyst Mediated by MOFs Fe-MIL-100

Yang, Xiangping; Guo, Xiaoxue; Zhang, Chenghua*; Wang, Xiaoping; Yang, Yong; Li, Yongwang

Acta Chim. Sinica **2017**, 75(4), 360-366

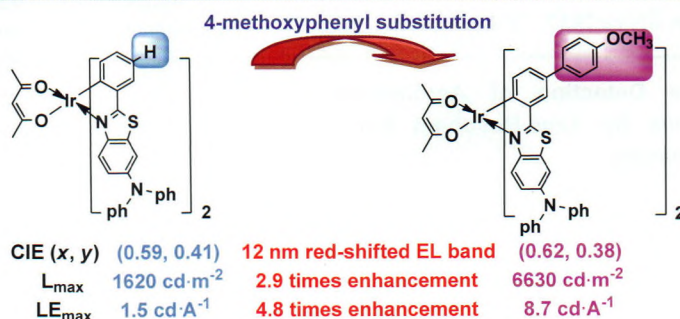


MOF-mediated synthesis strategy for the preparation of exceptionally dispersed Fe nano-particles in a porous carbon matrix is studied. The resulting solids display outstanding middle temperature Fischer-Tropsch synthesis performance.

Synthesis and Characterization of New Solution-Processable Red Iridium(III) Complexes Based on a Phenylation Strategy

Chen, Shiqi; Dai, Jun; Zhou, Kaifeng; Luo, Yanju; Su, Shijian*; Pu, Xuemei; Huang, Yan; Lu, Zhiyun*

Acta Chim. Sinica **2017**, 75(4), 367-374

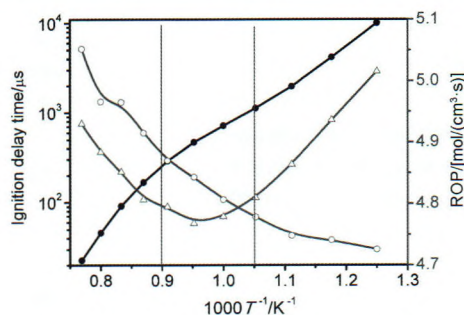


Para-(4-methoxyphenyl) modification is demonstrated to be an effective approach to acquiring high-performance solution-processable electroluminescent Ir(III) complexes with simultaneous red-shifted emission band.

Investigations of Chemical Kinetic Mechanisms for Low-to-medium Temperature Ignition of Ethylene

Li, Dongyan; Wang, Jingbo; Guo, Junjiang; Tan, Ningxin*; Li, Xiangyuan

Acta Chim. Sinica **2017**, 75(4), 375-382



The prevalent models cannot predict the ignition delay time of ethylene at low-to-medium temperature very well. By modifying rate constants of some key reactions, and adding new reaction channels to UCSD model, the ignition delay time becomes shorter. And then first stage ignition and Negative Temperature Coefficient (NTC) region appear. It has been neglected by researchers, and we do a detailed validation and analysis about this phenomenon.

Novel Coumarin-Based Fluorescent Probes for Detecting Fluoride Ions in Living Cells

Wang, Shaojing; Li, Changwei; Li, Jin; Chen, Bang; Guo, Yuan*

Acta Chim. Sinica **2017**, 75(4), 383-390

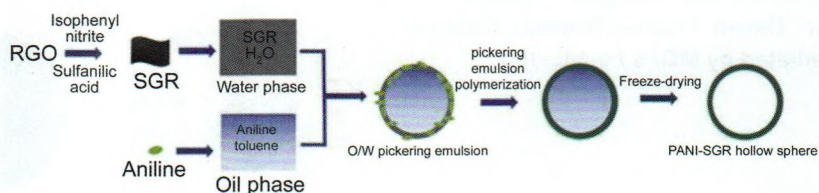


Using intramolecular charge transfer (ICT) as a signaling mechanism, three novel coumarin derivatives were synthesized as probes for F^- by taking advantage of F^- triggered Si—O bond cleavage. Furthermore, probes can be utilized for the imaging of F^- in MCF-7 cells, which is significant for the biological, medical and environmental study of fluoride ions.

Polyaniline-graphene Hollow Spheres based on Graphene Stabilized Pickering Emulsions

Zheng, Yuan; Luo, Jing*; Wei, Wei; Liu, Xiaoya

Acta Chim. Sinica **2017**, 75(4), 391-397

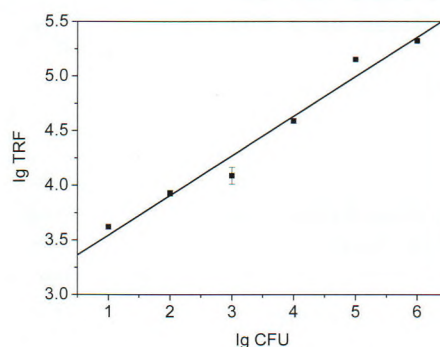


In this work, a novel kind of graphene-polyaniline hollow capsules was prepared via Pickering emulsion polymerization using sulfonated graphene (SGR) as Pickering stabilizer. Aniline molecules were adsorbed to the oil-water interface owing to the electrostatic interaction between amino groups of aniline and sulfonic groups of SGR, which subsequently underwent interfacial polymerization at the oil/water interface upon the addition of initiator APS. After polymerization of aniline and removal of the oil phase, three-dimensional hollow graphene-polyaniline sphere (PANI-SGR HS) was obtained.

Sensitive Detection of *Aeromonas Hydrophila* by Time-Resolved Fluorimmunoassay

Lin, Peng*; Lu, Jie; Guo, Songlin; Feng, Jianjun; Wang, Yilei; Chen, Jinmin

Acta Chim. Sinica **2017**, 75(4), 398-402

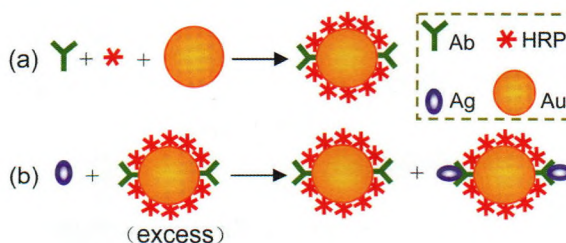


A sensitive detection of *Aeromonas Hydrophila* by biotin-avidin system and time-resolved fluorimmunoassay was established. The new detection method can be extended to aquaculture.

Capillary Electrophoresis Immunoassay by Gold Nanoparticles Assisted Signal Generation and Sequential Stacking

Zhang, Zhaoxiang*; Luan, Wenxiu; Zhang, Chaoying; Liu, Yujie

Acta Chim. Sinica **2017**, 75(4), 403-407



The determination of brevetoxin that has no EC signal has been realized by simultaneous attachment of HRP and Ab on AuNPs. The sensitivity was greatly improved by using high HRP/Ab molar ratio.



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