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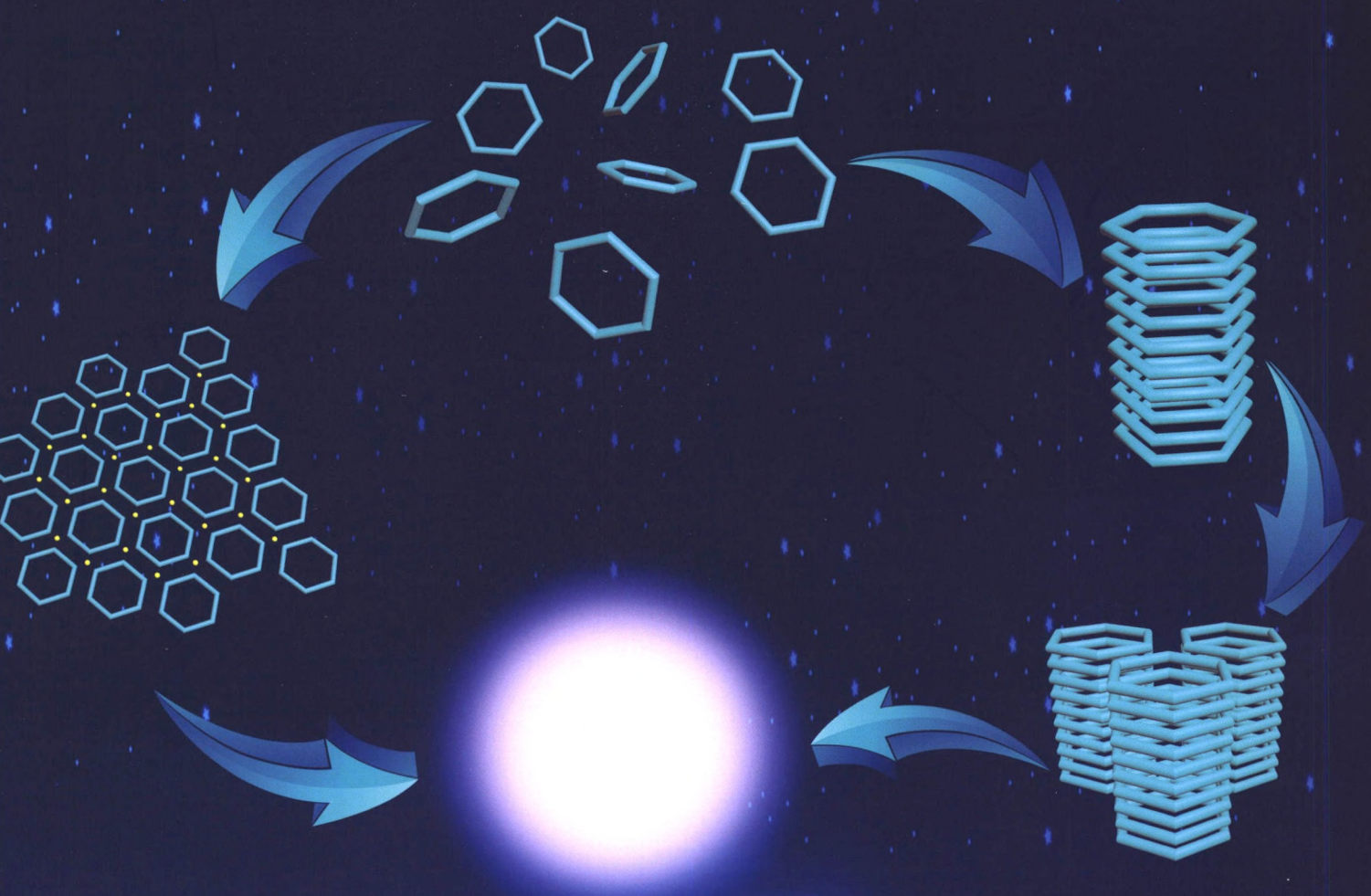
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# 化学学报

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# 化学学报

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## 目次

### 综述

- 细胞分泌物中的聚糖分析 ..... 熊莹莹, 陈云龙, 鞠焜先\*, 化学学报, **2019**, 77(12), 1221-1229
- DNA-二维纳米片层材料传感平台的构建及其应用 ..... 迟景元, 李晶, 任少康, 苏邵, 汪联辉\*, 化学学报, **2019**, 77(12), 1230-1238
- 稀土纳米晶用于近红外区活体成像和传感研究进展 ..... 熊麟, 凡勇, 张凡\*, 化学学报, **2019**, 77(12), 1239-1249
- 多感知集成的柔性电子皮肤 ..... 赵帅, 朱荣\*, 化学学报, **2019**, 77(12), 1250-1262

### 研究通讯

- 由芳基卤化物、芳基硼酸和芳烃一锅法合成单氟甲氧基芳烃 ..... 赵小淳, 丁天琪, 蒋绿齐, 易文斌\*, 化学学报, **2019**, 77(12), 1263-1267

### 研究论文

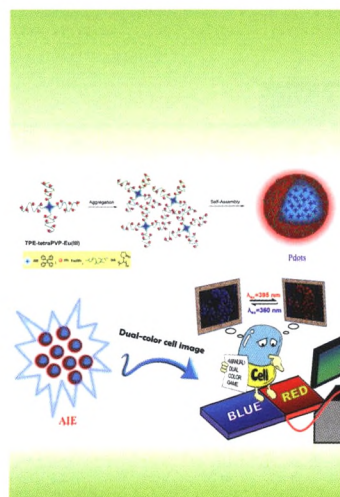
- 具有 AIE 效应的 Eu(III)-聚(*N*-乙基吡咯烷酮)配位聚合物 Pdots 的制备及双色肿瘤细胞成像 ..... 关晓琳\*, 李志飞, 王林, 刘美娜, 王凯龙, 杨学琴, 李亚丽, 胡丽丽, 赵小龙, 来守军, 雷自强, 化学学报, **2019**, 77(12), 1268-1278
- 环二肽的自组装及其荧光性能 ..... 杨靖鸽, 李阳, 王小艾, 王栋, 孙亚伟, 王继乾\*, 徐海\*, 化学学报, **2019**, 77(12), 1279-1286
- N,N*-二甲基正辛胺/十六烷混合体系液液相变吸收 SO<sub>2</sub> ..... 李雪霏, 陈玲, 许胜超, 赵文波\*, 化学学报, **2019**, 77(12), 1287-1293
- 2019 年(77 卷)总目录 ..... 化学学报, **2019**, 77(12), 1294-1310

\* 通信联系人.

**On the cover:** Cyclic dipeptides form nanofibers with different diameters driven by hydrogen bond interactions. The assemblies have fluorescent properties, and both the coordination of zinc ion with the imidazole group on histidine and the oxidation of phenolic hydroxyl group in tyrosine enhance the fluorescent emission intensity of cyclic dipeptides. The self-assembly of cyclic dipeptide provides a new route for bioluminescent material development. [Wang, Jiqian *et al.* on page 1279-1286.]

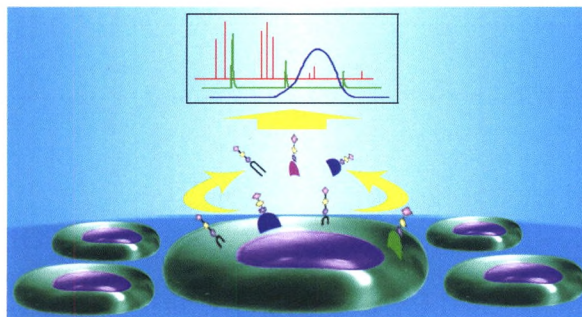


**On the back cover:** Highly fluorescent polymer dots (Pdots) have been developed as an excellent fluorescent bioprobe recently. Herein, we reported a facile method for fine-tuning the emission color from blue to red of nonconjugated Pdots synthesized with tetraphenylethylene (TPE) and poly(*N*-vinyl-2-pyrrolidone)-Eu(III) complex (PVP-Eu(III)). The investigation of cellular imaging indicated that the photoswitchable dual-emission could be easily realized in HeLa, HepG2 and A549 cells by merely turning the excitation wavelength. Therefore, the Pdots is an ideal dual-color live cell imaging probe. [Guan, Xiaolin *et al.* on page 1268-1278.]



### Review

#### Glycan Analysis in Cellular Secretion

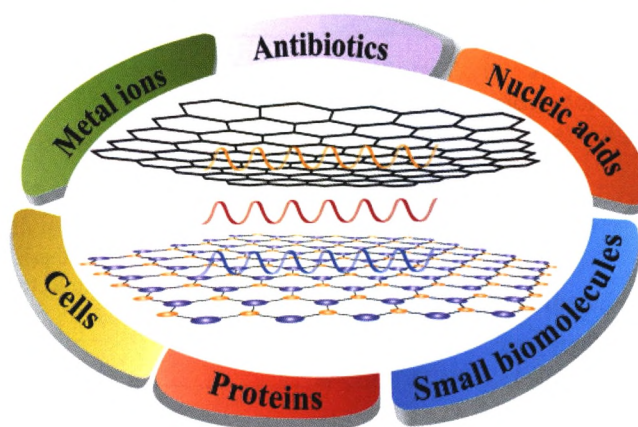


Xiong, Yingying; Chen, Yunlong; Ju, Huangxian\*

*Acta Chim. Sinica* **2019**, 77(12), 1221-1229

This review has introduced biological functions and significances of glycans, summarized the detection technologies of cell secretory glycans, and finally outlooked the future development of this field, which can be provided as a useful guidance for the research of glycosylation or glycan-related biological processes.

### Construction and Application of DNA-two-dimensional Layered Nanomaterials Sensing Platform

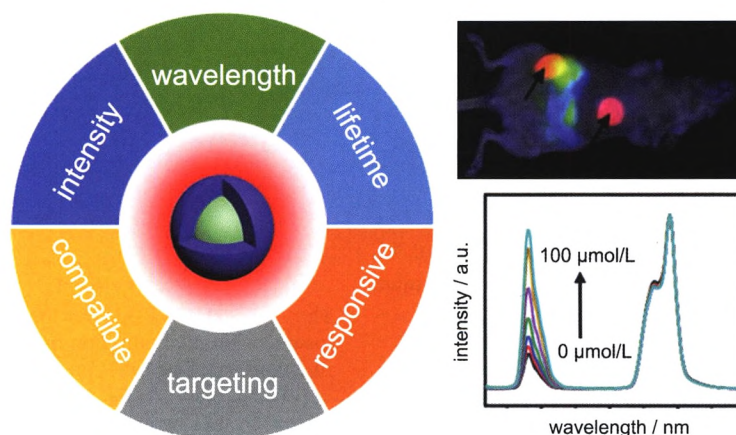


Chi, Jingyuan; Li, Jing; Ren, Shaokang; Su, Shao; Wang, Lianhui\*

*Acta Chim. Sinica* **2019**, 77(12), 1230-1238

DNA-2D layered nanomaterials sensing platform is a powerful tool for the detection of chemical/biological molecules.

### Research Progress on Rare Earth Nanocrystals for *In Vivo* Imaging and Sensing in Near Infrared Region

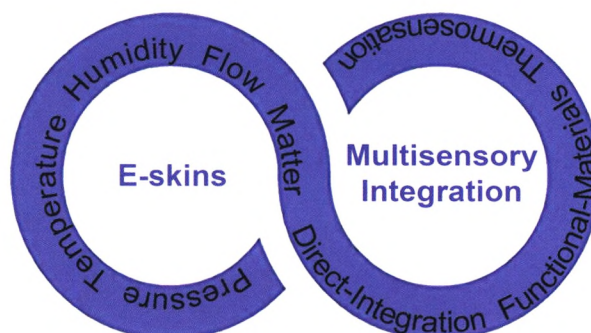


Xiong, Lin; Fan, Yong; Zhang, Fan\*

*Acta Chim. Sinica* **2019**, 77(12), 1239-1249

Rare earth nanocrystals with tunable optical and biochemical properties were developed for *in vivo* imaging and sensing.

### Flexible Electronic Skin with Multi-sensory Integration



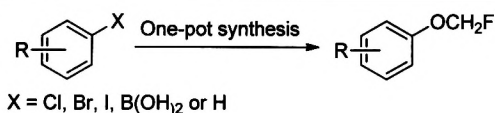
Zhao, Shuai; Zhu, Rong\*

*Acta Chim. Sinica* **2019**, 77(12), 1250-1262

This review focuses on the sensing capabilities and multisensory integration methods in flexible electronic skin. Various mechanisms of perceiving stimuli of pressure, temperature, humidity, flow and matter are summarized. There are mainly three mechanisms applied in multisensory integration, that is, direct-integration method, functional-materials based method, and uniform sensing method based on thermosensation. The advantages and disadvantages of each method are analyzed.

## Communication

## One-Pot Synthesis of Monofluoromethoxy Arenes from Aryl Halides, Arylboronic Acids and Arenes



Zhao, Xiaochun; Ding, Tianqi; Jiang, Lüqi; Yi, Wenbin\*

*Acta Chim. Sinica* 2019, 77(12), 1263-1267

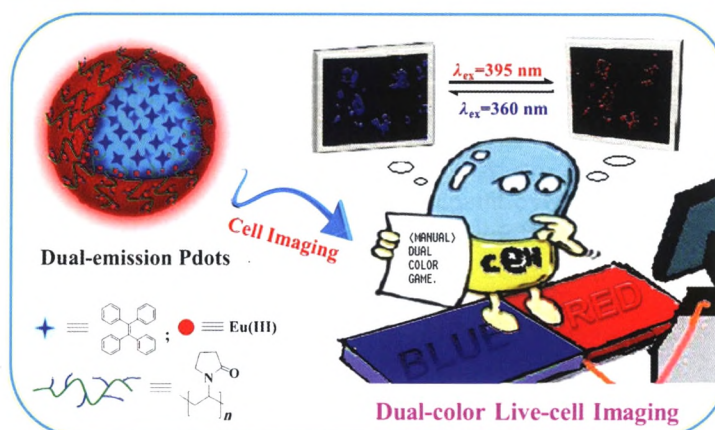
Direct monofluoromethylation of phenols and alcohols is known method thanks to the development of a series of electrophilic monofluoromethylating reagents. Considering the importance of synthesis of monofluoromethoxy arenes and the substrate limitation of current state, a method to access monofluoromethoxy arenes from aryl halides, arylboronic acids and arenes via a one-pot several steps synthesis is developed.

## Article

Preparation of AIE Polymer Dots (Pdots) Based on Poly(*N*-vinyl-2-pyrrolidone)-Eu(III) Complex and Dual-color Live Cell Imaging

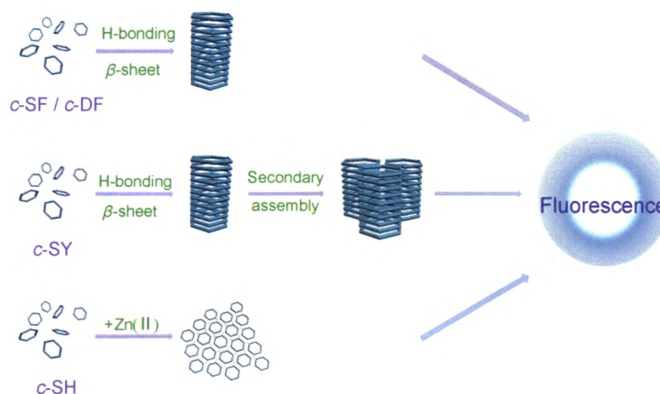
Guan, Xiaolin\*; Li, Zhifei; Wang, Lin; Liu, Meina; Wang, Kailong; Yang, Xueqin; Li, Yali; Hu, Lili; Zhao, Xiaolong; Lai, Shoujun; Lei, Ziqiang

*Acta Chim. Sinica* 2019, 77(12), 1268-1278



The TPE-tetraPVP-Eu(III) polymer dots (Pdots) with excellent AIE effect, photoswitchable dual-emission property and temperature/pH dual responsivity was successfully applied as a probe for dual-color live cell imaging.

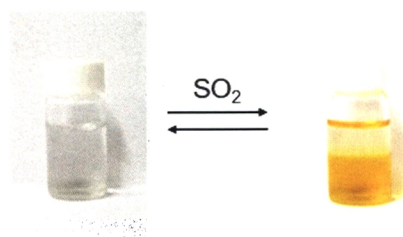
## Self-Assembly of Cyclic Dipeptides and Their Fluorescent Properties



Yang, Jingge; Li, Yang; Wang, Xiaoi; Wang, Dong; Sun, Yawei; Wang, Jiqian\*; Xu, Hai\*

*Acta Chim. Sinica* 2019, 77(12), 1279-1286

Cyclic dipeptides, *c*-SF, *c*-SY, *c*-SH and *c*-DF, mainly adopted  $\beta$ -sheet conformation, and they could form nanofibers with different diameters, driven by hydrogen bonding interactions. The diketopiperazine ring of cyclic dipeptides and its self-assembly endowed cyclic dipeptides with special fluorescent properties. And both the coordination of zinc ion with the imidazole group on histidine and the oxidation of phenolic hydroxyl group in tyrosine could enhance the fluorescent emission intensity of cyclic dipeptides.

**Liquid-liquid Phase-change Absorption of SO<sub>2</sub> Using *N,N*-Dimethyl-*n*-octylamine Mixed with Hexadecane**

Li, Xuefei; Chen, Ling; Xu, Shengchao; Zhao, Wenbo\*

*Acta Chim. Sinica* **2019**, 77(12), 1287-1293

The homogeneous absorption solution consisting of *N,N*-dimethyl-*n*-octylamine (DMOA) as absorbent and hexadecane as a solvent would be automatically separated into two immiscible phases after introducing sulfur dioxide (SO<sub>2</sub>). The hexadecane in the upper phase could be directly recycled, and the DMOA could be recovered by removing sulfur dioxide from the lower phase.

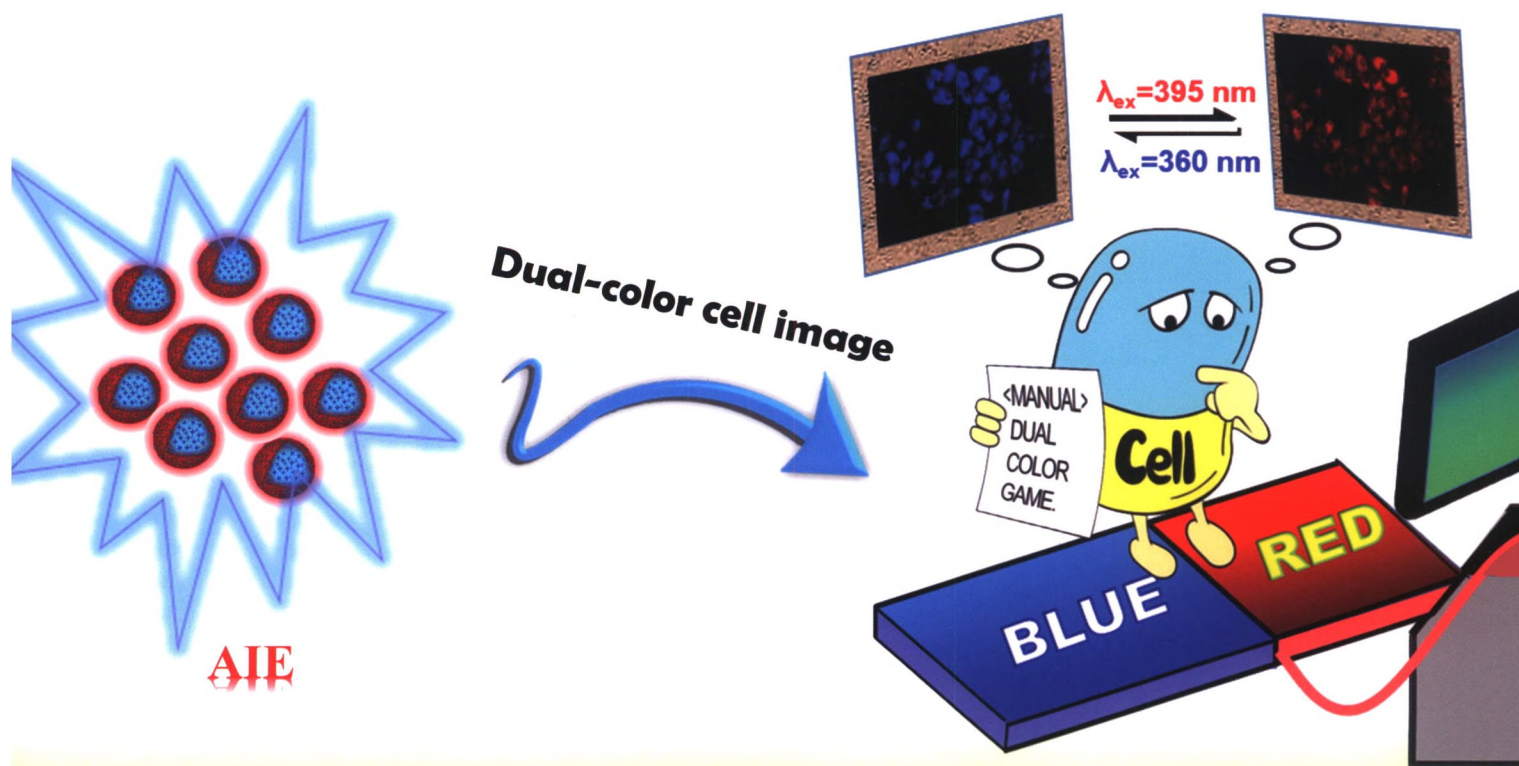
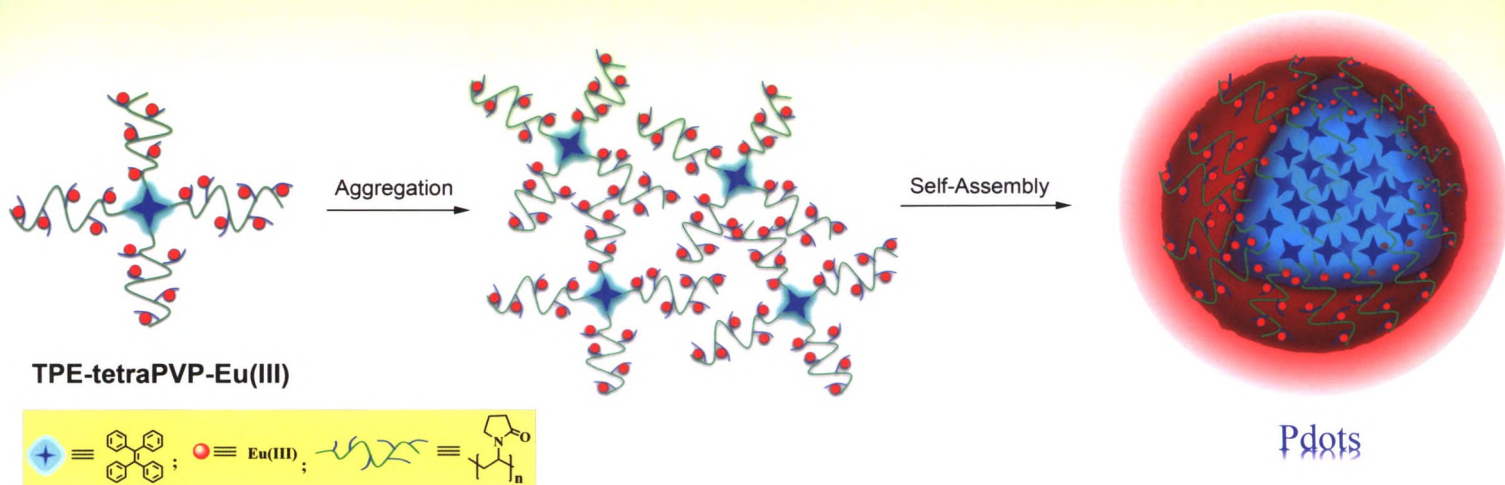
**Volume Contents (2019, Volume 77)**..... *Acta Chim. Sinica* **2019**, 77(12), 1294-1310



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