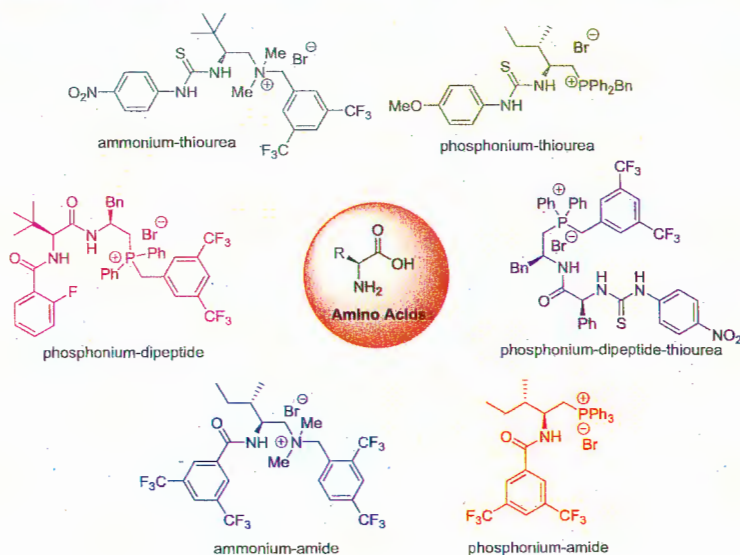


## Chemistry Authors Up Close

1111  
Bifunctional Ion Pair Catalysts from Chiral  $\alpha$ -Amino Acids

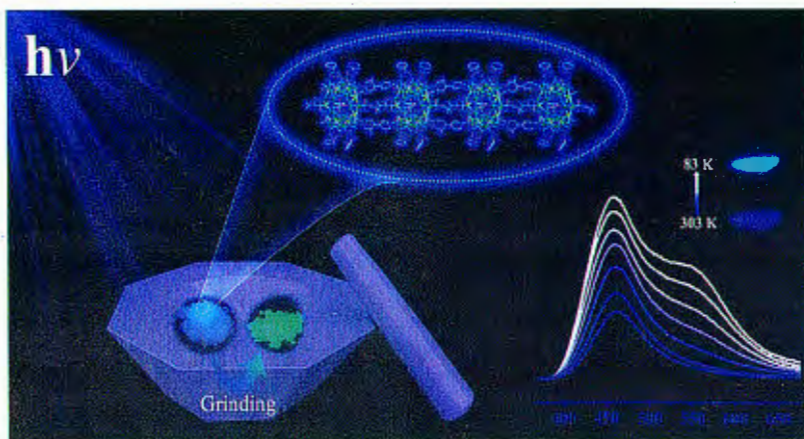


Asymmetric ion pair catalysis presents a powerful strategy for the construction of chiral molecules. However, the ion-pair interactions are weakly directional and result in difficultly controlling the conformational constraint for high stereo-inductions. Based on the hydrogen bonding interactions, we have successfully developed a new family of bifunctional ion pair catalysts derived from chiral amino acid via simple operations. With these chiral ammonium and phosphonium salts in hand, the enantioselective construction of C—C and C—X bonds was realized in our lab.

Hongyu Wang, Changwu Zheng, Gang Zhao\*

## Breaking Report

1120  
Reversible Wide-Range Tuneable Luminescence of a Dual-Stimuli-Responsive Silver Cluster-Assembled Material



Xiao-Hong Ma, Jia-Yin Wang, Jun-Jie Guo,

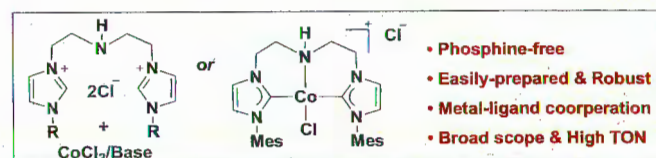
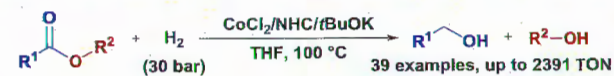
Herein, a novel silver cluster-assembled material  $\text{Ag}_{18}\text{bpy-NH}_2$  was prepared and structurally char-



## Concise Reports

1125

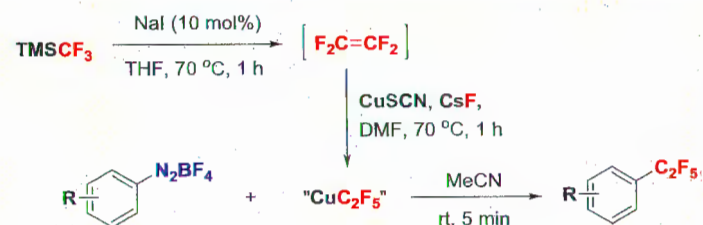
General and Phosphine-Free Cobalt-Catalyzed Hydrogenation of Esters to Alcohols



Zhihui Shao, Rui Zhong, Raffaella Ferraccioli, Yibiao Li, Qiang Liu\*

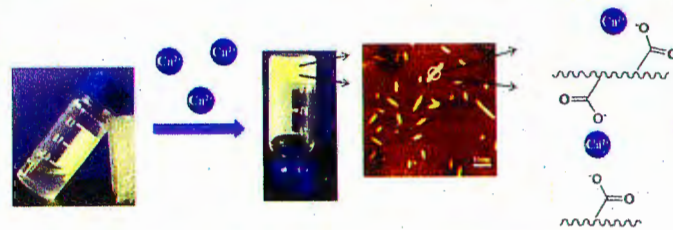
1131

Pentafluoroethylation of Arenediazonium Tetrafluoroborates Using On-Site Generated Tetrafluoroethylene

Copper-mediated pentafluoroethylation of arenediazonium tetrafluoroborates with tetrafluoroethylene (on-site generated from  $TMSCF_3$ ) has been developed as a new method to prepare pentafluoroethyl arenes.

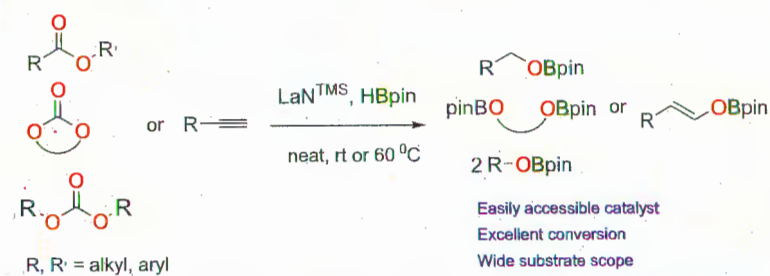
Bo Xing, Lingchun Li, Chuanfa Ni, Jinbo Hu\*

1137

Stimuli-Responsive Polypeptide-Based Supramolecular Hydrogels Mediated by  $Ca^{2+}$  Ion Cross-Linking

Fandong Meng, Jing Sun,\* Zhibo Li\*

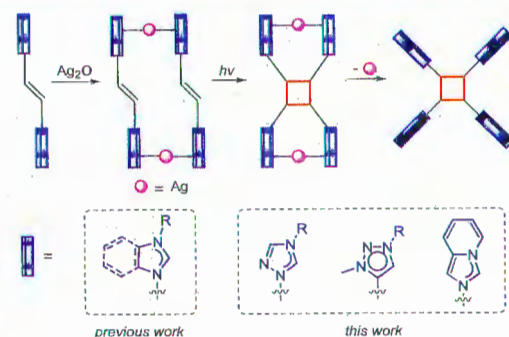
1142

 $La[N(SiMe_3)_2]_3$ -Catalyzed Hydroboration of Esters and Other Challenging Unsaturated Groups

Xiaojuan Xu, Zihan Kang, Dandan Yan, Mingqiang Xue\*

1147

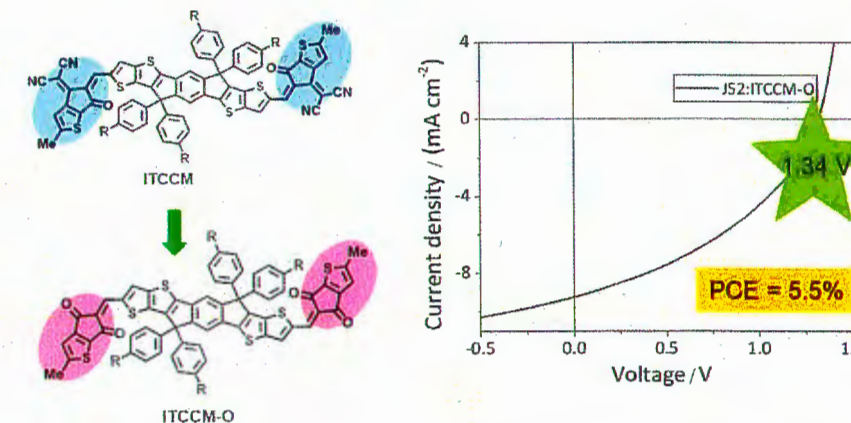
Metal-Carbene-Templated Photochemistry in Solution: A Universal Route towards Cyclobutane Derivatives



A metal-carbene-templated photochemistry towards cyclobutane derivatives is reported. It is

1153

Efficient Organic Solar Cells with a High Open-Circuit Voltage of 1.34 V

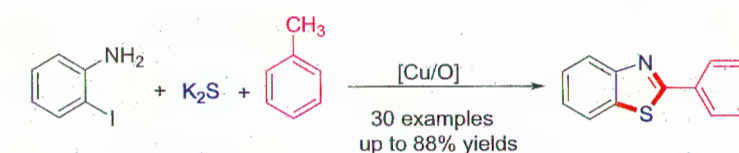


Bowei Gao, Hui Feng Yao,\* Ling Hong, Jianhui Hou

We synthesized a new wide bandgap non-fullerene acceptor ITCCM-O. By blending with a polymer donor JS2, the photovoltaic cell achieved an impressive  $V_{oc}$  of 1.34 V.

1158

Copper-Catalyzed Benzylic C-H Functionalization, Oxidation and Cyclization of Methylarenes: Direct Access to 2-Arylbenzothiazoles



- Triple C(sp<sup>3</sup>)-H Functionalization
- C-N/C-S Bonds Formation
- Available Materials
- Broad Substrate Scope

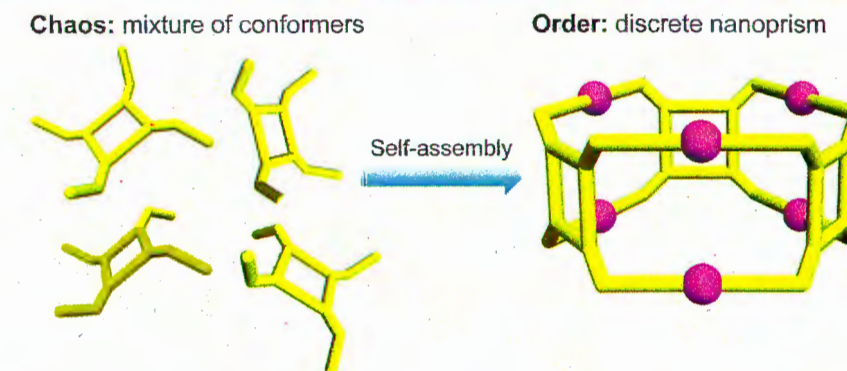
Herein, the first example for the construction of C-N/C-S bonds formation through benzylic C(sp<sup>3</sup>)-H functionalization of methylarene was reported. In addition, the reaction provides a convenient method for the synthesis of various 2-arylbenzothiazoles with wide substrate scope and good yields with available raw materials. Furthermore, mechanistic studies reveal that benzylic C(sp<sup>3</sup>)-H amination of methylarenes should be a key path instead of classic condensation reaction via benzaldehyde.

Wentao Yu, Wanqing Wu, Huanfeng Jiang\*

## Comprehensive Report

1167

Order from Chaos: Self-Assembly of Nanoprism from a Mixture of Tetratopic Terpyridine-Porphyrin Conformers



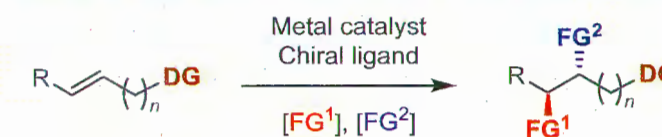
Alexander Filosa, Heng Wang, Wei-Jian Li, Wen-Jing Zhang, Ellie Ngo, Jonathan E. Piccolo, Hai-Bo Yang, Xiaopeng Li\*

Discrete supramolecular nanoprisms are self-assembled from a mixture of conformers of tetratopic terpyridine-porphyrin ligands to achieve a typical order-out-of-chaos process.

## Recent Advances

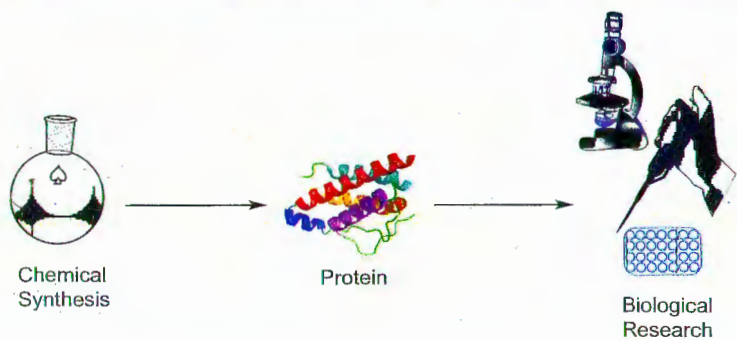
1174

Metal-Catalyzed Substrate-Directed Enantioselective Functionalization of Unactivated Alkenes



1181

Chemical Protein Synthesis by Native Chemical Ligation and Variations Thereof



Siyao Wang, Yogesh Abaso Thopate, Qingqing Zhou, Ping Wang\*