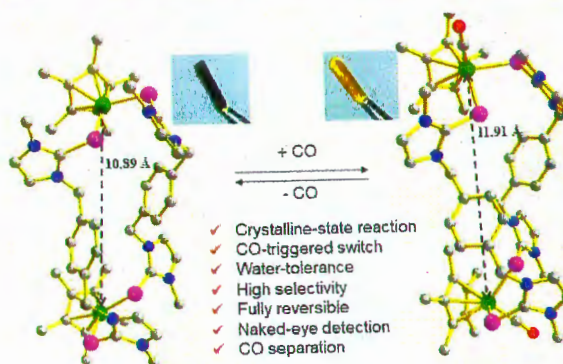


Concise Reports

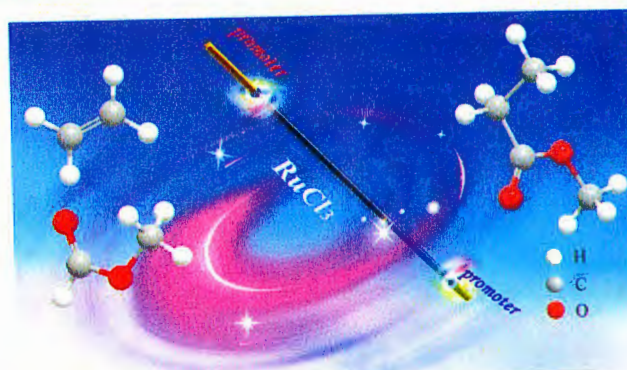
763  
Single-Crystalline Organoiridium Complex for  
Gas-Triggered Chromogenic Switches and Its  
Applications on CO Detection and Reversible  
Scavenging



Li-Ying Sun, Yuan-Yuan An, Li-Li Ma, Ying-Feng Han\*

Nonporous molecular single crystals of coordinatively unsaturated 16-electron metallacycle are found to undergo highly selective – yet reversible, chromogenic– binding of CO over other gases, VOCs and water.

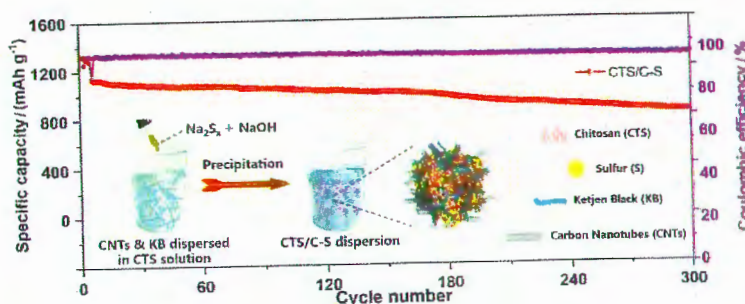
769  
High-Performance  $\text{RuCl}_3$  Catalyst Systems for  
Hydro-Esterification of Methyl Formate and  
Ethylene



Yan-Ru Li, Zhong-Ning Xu, Bing Bai, Zhi-Qiao Wang,\* Guo-Cong Guo\*

High-performance  $\text{RuCl}_3$  catalyst systems ( $\text{RuCl}_3$ -[PPN]Cl- $\text{Et}_4\text{NI}$  and  $\text{RuCl}_3$ -NaI) have been developed for hydro-esterification of methyl formate and ethylene to methyl propionate.

775  
Utilizing the Alterable Solubility of Chitosan in  
Aqueous Solution to Synthesize Nanosized  
Sulfur for High Performance Li-S Batteries

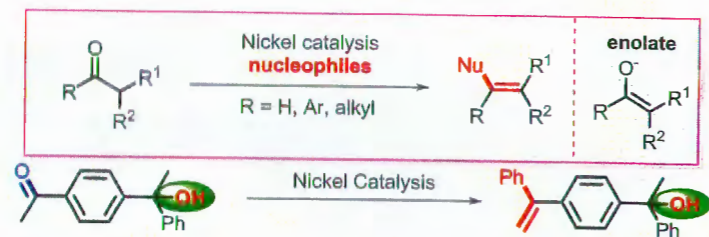


Yu Zhang, Wen-Cui Li, Bin He, Xiao-Fei Yu, Lu Hou, An-Hui Lu\*



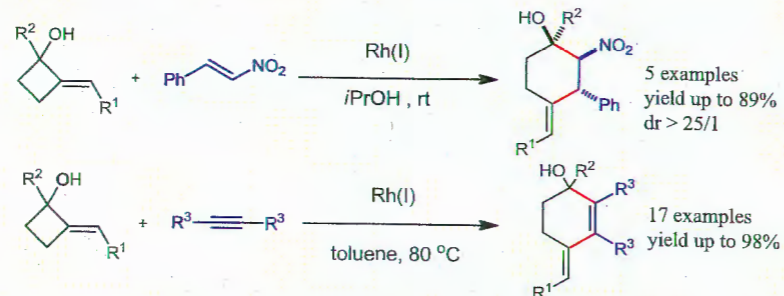
781

## Conversion of Carbonyl Compounds to Olefins via Enolate Intermediate



Zhi-Chao Cao, Pei-Lin Xu, Qin-Yu Luo, Xiao-Lei Li, Da-Gang Yu, Huayi Fang,\* Zhang-Jie Shi\*

786

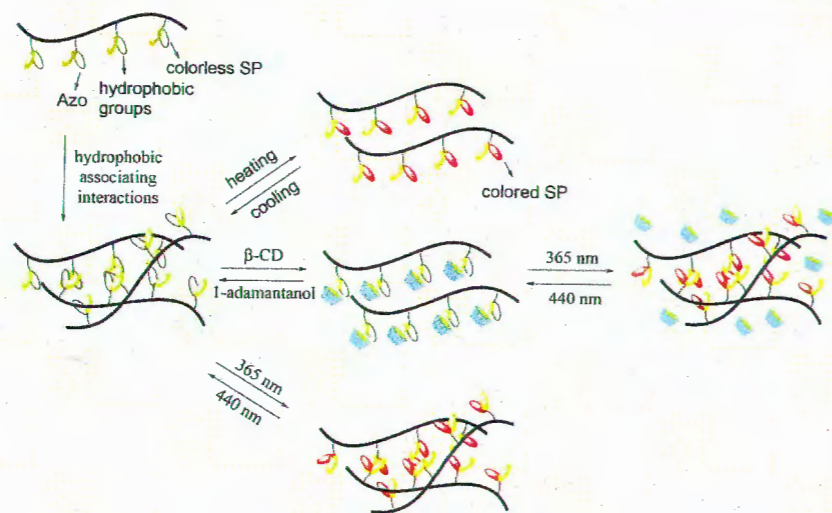
Rhodium(I)-Catalyzed [4+2] Cycloaddition Reactions of 2-Alkylencyclobutanols with Alkynes and (E)-2-Nitroethylbenzene through C(sp<sup>2</sup>)-C(sp<sup>3</sup>) Bond Cleavage

An intermolecular [4+2] cycloaddition was realized through C—C bond cleavage in the presence of Rh(I) catalyst. The selective ring opening of 2-alkylencyclobutanols enables the generation of active alkenylrhodium species, which underwent smooth cross addition over alkynes and (E)-2-nitroethylbenzene, leading to highly substituted all-carbon six-membered rings in a single step and in a complete atom economy.

Xinxin Zheng, Guozhu Zhang,\* Dayong Zhang\*

793

## A Multiresponsive Hydrophobic Associating Hydrogel Based on Azobenzene and Spiropyran

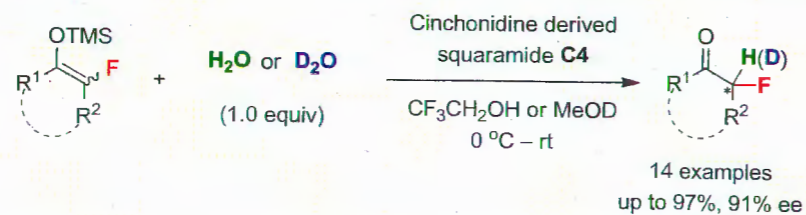


Anqi Liu, Chenxiao Xiong, Xiaoying Ma, Wenjing Ma, Ruyi Sun\*

Herein, azobenzene and spiropyran acting as two hydrophobic pendant groups were introduced into a hydrophilic polyacrylamide via free radical copolymerization to construct a hydrophobic interaction based thermo-, light- responsive polymer hydrogel.

799

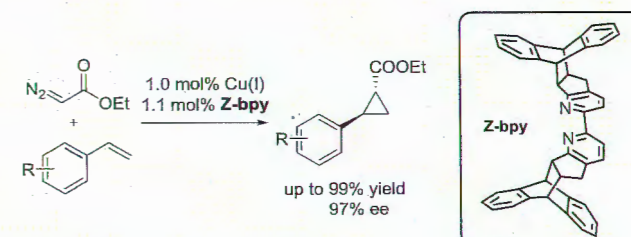
## Catalytic Enantioselective Protonation of Mono-fluorinated Silyl Enol Ethers towards Chiral α-Fluoroketones



We report a highly organocatalytic enantioselective protonation of monofluorinated silyl enol ethers with water as proton source, which represents a rare example of facile synthesis of optically active α-secondary α-fluoroketones. Moreover, with D<sub>2</sub>O as the deuterium source and MeOD as the solvent, the first highly enantioselective catalytic synthesis of enantioenriched α-deuterated α-fluoroketones is developed.

Kui Liao, Xiao-Si Hu, Ren-Yi Zhu, Ruo-Han Rao, Jin-Sheng Yu,\* Feng Zhou, Jian Zhou\*

807

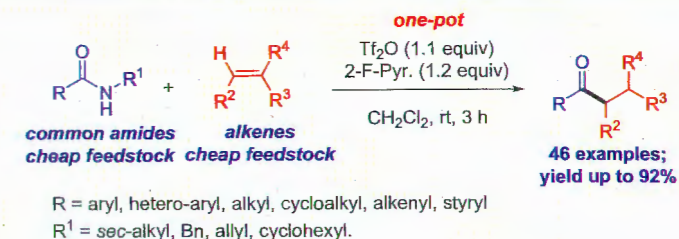
Z-bpy, a New C<sub>2</sub>-Symmetric Bipyridine Ligand and Its Application in Enantioselective Copper(I)-Catalyzed Cyclopropanation of Olefins

Yizhao Ouyang, Miao Zhan, Jing Zhou, Jiao Jiao, Hao Hu, Yoichi M. A. Yamada, Pengfei Li\*

A new C<sub>2</sub>-symmetric bipyridine ligand with triptycene-like backbone was synthesized and used in highly efficient asymmetric cyclopropanation reaction with small reagent ethyl diazoacetate.

811

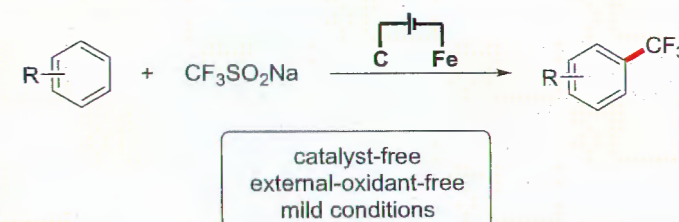
## Ketone Synthesis by Direct, Orthogonal Chemo-selective Hydroacylation of Alkenes with Amides: Use of Alkenes as Surrogates of Alkyl Carbanions



We report the Tf<sub>2</sub>O-mediated hydroacylation of alkenes with secondary amides, which constitutes a mild and versatile method for ketone synthesis. The use of cheap feedstock alkenes as surrogates of organometallic reagents for selective addition to secondary amides, the least reactive carboxylic acid derivatives, presents several advantages.

Hui Geng, Pei-Qiang Huang\*

817

External-Oxidant-Free Electrochemical Oxidative Trifluoromethylation of Arenes Using CF<sub>3</sub>SO<sub>2</sub>Na as the CF<sub>3</sub> Source

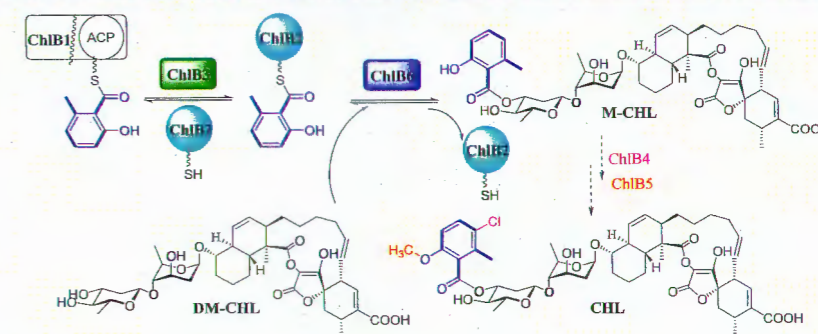
Yong Deng, Fangling Lu, Siqi You, Tianrui Xia, Yifan Zheng, Cuiwen Lu, Guichun Yang, Zuxing Chen, Meng Gao,\* Aiwen Lei\*

An efficient and environmentally benign electrochemical oxidative radical C—H trifluoromethylation of arenes by employing Langlois reagent as the CF<sub>3</sub> source was developed in this work.

## Comprehensive Reports

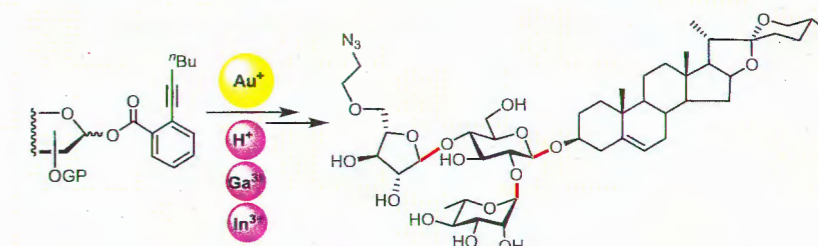
821

## Insights into the Functionalization of the Methylsalicylic Moiety during the Biosynthesis of Chlorothricin by Comparative Kinetic Assays of the Activities of Two KAS III-like Acyltransferases



Xuan Yi, Qunfei Zhao, Zhenhua Tian, Xinying Jia, Weiguo Cao, Wen Liu,\* Qing-Li He\*

827

Synthesis of Spirostanol Saponins via Gold(I)-Catalyzed Glycosylation in the Presence of Ga(OTf)<sub>3</sub>, In(OTf)<sub>3</sub>, or HOTf

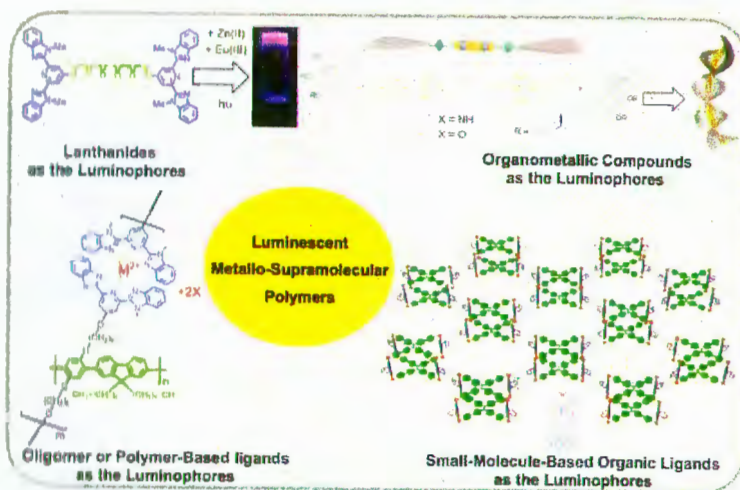
Teddy Stephen Ehaneta, Dacheng Shen, Peng Xu, Biao Yu\*

A panel of bioactive spirostanol saponins are synthesized via glycosylations catalyzed by ≤0.5 mol% gold(I) complex in the presence of Ga(OTf)<sub>3</sub>, In(OTf)<sub>3</sub>, or HOTf.



834  
TetrahedronLin Wu, Yusheng Chen, Jingfang Pei, Min Tang,  
Shangshang Wang, Zhichang Liu\*

We summarize herein the structures, synthetic strategies, properties, and applications of two different classes of tetrahedral cages.

843  
Luminescent Metallo-Supramolecular Polymers

Bo Zheng, Yali Hou, Lingyan Gao,\* Mingming Zhang\*

We classify luminescent metallo-supramolecular polymers based on the types of fluorophores used and summarize recent developments of luminescent metallo-supramolecular polymers.