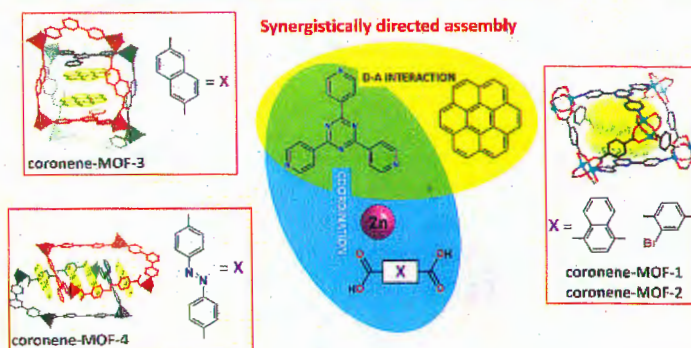


## Breaking Report

871  
Synergistically Directed Assembly of Aromatic Stacks Based Metal-Organic Frameworks by Donor-Acceptor and Coordination Interactions

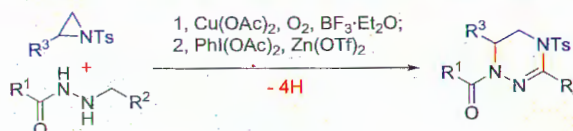


The synergistically directed assembly strategy toward donor-acceptor stacks based frameworks is proposed on the basis of supramolecular donor-acceptor and coordination interactions. As a proof of concept, four novel coronene-MOFs were prepared by the deliberate introduction of coronene (donor) into tpt (acceptor) involved coordination assemblies. The porous coronene-MOF-1 and -2 reveal high physicochemical stability and considerable hydrocarbons storage and separation performances.

Xi Wang, Ying Zhang, Ze Chang,\* Hui Huang,  
Xiao-Ting Liu, Jialiang Xu, Xian-He Bu\*

## Concise Reports

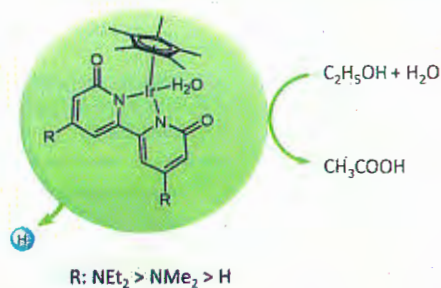
878  
Oxidative Dehydrogenative [3+3] Annulation of Benzylhydrazines with Aziridines Leading to Tetrahydrotriazines



Oxidative dehydrogenative [3+3] cyclization of benzylhydrazines with *N*-sulfonylaziridines is described. A series of complex tetrahydro-1,2,4-triazines were produced under mild reaction conditions.

Hailiao Li, Jia Liang, Congde Huo\*

883  
A Computational Study on Iridium-Catalyzed Production of Acetic Acid from Ethanol and Water Solution

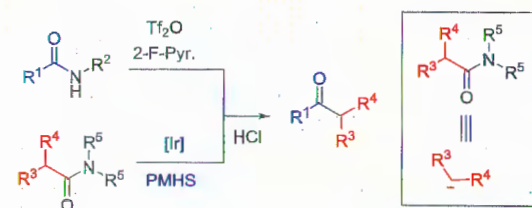


A DFT study on the dehydrogenation of ethanol and water solution has been performed. The cooperation of the iridium center and bpyO ligand is highlighted, which plays an important role in the catalytic activity. The electronic structure analysis suggests electron-donating substituents could decrease the energy barrier of the rate-determining step.

Xin Yue, Longfei Li, Pengjie Li, Chenguang Luo,  
Min Pu, Zuoyin Yang, Ming Lei\*



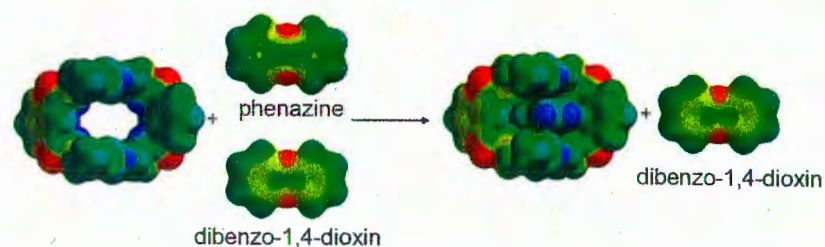
887  
Cross-Coupling of Secondary Amides with Tertiary Amides: The Use of Tertiary Amides as Surrogates of Alkyl Carbanions for Ketone Synthesis



We report the cross-coupling of secondary amides with tertiary amides, which provides a synthesis of ketones under mild conditions, and features the use of tertiary amides as surrogates of alkyl carbanions.

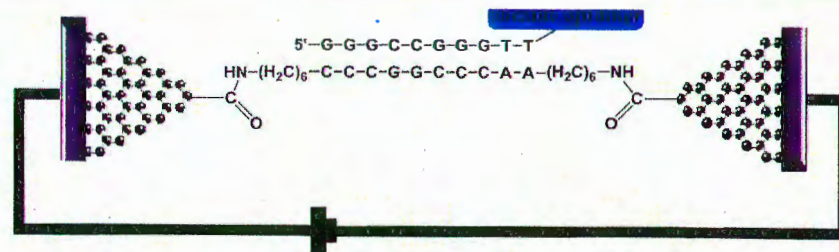
Shu-Ren Wang, Pei-Qiang Huang\*

892  
Selective Recognition of Phenazine by 2,6-Di-butoxynaphthalene-Based Tetralactam Macrocycle



Li-Li Wang, Yi-Kuan Tu, Arto Valkonen, Kari Rissanen, Wei Jiang\*

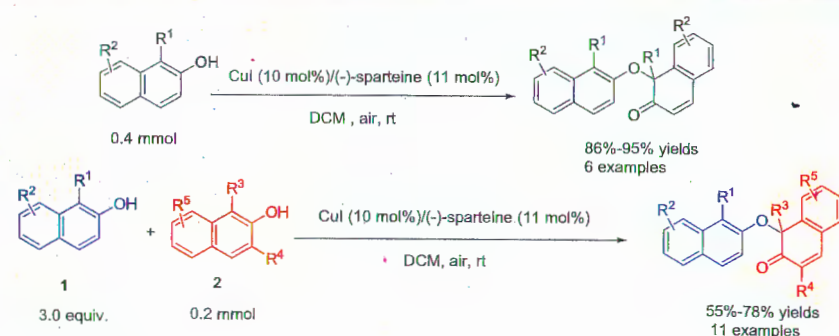
897  
Ultrasensitive Detection and Binding Mechanism of Cocaine in an Aptamer-based Single-molecule Device



We report a label-free, ultrasensitive detection of single-molecule cocaine-aptamer interaction by using an electrical nanocircuit based on graphene-molecule-graphene single-molecule junctions (GMG-SMJs). Real-time recordings of cocaine-aptamer interactions exhibited distinct current oscillations before and after cocaine treatment, revealing the dynamic mechanism of the conformational changes of aptamer upon binding with cocaine. Further concentration-dependent experiments have proved that these devices can act as a single-molecule biosensor with at least a limit of detection as low as  $1 \text{ nmol} \cdot \text{L}^{-1}$ .

Xinjiani Chen, Chenguang Zhou, Xuefeng Guo\*

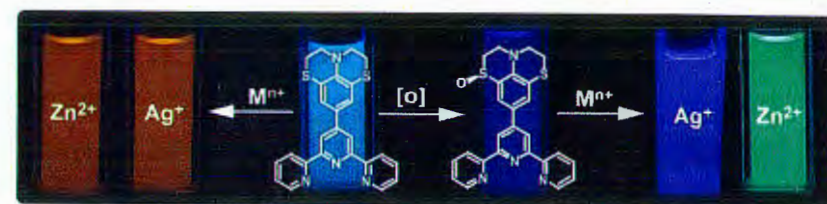
903  
Copper-Catalyzed Oxidative Dearomatization of 2-Naphthols via Etherification



Copper-catalyzed intermolecular oxidative dearomatization reaction of naphthols was realized, affording multifunctionalized  $\beta$ -naphthalenones in good to excellent yields under mild reaction conditions.

Ji-Cheng Yi, Zhi-Jie Wu, Shu-Li You\*

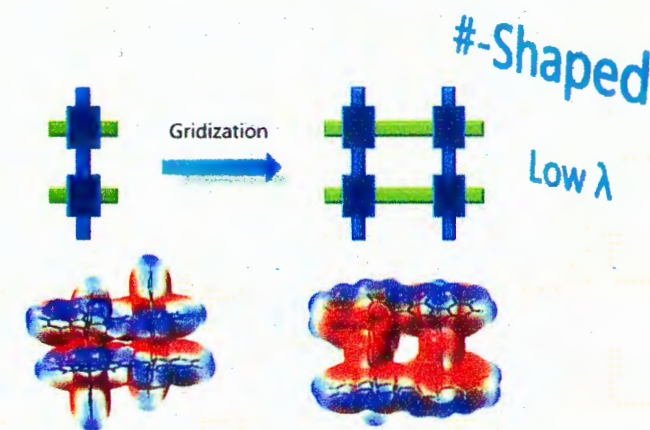
909  
Decoration of Terpyridine with Electron-Rich THDTAP: An Efficient Way to Explore Fluorescence Sensors for Recognizing Metal Ions



A series of terpyridine (TPy) ligands are created by decorating electron-rich THDTAP unit and the subsequent oxidation on THDTAP. These new ligands can be employed to recognize metal ions.

Taoshan Xu, Dongxu Li, Chaoxian Yan, Yuewei Wu, Cheng-Shan Yuan,\* Xiangfeng Shao\*

915  
Theoretical Studies on Novel Gridspiroarenes: Structures, Noncovalent Interactions and Reorganization Energies

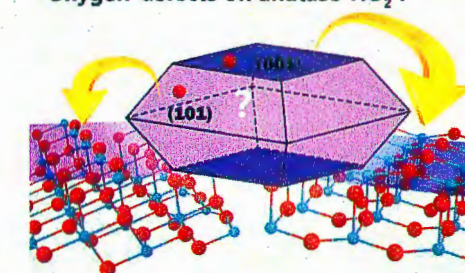


Lei Yang, Cheng-Zhu Yin, Mohamad Akbar Ali, Chao-Yang Dong, Xin-Miao Xie, Xiang-Ping Wu, Jie Mao, Yong-Xia Wang, Yang Yu, Ling-Hai Xie,\* Lin-Yi Bian, Jian-Min Bao, Xue-Qin Ran,\* Wei Huang\*

### Comprehensive Report

922  
Study of Oxygen Vacancies on Different Facets of Anatase TiO<sub>2</sub>

### Oxygen defects on anatase TiO<sub>2</sub>?

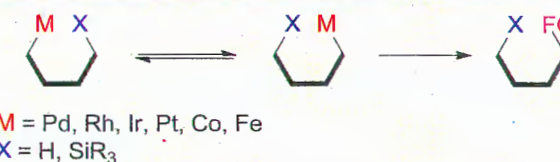


Oxygen vacancies are easier to form on {001} facets than on {101} facets of anatase TiO<sub>2</sub>.

Yanan Wu, Yingyi Fu, Li Zhang, Yuanhang Ren, Xueying Chen, Bin Yue,\* Heyong He\*

### Recent Advances

929  
1,4-Migration of Transition Metals in Organic Synthesis

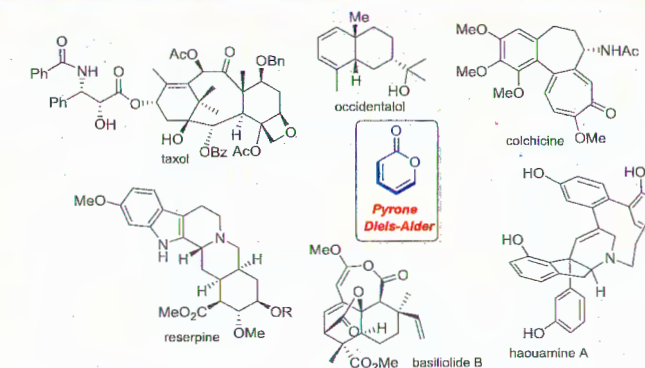


The 1,4-metal migration is a very useful way to create new carbon-metal species, which are pivotal in transition metal-catalyzed transformations. This review summarized the recent advances in transition metal-catalyzed reactions, which at least contained one step of 1,4-metal migration.

Abdur Rahim, Jia Feng, Zhenhua Gu\*

### Critical Review

946  
The [4+2] Cycloaddition of 2-Pyrone in Total Synthesis



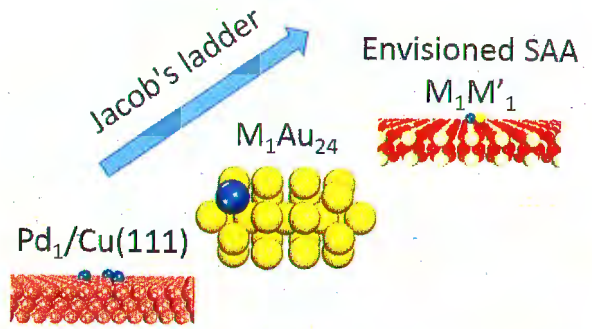
Diels-Alder reaction is one of the most important reaction in organic synthesis. In this review, we summarized the applications of [4+2] cycloaddition of 2-pyrone in natural product syntheses.

Quan Cai\*

# Content

977

Single Atom Alloy Preparation and Applications  
in Heterogeneous Catalysis



Jianyu Han, Jianmin Lu, Min Wang, Yehong Wang, Feng Wang\*

In this review, we use the Jacob's Ladder as a metaphor to describe the efforts dedicated to controlling the nanostructures and compositions of single atom alloys.