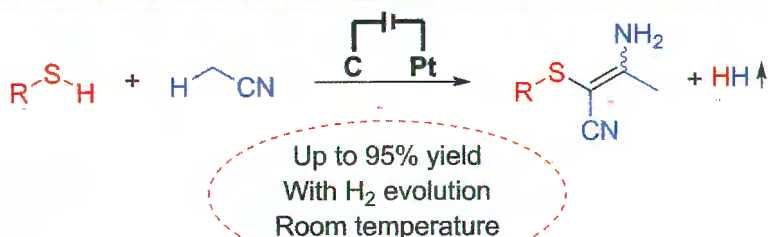


## Breaking Report

547  
Electrochemical Oxidative Csp<sup>3</sup>–H/S–H Cross-Coupling with Hydrogen Evolution for Synthesis of Tetrasubstituted Olefins

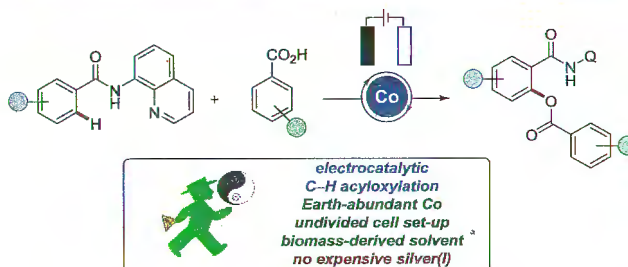


Fangling Lu, Zengzhan Yang, Tao Wang,\*  
Tianhao Wang, Yuying Zhang, Yong Yuan,\*  
Alwen Lei\*

A series of tetrasubstituted olefins were prepared under base-free, transition metal-free, and oxidant-free electrochemical conditions.

## Concise Reports

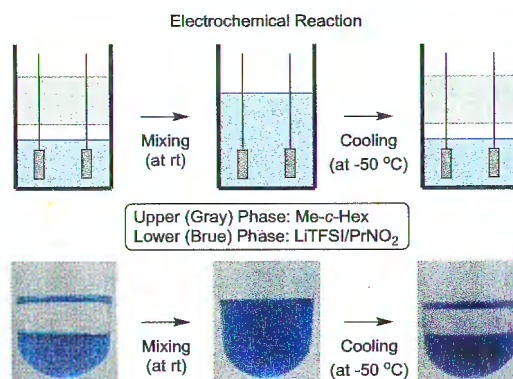
552  
Cobalt-electrocatalyzed C–H Acyloxylation



Cong Tian, Uttam Dhawa, Julia Struwe, Lutz Ackermann\*

Cobalt-catalyzed C–H acyloxylation was realized in the absence of costly silver(I) salts in biomass-derived solvent using electricity as sustainable oxidant.

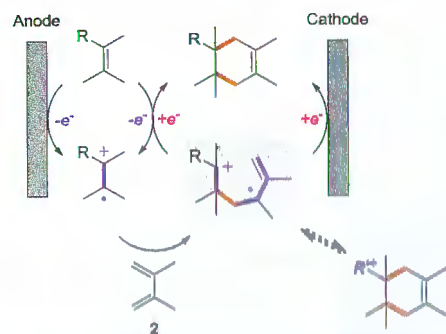
557  
A Novel Thermomorphic System for Electro-catalytic Diels-Alder Reactions



Yasushi Imada, Naoki Shida, Yohei Okada,  
Kazuhiro Chiba\*

Methyl cyclohexane can form a thermomorphic system with lithium bis(trifluoromethane)sulfonamide/1-nitropropane solution, where biphasic and monophasic conditions were reversibly switched over a practical temperature range. The monophasic condition serves as a less polar electrolyte solution, enabling the use of hydrophobic dienophiles for electrocatalytic Diels-Alder reactions.

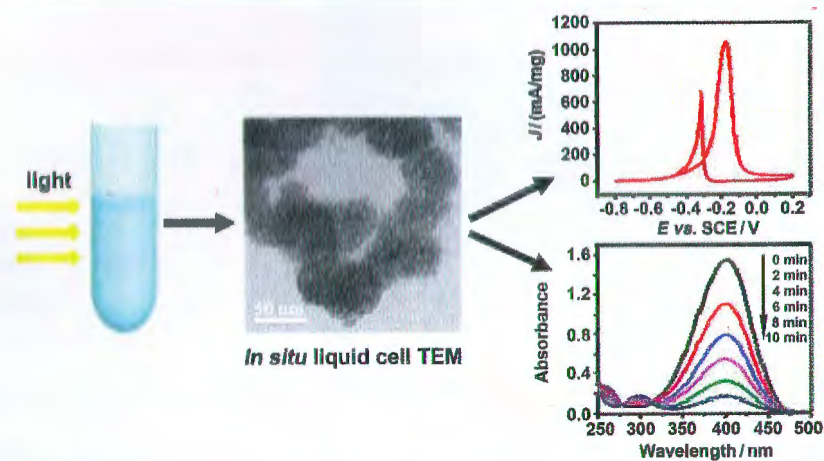
561  
Radical Cation Diels-Alder Reactions of Non-Conjugated Alkenes as Dienophiles by Electrocatalysis



The present study describes the serendipitous development of novel radical cation Diels-Alder reactions by electrocatalysis that use non-conjugated alkenes as dienophiles. The key to successful transformation involves highly substituted cyclohexenyl radical cations that are stable enough to be reduced by intermolecular single electron transfer.

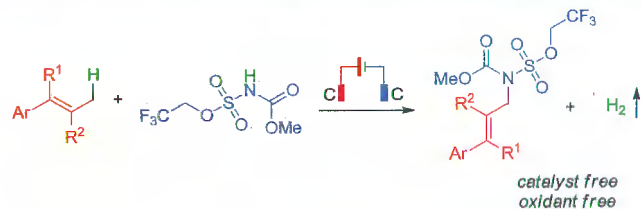
Atsushi Ozaki, Yusuke Yamaguchi, Yohei Okada, Kazuhiro Chiba\*

565  
Facile Synthesis and *in situ* TEM Observation of Nanoporous Pd for Enhanced Catalytic Applications



Haiyang Liu, Kal Ke, Chang Li, Xin Chen,\* Yulan Wu

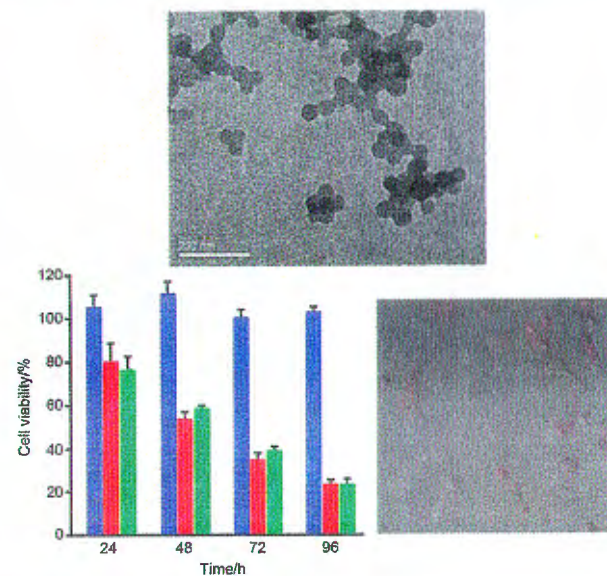
570  
An Electrochemical Cinnamyl C—H Amination Reaction Using Carbonyl Sulfamate



A direct cinnamyl C—H amination using carbonyl sulfamate as nitrogen source is reported with electrochemical procedure using carbon material as electrodes. The reaction proceeds in the absence of catalyst and oxidant. Continuous steps involving anodic oxidation, deprotonation, anodic oxidation, and nucleophilic addition of nitrogen source are proposed as the reaction pathway.

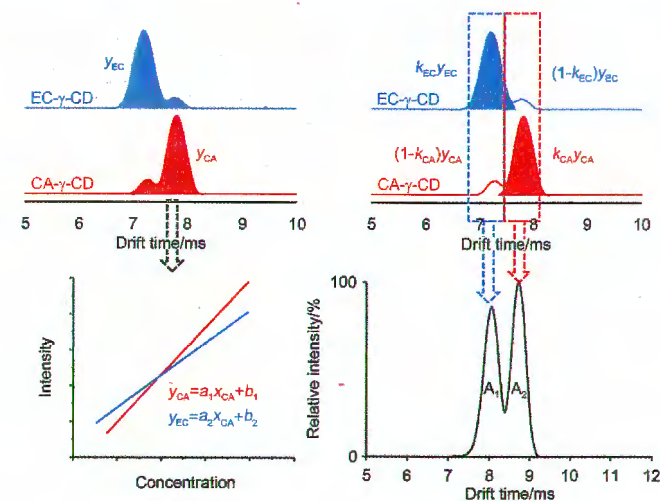
Shual Liu, Jin Li, Dalin Wang, Feng Liu, Xu Liu, Yongyuan Gao, Jie Dai, Xu Cheng\*

575  
Supramolecular Vesicles Based on Water-Soluble 2,6-Helic[6]arene: High Affinity Binding, Stimuli Responsiveness and Delivery of Doxorubicin to Cancer Cells



Xuan Yang, Weipeng Mao, Yamin Liu, Libai Li, Da Ma\*

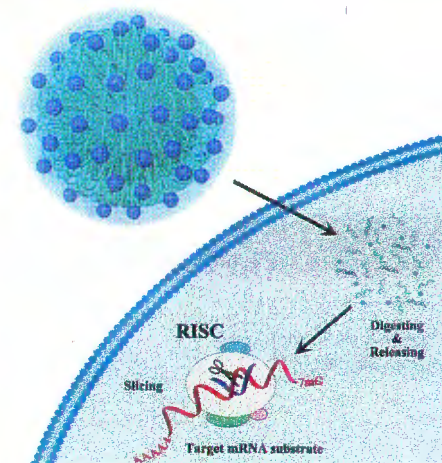
581  
Separation, Quantification and Structural Study of (+)-Catechin and (-)-Epicatechin by Ion Mobility Mass Spectrometry Combined with Theoretical Algorithms



Xinyu Bian, Bing Zhao, Bo Pang, Zhong Zheng, Shu Liu,\* Zhiqiang Liu, Fengrui Song\*

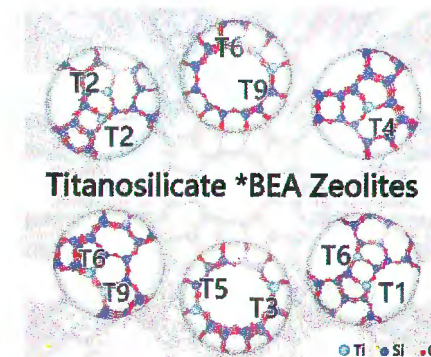
Two catechins were successfully separated and quantified by binding with  $\gamma$ -cyclodextrin and ion mobility mass spectrometry.

588  
Efficient Self-Assembled DNA Nanoparticles through Rolling Circle Amplification for siRNA Delivery *in vitro*



Qian Yao, Yuqi Chen, Fan Wu, Fan Wu, Chaoxing Liu, Tingting Hong, Wei Li, Yi Chen, Xiang Zhou\*

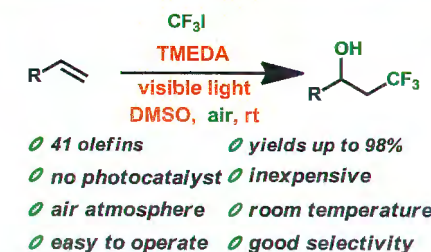
593  
Systematic Study of Ti-Distribution in Titanosilicate \*BEA Zeolites via Symmetry-Adapted Enumeration



A systematic study of Ti distribution in single- and double-Ti introduced titanosilicate \*BEA zeolites is conducted via symmetry-adapted enumeration method and Boltzmann statistics.

Lin Li, Jiaze Wang, Yi Li,\* Jihong Yu

597  
Catalyst-Free Hydroxytrifluoromethylation of Alkenes Using Iodotrifluoromethane

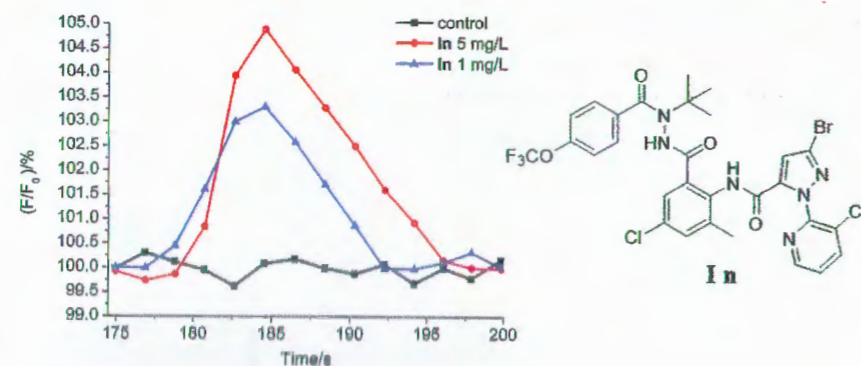


The reaction can be applied to not only styrenes but also various aliphatic alkenes with excellent selectivity. We propose a halogen bond interaction promotes a single electron transfer under the visible light irradiation. No catalyst was needed. A solution of  $\text{CF}_3\text{I}$  in DMSO was used as the facile trifluoromethylating reagent.

Zhaoben Su, Yong Guo,\* Qing-Yun Chen,\* Zhi-Gang Zhao,\* Bao-Yi Nian

605

Synthesis and Bioactivities Evaluation of Novel Anthranilic Diamides Containing *N*-(*tert*-Butyl)-benzohydrazide Moiety as Potent Ryanodine Receptor Activator



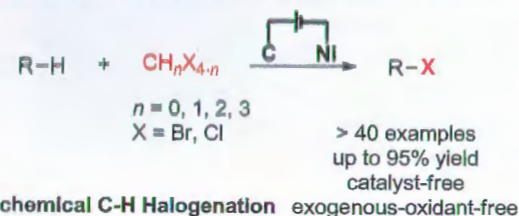
Yunyun Zhou,\* Wei Wei, Liangliang Zhu, Yuxin Li\*

The novel anthranilic diamides derivatives containing *N*-(*tert*-butyl)benzohydrazide moiety showed excellent insecticidal activities and could act as potent activators of the RyRs.

611

Synergy of Anodic Oxidation and Cathodic Reduction Leads to Electrochemical C—H Halogenation

### Synergy of Anodic Oxidation and Cathodic Reduction



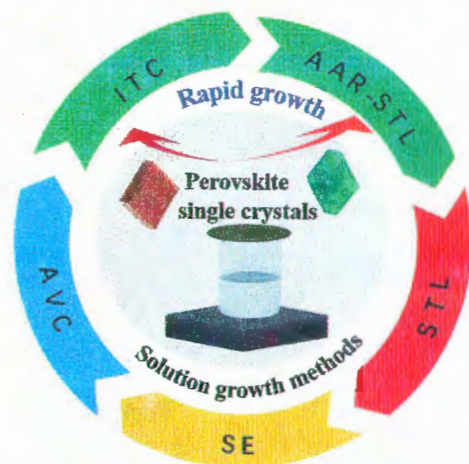
Zhilin Zhou, Yong Yuan, Yangmin Cao, Jin Qiao, Anjin Yao, Jing Zhao, Wanqing Zuo, Wenjie Chen, Aiwen Lei\*

We herein uncovered an electrochemical C—H halogenation protocol that synergistically combines anodic oxidation and cathodic reduction for C—X bond formation.

### Critical Review

616

Rapid Growth of Halide Perovskite Single Crystals: From Methods to Optimization Control

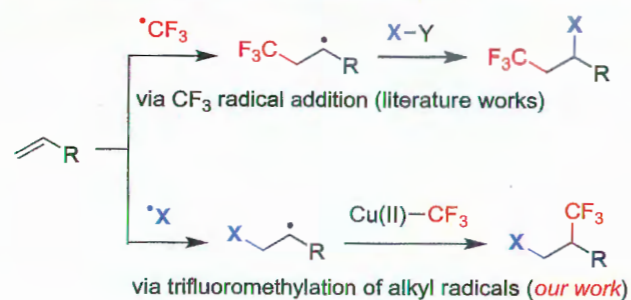


Yu-Ling Wang, Shuai Chang, Xiao-Mei Chen, Yan-Dong Ren, Li-Fu Shi, Yong-Hao Liu,\* Hai-Zheng Zhong\*

### Inside Story

630

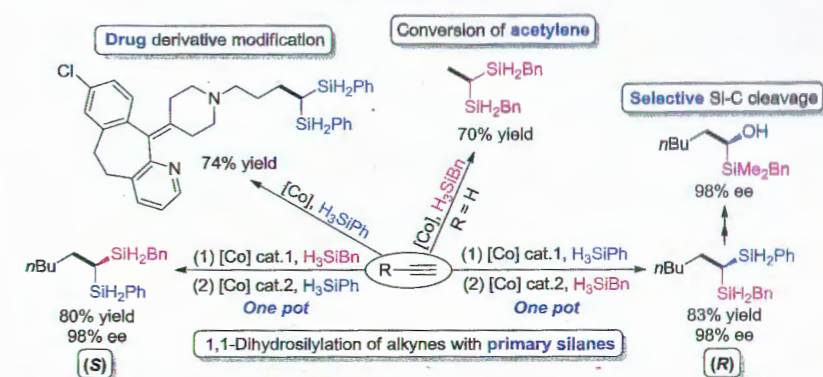
Trifluoromethyl Radical Addition versus Radical Trifluoromethylation: Reversed Regioselectivity in Carbotrifluoromethylation of Alkenes



Zhenzhen Zhang,\* Lin Zhu

632

One Earth-Abundant Cobalt Catalyst for Alkynes Double Hydrosilylation: Efficient Synthesis of Gem-bis(silanes)



Highly regioselective sequential 1,1-dihydrosilylation of terminal aliphatic alkynes with primary silanes enabled by one cobalt catalyst has been developed. The reactions use readily available aliphatic alkynes, including acetylene and a complex drug derivative, to access valuable gem-bis(dihydrosilyl)alkanes. Asymmetric transformation using two cobalt catalysts in one pot is also realized.

Zhaoyang Cheng\*