

Chemical Science

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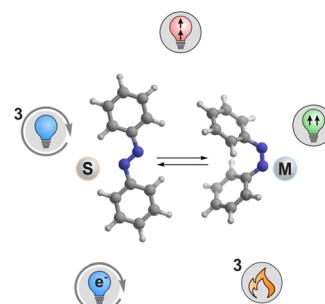


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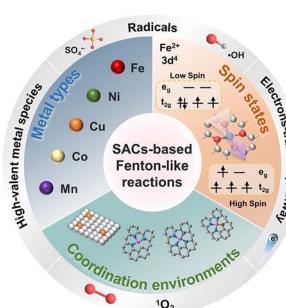


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Jie Miao, Yunyao Jiang, Xixi Wang, Xue Li, Yuan Zhu, Zongping Shao and Mingce Long*



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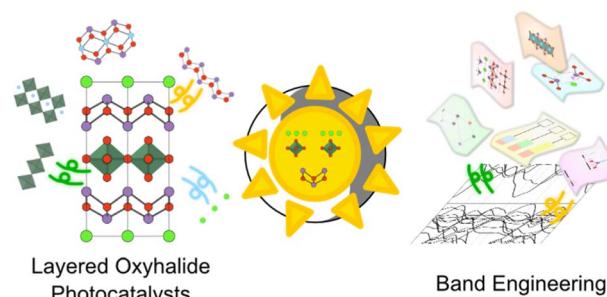
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Fundamental questions
Elemental answers

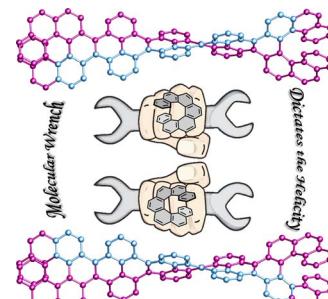
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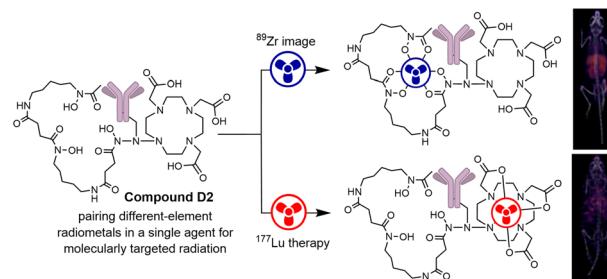
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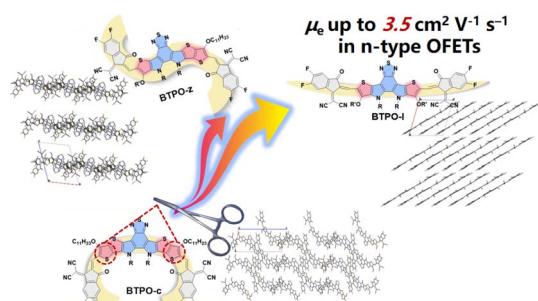
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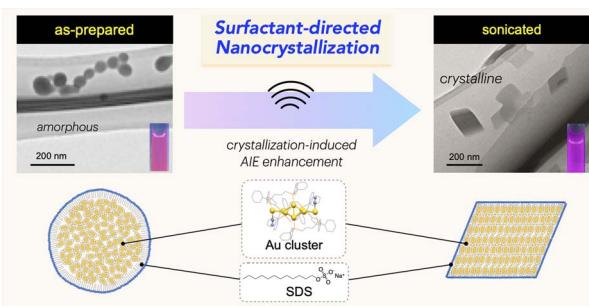
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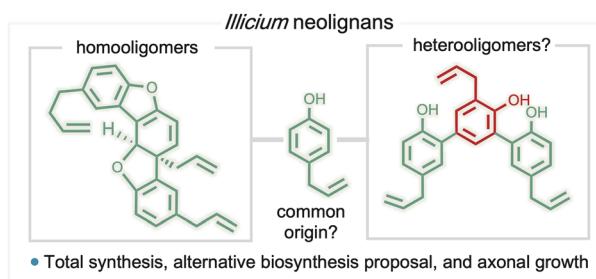
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**Controlled nanocrystallization of gold nanoclusters within surfactant envelopes: enhancing aggregation-induced emission in solution**

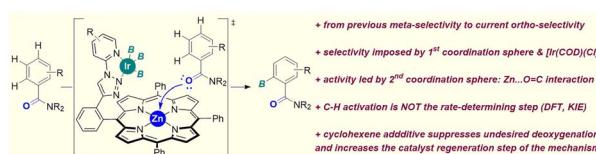
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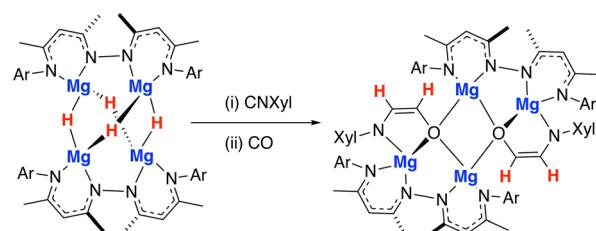
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Wenbang Yang, Andrew J. P. White and Mark R. Crimmin*

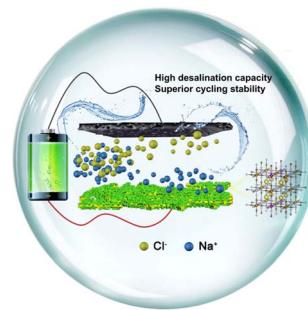


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Enhanced redox kinetics of Prussian blue analogues for superior electrochemical deionization performance

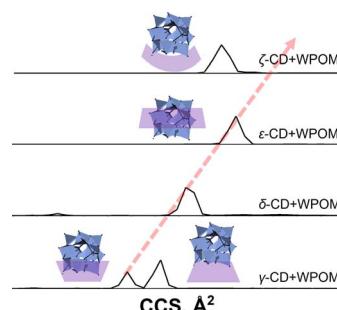
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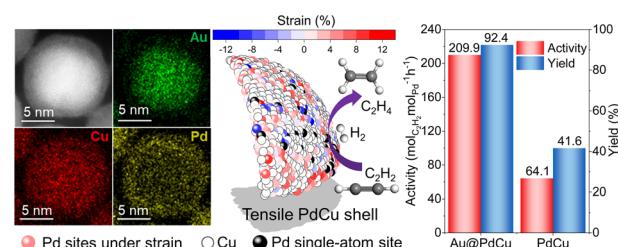
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Highly efficient semi-hydrogenation in strained ultrathin PdCu shell and the atomic deciphering for the unlocking of activity-selectivity

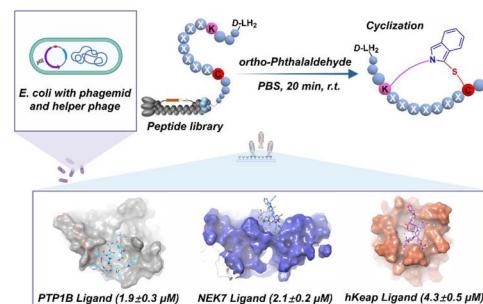
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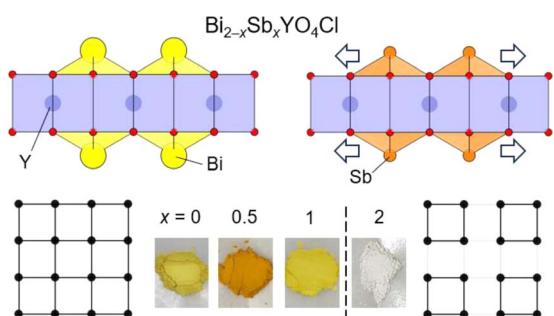
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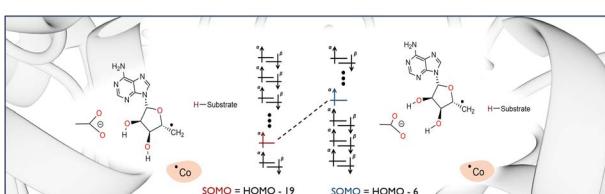
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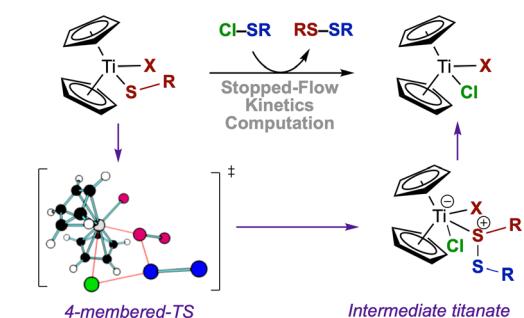
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**Non-Aufbau electronic structure in radical enzymes and control of the highly reactive intermediates**

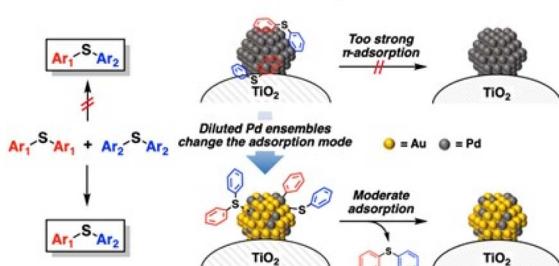
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Direct thioether metathesis enabled by metal ensemble control**Heterogeneously catalyzed thioether metathesis by a supported Au–Pd alloy nanoparticle design based on Pd ensemble control**

Takehiro Matsuyama, Takafumi Yatabe,* Tomohiro Yabe and Kazuya Yamaguchi*

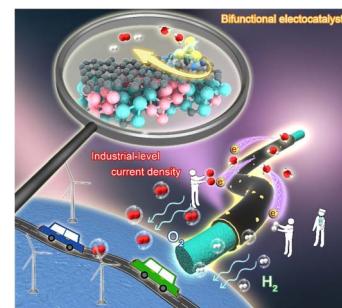


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Manipulating electron redistribution between iridium and $\text{Co}_6\text{Mo}_6\text{C}$ bridging with a carbon layer leads to a significantly enhanced overall water splitting performance at industrial-level current density

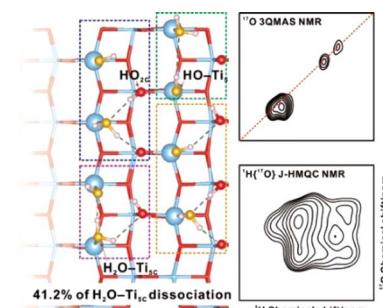
Weimo Li, Wenqiong Gou, Linfeng Zhang, Mengxiao Zhong, Siyu Ren, Guangtao Yu, Ce Wang, Wei Chen* and Xiaofeng Lu*



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Unraveling the atomic structure and dissociation of interfacial water on anatase TiO_2 (101) under ambient conditions with solid-state NMR spectroscopy

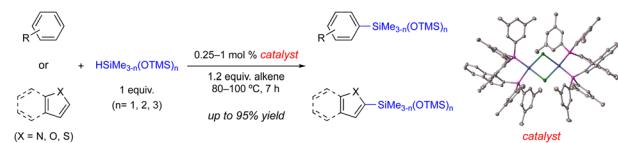
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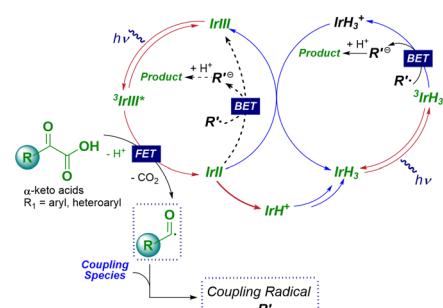
Noah Swann, Kiki Tang, Jihyeon Nam, Jooyeon Lee, Marek Domin, Thomas E. Shaw, Stosh A. Kozimor, Salina Som and Kangsang L. Lee*



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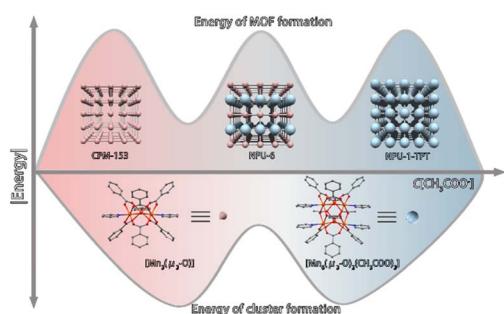
Multiphoton tandem photoredox catalysis of $[\text{Ir}(\text{dFCF}_3\text{ppy})_2(\text{dtbbpy})]^+$ facilitating radical acylation reactions

Zhicong Lin, Qian Zhou, Yan Liu, Chenli Chen, Jialong Jie* and Hongmei Su



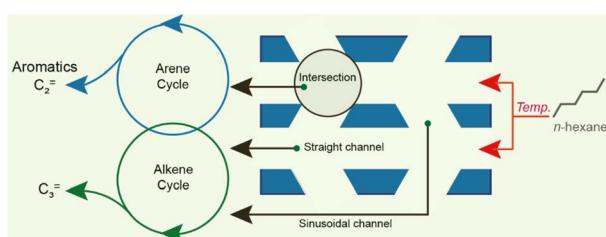
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Ordered assembly of two different metal clusters with the same topological connectivity in one single coordination network

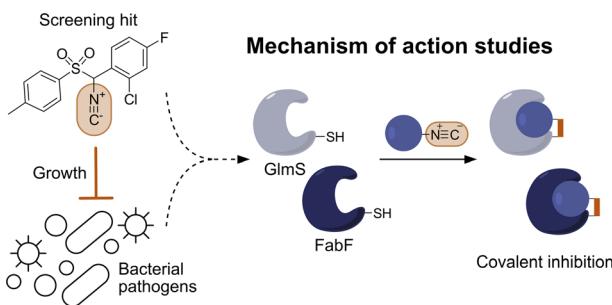
Jian-Wei Cao, Tao Zhang, Juan Chen, Jin-Bo Wang, Yu Wang and Kai-Jie Chen*

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Selectivity descriptors of the catalytic *n*-hexane cracking process over 10-membered ring zeolites

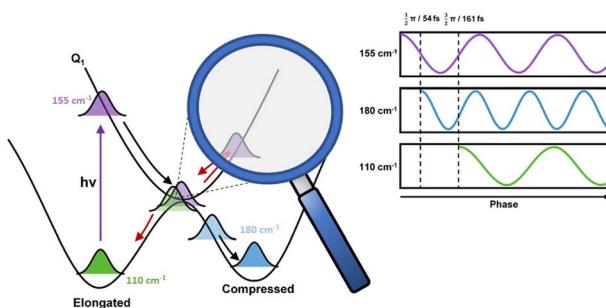
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Isocyanides inhibit bacterial pathogens by covalent targeting of essential metabolic enzymes

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Tracking the conical intersection dynamics for the photoinduced Jahn–Teller switch of a Mn(III) complex

Ryan Phelps, Eleftheria Agapaki, Euan K. Brechin and J. Olof Johansson*

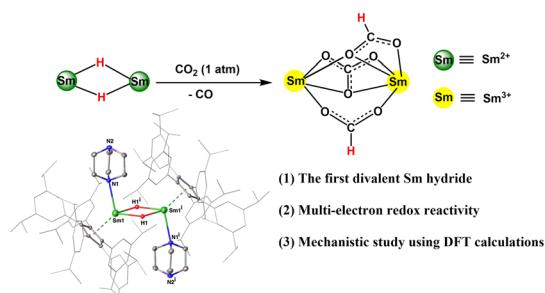


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Multi-electron redox reactivity of a samarium(II) hydrido complex

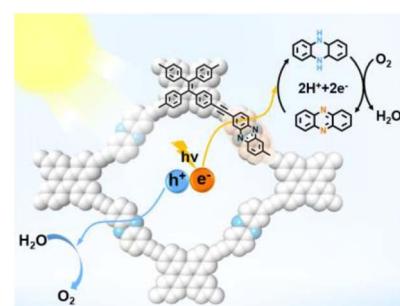
Xianghui Shi, Peng Deng, Thayalan Rajeshkumar, Laurent Maron* and Jianhua Cheng*



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Leveraging phenazine and dihydrophenazine redox dynamics in conjugated microporous polymers for high-efficiency overall photosynthesis of hydrogen peroxide

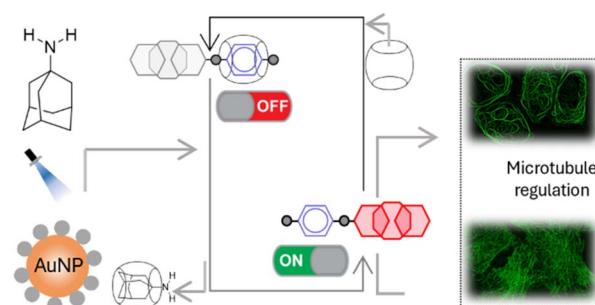
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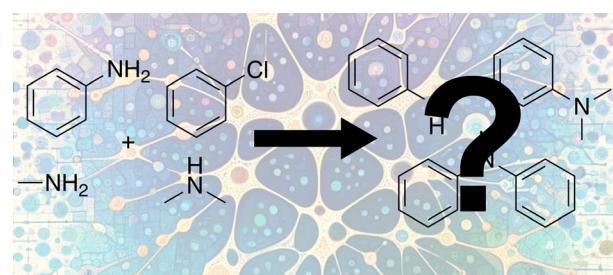
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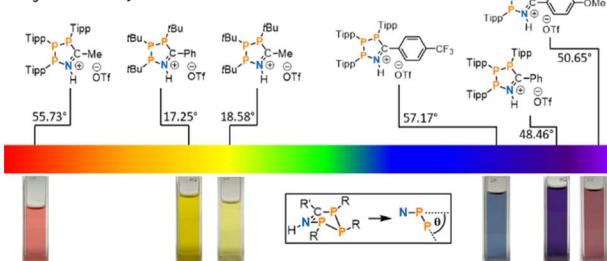
Deductive machine learning models for product identification

Tianfan Jin, Qiyuan Zhao, Andrew B. Schofield and Brett M. Savoie*



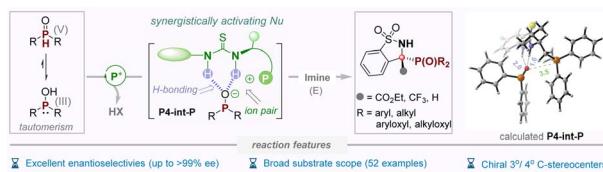
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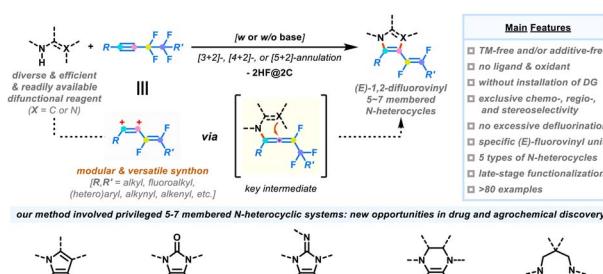
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**Synergistically activating nucleophile strategy enabled organocatalytic asymmetric P-addition of cyclic imines**

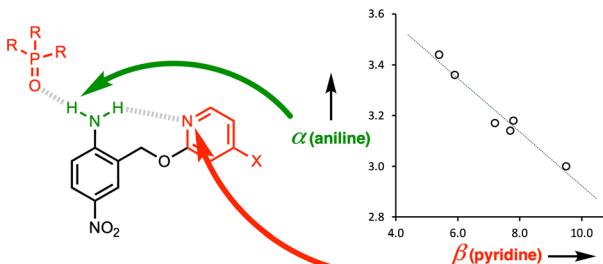
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**Chemo-, regio-, and stereoselective tetrafunctionalization of fluoroalkynes enables divergent synthesis of 5-7-membered azacycles**

Jia-Wei Chen, Wen-Jun Ji, Xue-Ying Huang, Danhua Ge, Zhi-Liang Shen,* Kai Guo* and Xue-Qiang Chu*

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**Negative cooperativity in the formation of H-bond networks involving primary anilines**

Fergal E. Hanna, Alexander J. Root, Markus Schade and Christopher A. Hunter*

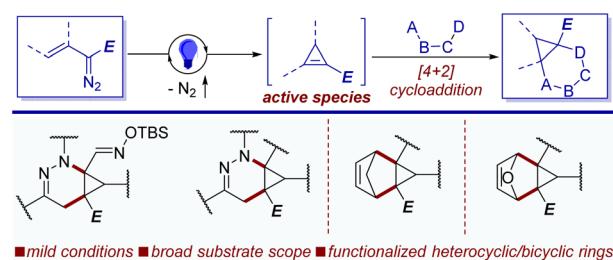


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Photoinduced [4 + 2]-cycloaddition reactions of vinyldiazo compounds for the construction of heterocyclic and bicyclic rings

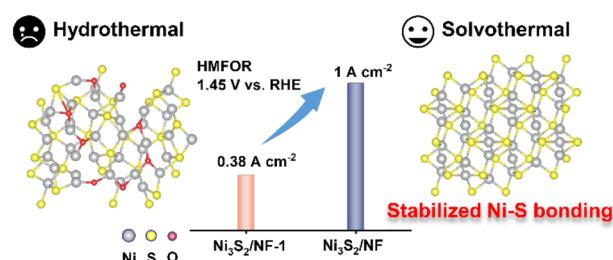
Ming Bao, Arnold R. Romero Bohórquez, Hadi Arman and Michael P. Doyle*^{*}



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Modulating Ni–S coordination in Ni_3S_2 to promote electrocatalytic oxidation of 5-hydroxymethylfurfural at ampere-level current density

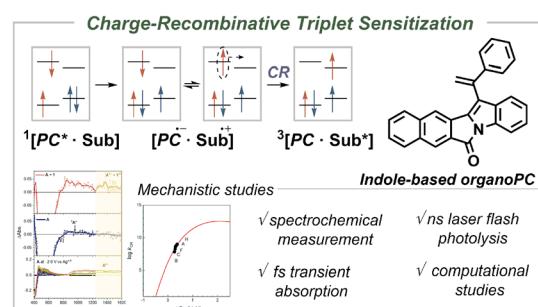
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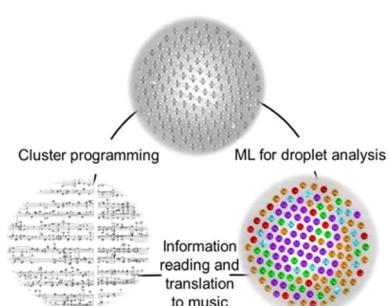
Yunjeong Lee, Byung Hak Jhun, Sihyun Woo, Seoyeon Kim, Jaehan Bae, Youngmin You* and Eun Jin Cho*



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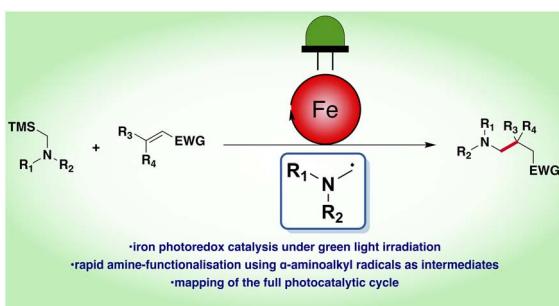
Observation of a chemical reaction in a levitating microdroplet cluster and droplet-generated music

Alexander A. Fedorets, Semyon Koltsov, Anton A. Muravev, Alexey Fotin, Pavel Zun, Nikita Orekhov, Michael Nosonovsky* and Ekaterina V. Skorb*



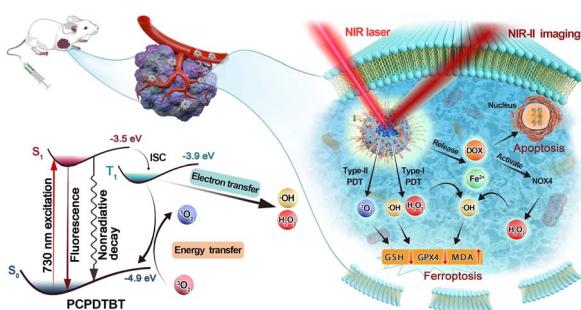
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**Aminomethylations of electron-deficient compounds—bringing iron photoredox catalysis into play**

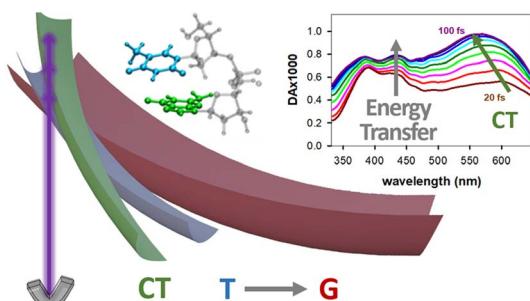
Aleksandra Ilic, Benjamin R. Strücker, Catherine E. Johnson, Simon Hainz, Reiner Lomoth* and Kenneth Wärnmark*

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**Confined semiconducting polymers with boosted NIR light-triggered H_2O_2 production for hypoxia-tolerant persistent photodynamic therapy**

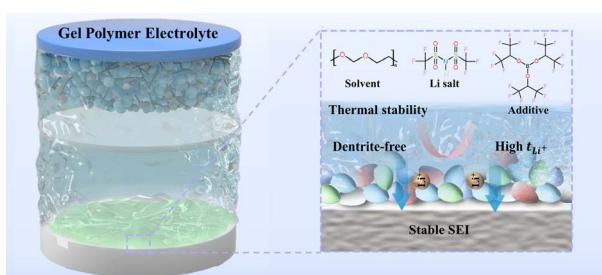
Feng Lu, Lili Li, Meng Zhang, Chengwu Yu, Yonghui Pan, Fangfang Cheng, Wenbo Hu, Xiaomei Lu, Qi Wang* and Quli Fan*

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**Real-time observation of sub-100-fs charge and energy transfer processes in DNA dinucleotides**

Vasilis Petropoulos, Lara Martinez-Fernandez*, Lorenzo Uboldi, Margherita Maiuri, Giulio Cerullo*, Evangelos Balanikas and Dimitra Markovitsi*

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***In situ* polymerization of 1,3-dioxolane and formation of fluorine/boron-rich interfaces enabled by film-forming additives for long-life lithium metal batteries**

Ting Li, Kai Chen, Borui Yang, Kun Li, Bin Li, Miao He, Liu Yang, Anjun Hu* and Jianping Long*

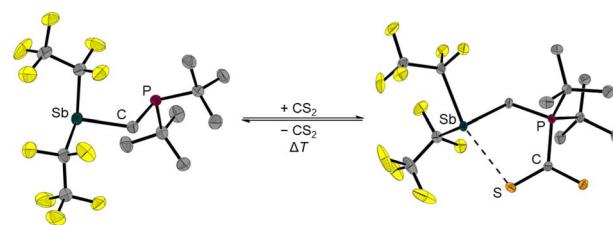


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A geminal antimony(III)/phosphorus(III) frustrated Lewis pair

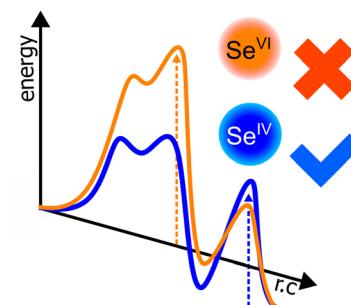
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Jan-Hendrik Lamm and Norbert W. Mitzel*



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Untangling the catalytic importance of the Se oxidation state in organoselenium-mediated oxygen-transfer reactions: the conversion of aniline to nitrobenzene

Andrea Madabeni, Damiano Tanini, Antonella Capperucci
and Laura Orian*



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Flexible interactions of the rare-earth elements Y, La, and Lu with phosphorus in metallacyclohexane rings

Yury Minko, Taylor V. Fetrow, Shikha Sharma, Brenna K. Cashman and Aaron M. Tondreau*

