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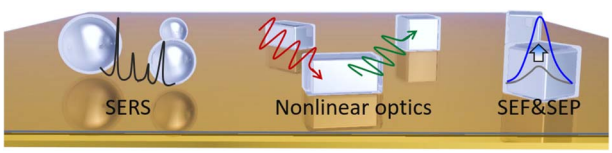

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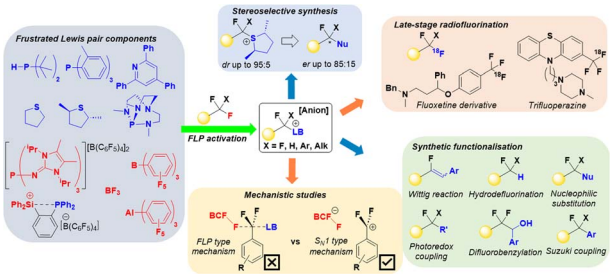
PERSPECTIVES

2712

A review of frustrated Lewis pair enabled monoselective C–F bond activation

Kenneth Lye and Rowan D. Young*



EDGE ARTICLES

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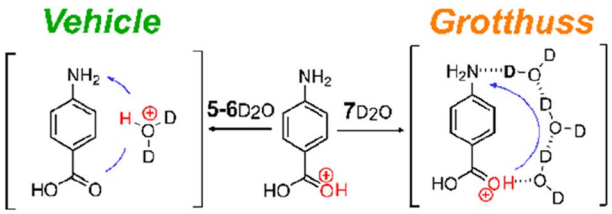
Transition from vehicle to Grotthuss proton transfer in a nanosized flask: cryogenic ion spectroscopy of protonated *p*-aminobenzoic acid solvated with D_2O

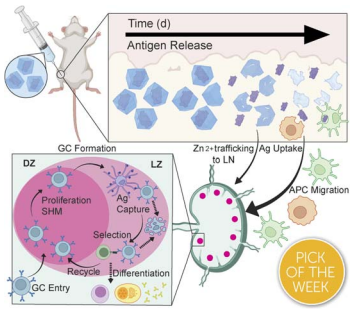
Keisuke Hirata, Kyota Akasaka, Otto Dopfer,* Shun-ichi Ishiuchi* and Masaaki Fujii*



2731

A scalable synthesis of adjuvanting antigen depots based on metal–organic frameworks

Ryanne N. Ehrman, Olivia R. Brohlin, Yalini H. Wijesundara, Sneha Kumari, Orikeda Trashi, Thomas S. Howlett, Ikeda Trashi, Fabian C. Herbert, Arun Raja, Shailendra Koirala, Nancy Tran, Noora M. Al-Kharji, Wendy Tang, Milinda C. Senarathna, Laurel M. Hagge, Ronald A. Smaldone and Jeremiah J. Gassensmith*



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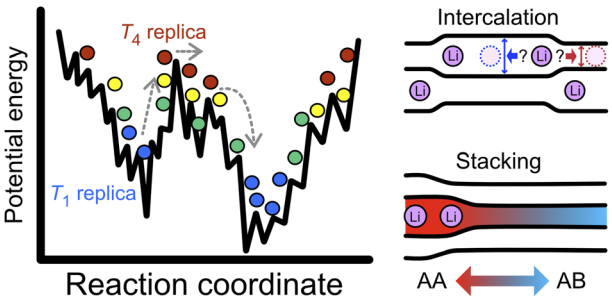
Replica exchange molecular dynamics for Li-intercalation in graphite: a new solution for an old problem

Heesoo Park,* David S. Wragg and Alexey Y. Koposov*



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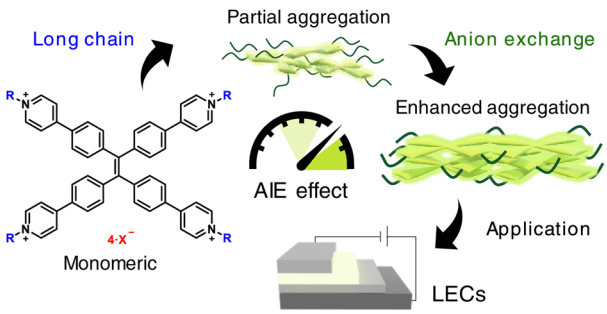
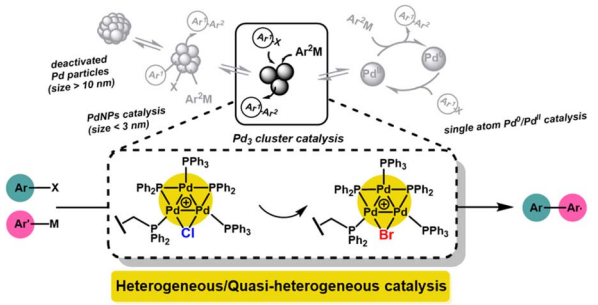


Controlling aggregation-induced emission by supramolecular interactions and colloidal stability in ionic emitters for light-emitting electrochemical cells

Alba Sanz-Velasco, Olivia Amargós-Reyes, Aya Kähäri, Sophia Lipinski, Luca M. Cavinato, Rubén D. Costa,* Mauri A. Kostiainen and Eduardo Anaya-Plaza*

2763



Evidence for Suzuki–Miyaura cross-couplings catalyzed by ligated Pd_3-clusters: from cradle to grave

Neda Jeddi, Neil W. J. Scott, Theo Tanner, Simon K. Beaumont* and Ian J. S. Fairlamb*

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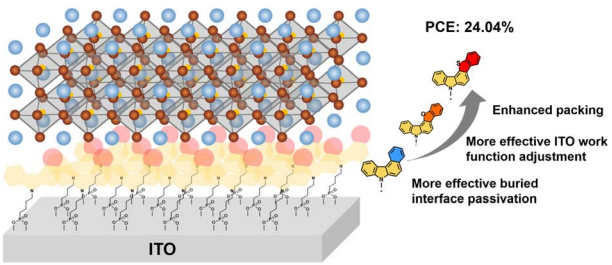

Rational molecular design of multifunctional self-assembled monolayers for efficient hole selection and buried interface passivation in inverted perovskite solar cells

Wenlin Jiang, Ming Liu, Yanxun Li, Francis R. Lin and Alex K.-Y. Jen*

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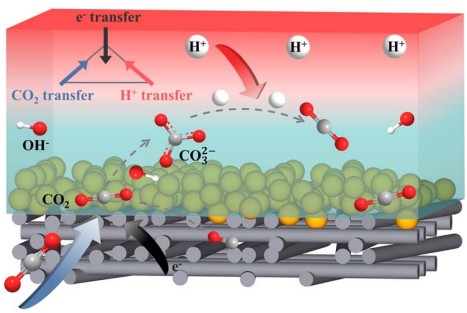

Unravelling the carbonate issue through the regulation of mass transport and charge transfer in mild acid

Zhongshuo Zhang, Qian Lu, Jiping Sun, Guangchao Li, Weixing Wu, Zhanyou Xu, Liangpang Xu and Ying Wang*

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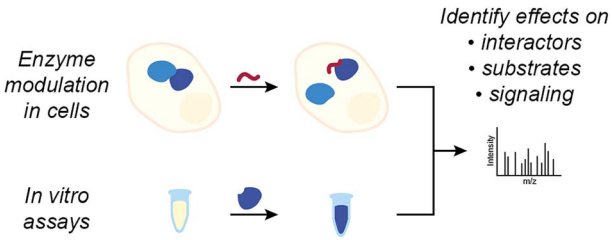
A strategy to disentangle direct and indirect effects on (de)phosphorylation by chemical modulators of the phosphatase PP1 in complex cellular contexts

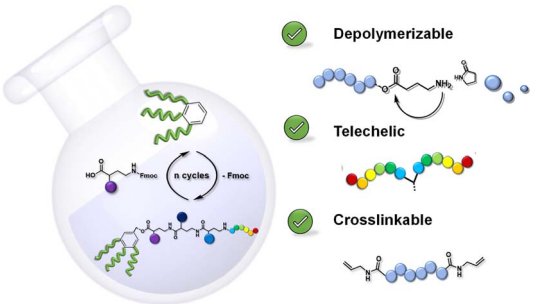
Bernhard Hoermann, Eva-Maria Dürr, Christina Ludwig, Melda Ercan and Maja Köhn*



2805

Telechelic sequence-defined oligoamides: their step-economical synthesis, depolymerization and use in polymer networks

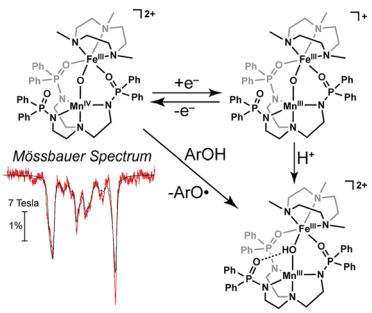
Irene De Franceschi, Nezha Badi* and Filip E. Du Prez*



2817

Accessing a synthetic $Fe^{III}Mn^{IV}$ core to model biological heterobimetallic active sites

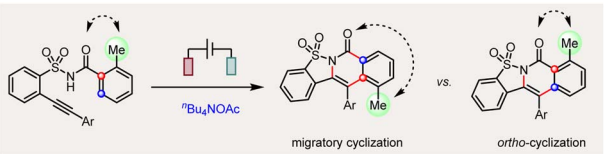
Justin L. Lee, Saborni Biswas, Joseph W. Ziller, Emile L. Bominaar, Michael P. Hendrich and A. S. Borovik*



2827

Electrochemical cascade migratory *versus ortho*-cyclization of 2-alkynylbenzenesulfonamides

Zhaojiang Shi, Shicheng Dong, Ting Liu, Wei-Zhen Wang, Nan Li, Yaofeng Yuan, Jun Zhu* and Ke-Yin Ye*



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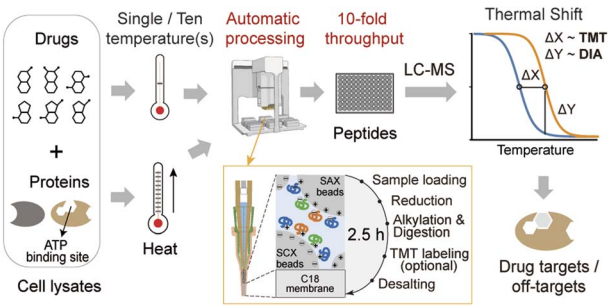
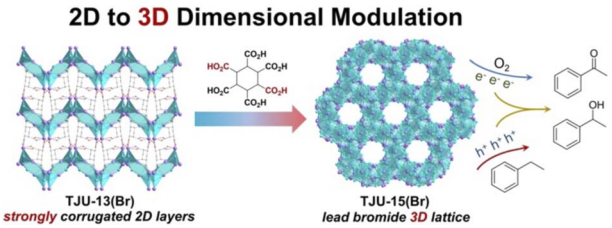


High-throughput drug target discovery using a fully automated proteomics sample preparation platform

Qiong Wu, Jiangnan Zheng, Xintong Sui, Changying Fu, Xiaozhen Cui, Bin Liao, Hongchao Ji, Yang Luo, An He, Xue Lu, Xinyue Xue, Chris Soon Heng Tan* and Ruijun Tian*

2848



Promoting the formation of metal–carboxylate coordination to modulate the dimensionality of ultrastable lead halide hybrids

Yilin Jiang, Jinlin Yin, Ruonan Xi and Honghan Fei*

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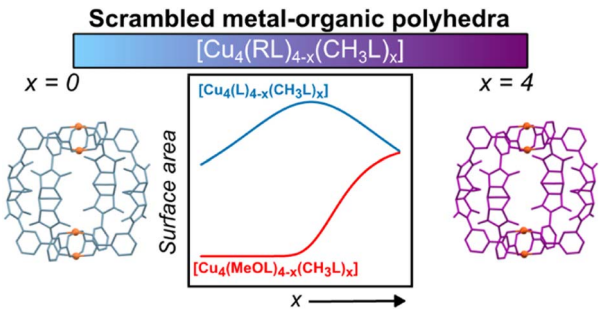

Improving the gas sorption capacity in lantern-type metal–organic polyhedra by a scrambled cage method

Beatriz Doñagueda Suso, Zaoming Wang, Alan R. Kennedy, Ashleigh J. Fletcher, Shuhei Furukawa and Gavin A. Craig*

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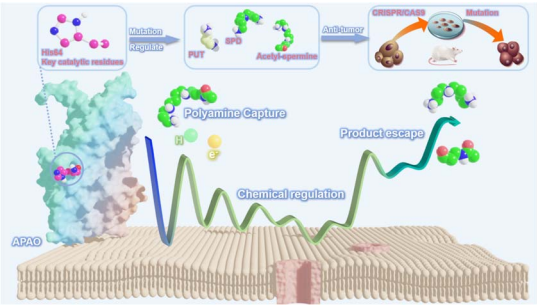

Enzymatic-related network of catalysis, polyamine, and tumors for acetylpolyamine oxidase: from calculation to experiment

Dong Fang, Zhiyang Zhang, Jihang Zhai, Baolin Guo, Pengfei Li, Xiaoyuan Liu, Jinshuai Song, Songqiang Xie, Ruibo Wu, Yuan Zhao* and Chaojie Wang*

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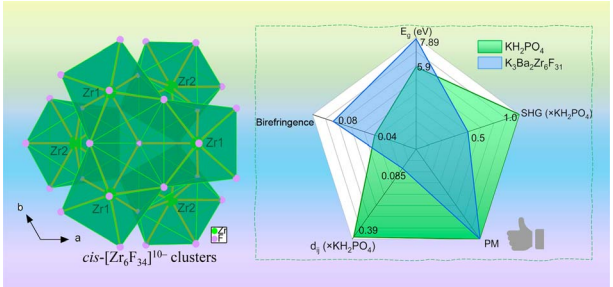
Exploring a new short-wavelength nonlinear optical fluoride material featuring unprecedented polar *cis*-$[Zr_6F_{34}]^{10-}$ clusters

Mei Yan, Ru-Ling Tang,* Wen-Dong Yao, Wenlong Liu and Sheng-Ping Guo*



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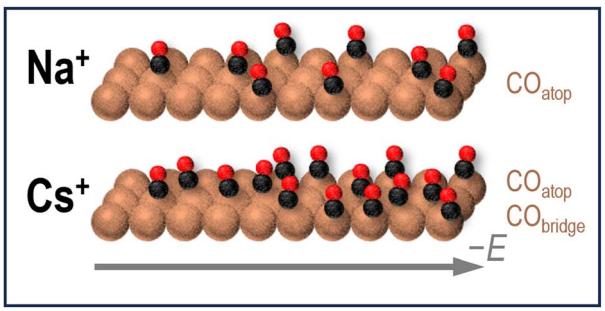
Studying the cation dependence of CO_2 reduction intermediates at Cu by *in situ* VSFG spectroscopy

Liam C. Banerji, Hansaem Jang, Adrian M. Gardner and Alexander J. Cowan*



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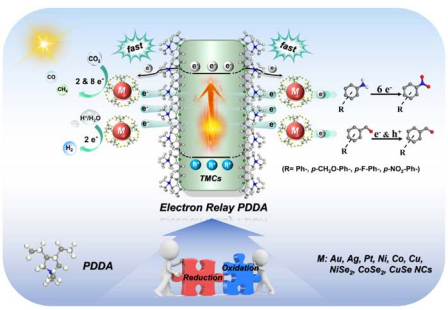
Customizing precise, tunable, and universal cascade charge transfer chains towards versatile photoredox catalysis

Xian Yan, Jun-Hao Dong, Jing-Ying Zheng, Yue Wu and Fang-Xing Xiao*



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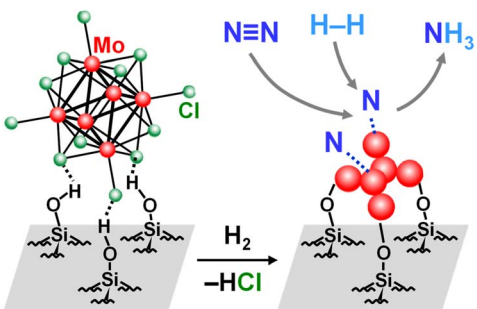
Catalytic ammonia synthesis on HY-zeolite-supported angstrom-size molybdenum cluster

Satoshi Kamiguchi,* Kiyotaka Asakura, Tamaki Shibayama, Tomoko Yokaichiya, Tatsushi Ikeda, Akira Nakayama,* Ken-ichi Shimizu and Zhaomin Hou



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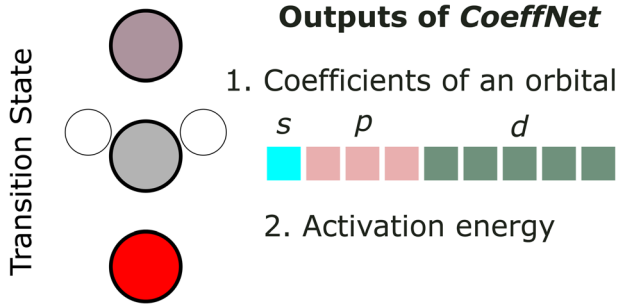

CoeffNet: predicting activation barriers through a chemically-interpretable, equivariant and physically constrained graph neural network

Sudarshan Vijay, Maxwell C. Venetos, Evan Walter Clark Spotte-Smith, Aaron D. Kaplan, Mingjian Wen and Kristin A. Persson*

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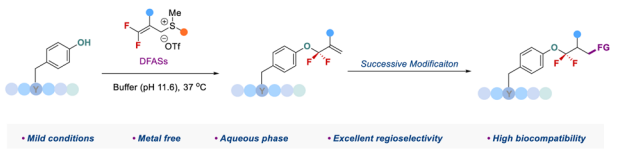

Late-stage *gem*-difluoroallylation of phenol in bioactive molecules and peptides with 3,3-difluoroallyl sulfonium salts

Minqi Zhou, Jin-Xiu Ren, Xiao-Tian Feng, Hai-Yang Zhao, Xia-Ping Fu, Qiao-Qiao Min and Xingang Zhang*

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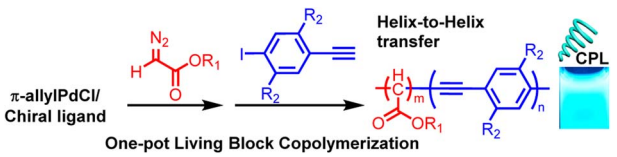

One-pot asymmetric living copolymerization-induced chiral self-assemblies and circularly polarized luminescence

Run-Tan Gao, Shi-Yi Li, Bing-Hao Liu, Zheng Chen, Na Liu,* Li Zhou and Zong-Quan Wu*

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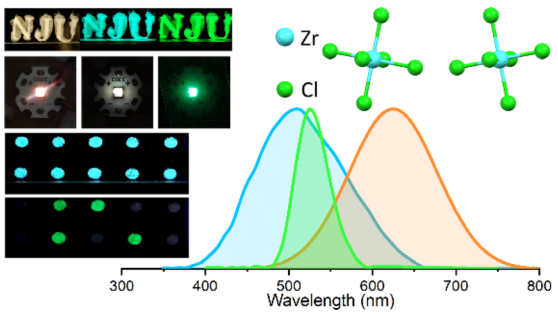

RGB tri-luminescence in organic–inorganic zirconium halide perovskites

Chuying Wang, Wen Meng, Guigen Luo, Guangyong Xu, Min Peng, Bin Xu, Shuming Nie and Zhengtao Deng*

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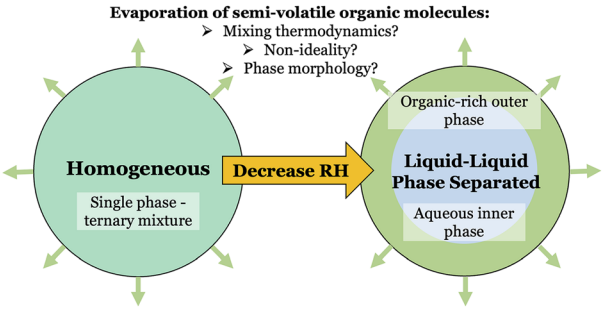
Probing the evaporation dynamics of semi-volatile organic compounds to reveal the thermodynamics of liquid–liquid phase separated aerosol

Jack M. Choczynski, Bilal Shokoor, Jorge Salazar, Andreas Zuend and James F. Davies*



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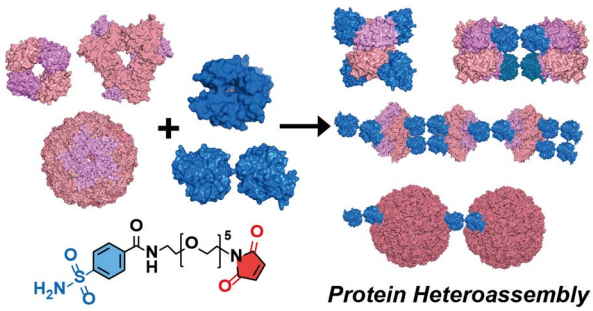
Programming interchangeable and reversible heterooligomeric protein self-assembly using a bifunctional ligand

Soyeun Son and Woon Ju Song*



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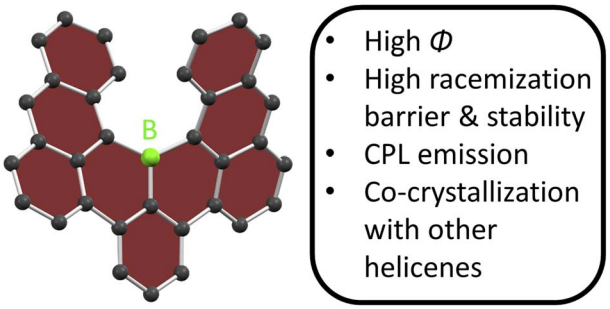
A highly fluorescent bora[6]helicene exhibiting circularly polarized light emission

Matthias Schnitzlein, Kazutaka Shoyama and Frank Würthner*



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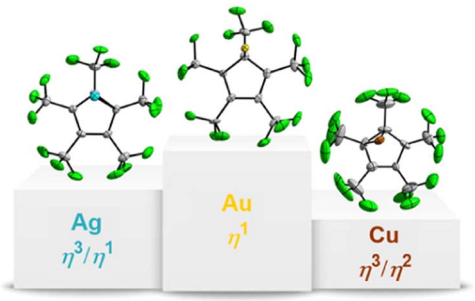
Synthesis and structural characterization of stable coinage metal (Cu, Ag, Au) cyclopentadienyl complexes

Robin Sievers, Marc Reimann, Nico G. Kub, Susanne M. Rupf, Martin Kaupp and Moritz Malischewski*



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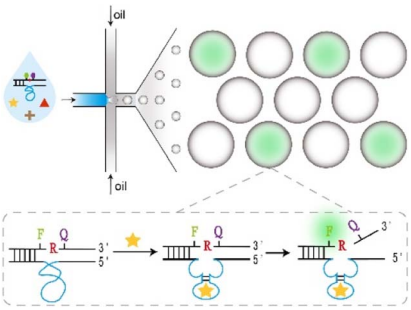

A DNAzymes-in-droplets assay for *Burkholderia gladioli pathovar cocovenenans* with single-bacterium sensitivity

Xiaoqian Li, Yangyang Chang, Yunping Wu and Meng Liu*

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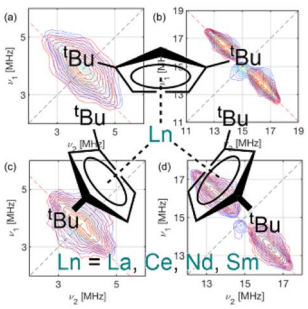
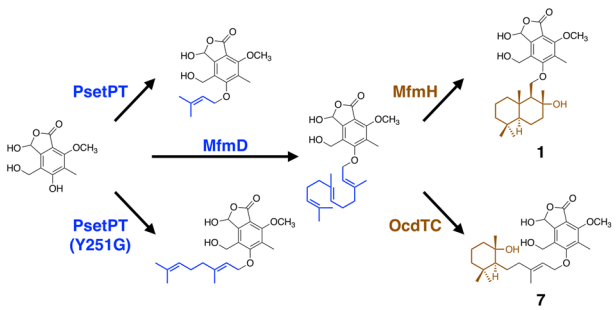


Metal–carbon bonding in early lanthanide substituted cyclopentadienyl complexes probed by pulsed EPR spectroscopy

Lydia E. Nodaraki, Jingjing Liu, Ana-Maria Ariciu, Fabrizio Ortu, Meagan S. Oakley, Letitia Birnoschi, Gemma K. Gransbury, Philip J. Cobb, Jack Emerson-King, Nicholas F. Chilton,* David P. Mills,* Eric J. L. McInnes* and Floriana Tuna*

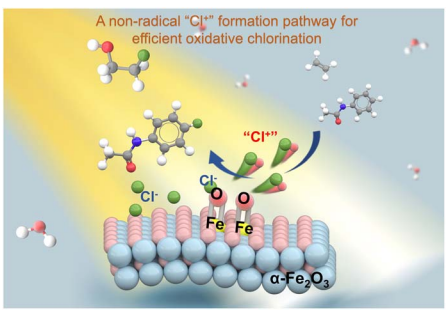
3011



Global genome mining-driven discovery of an unusual biosynthetic logic for fungal polyketide–terpenoid hybrids

Dexiu Yan and Yudai Matsuda*

3018



A controlled non-radical chlorine activation pathway on hematite photoanodes for efficient oxidative chlorination reactions

Daojian Tang, Lei Wu, Liubo Li, Niankai Fu, Chuncheng Chen, Yuchao Zhang* and Jincai Zhao

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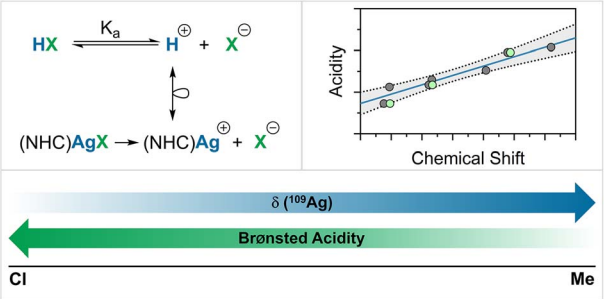
^{109}Ag NMR chemical shift as a descriptor for Brønsted acidity from molecules to materials

Colin Hansen, Scott R. Docherty, Weicheng Cao, Alexander V. Yakimov and Christophe Copéret*



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