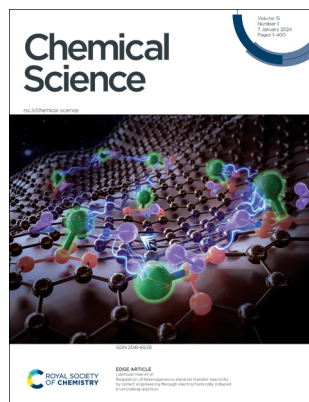


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ISSN 2041-6539 CODEN CSHCBM 15(1) 1–400 (2024)



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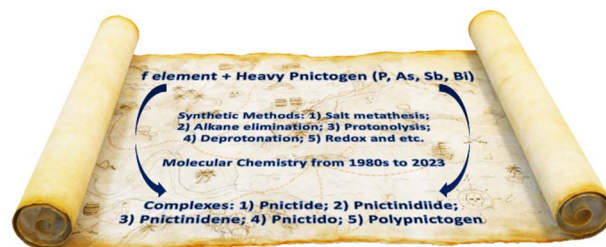
Inside cover
See Diana Portugal Barron and Zhefeng Guo, pp. 46–54. Image reproduced by permission of Diana Portugal Barron and Zhefeng Guo from *Chem. Sci.*, 2024, 15, 46.

REVIEW

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f-Element heavy pnictogen chemistry

Jingzhen Du, Philip J. Cobb, Junru Ding, David P. Mills* and Stephen T. Liddle*

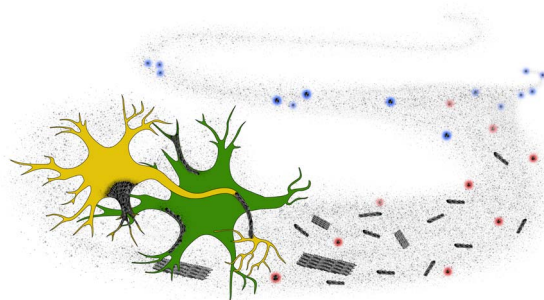


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The supersaturation perspective on the amyloid hypothesis

Diana Portugal Barron and Zhefeng Guo*



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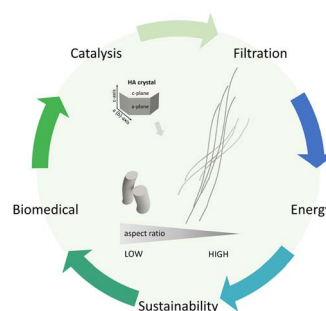


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High-aspect-ratio nanostructured hydroxyapatite: towards new functionalities for a classical material

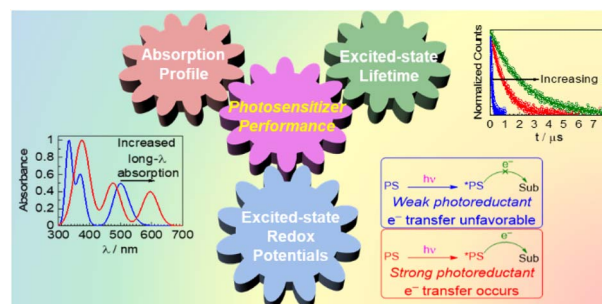
Anna Diez-Escudero, Montserrat Espanol and Maria-Pau Ginebra*



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Improved transition metal photosensitizers to drive advances in photocatalysis

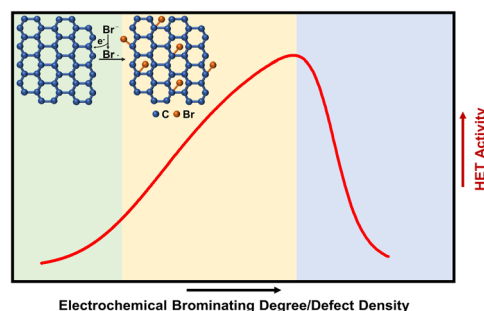
Dooyoung Kim, Vinh Q. Dang and Thomas S. Teets*



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Regulation of heterogeneous electron transfer reactivity by defect engineering through electrochemically induced brominating addition

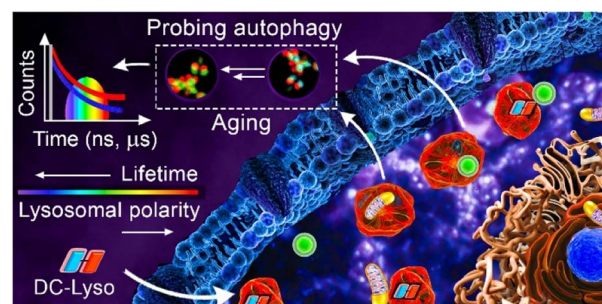
Lanping Zeng, Lianhuan Han,* Wenjing Nan, Weiyong Song, Shiyi Luo, Yuan-Fei Wu, Jian-Jia Su and Dongping Zhan



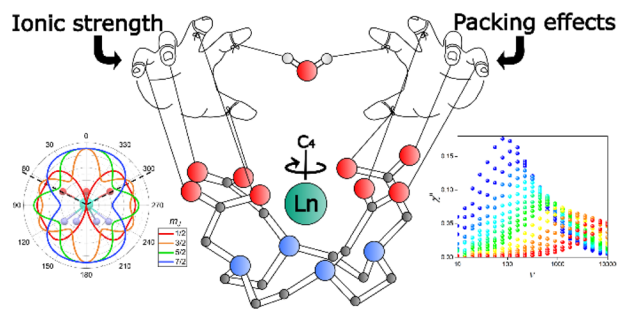
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Unveiling autophagy and aging through time-resolved imaging of lysosomal polarity with a delayed fluorescent emitter

Subhadeep Das, Abhilasha Batra, Subhankar Kundu, Rati Sharma and Abhijit Patra*



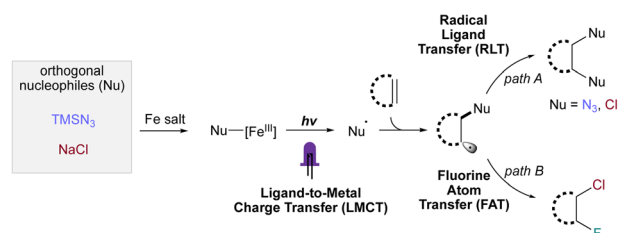
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LnDOTA puppeteering: removing the water molecule and imposing tetragonal symmetry

Anna Schannong Manvell, Rouven Pflieger, Niels Andreas Bonde, Matteo Briganti,* Carlo Andrea Mattei, Theis Brock Nannestad, Høgni Weihe, Annie K. Powell, Jacques Ollivier, Jesper Bendix* and Mauro Perfetti*

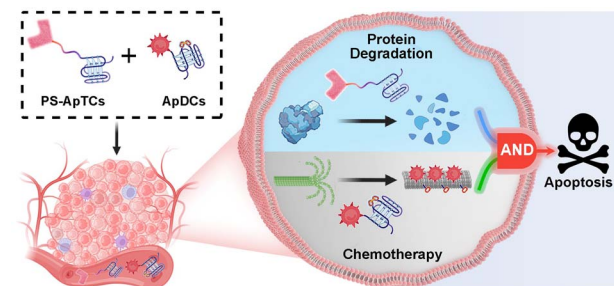
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Photocatalytic, modular difunctionalization of alkenes enabled by ligand-to-metal charge transfer and radical ligand transfer

Kang-Jie Bian, David Nemoto, Jr, Xiao-Wei Chen, Shih-Chieh Kao, James Hooson and Julian G. West*

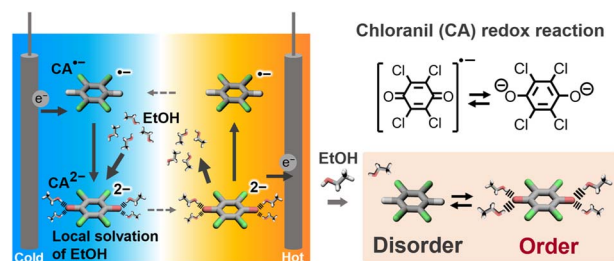
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Cooperatively designed aptamer-PROTACs for spatioselective degradation of nucleocytoplasmic shuttling protein for enhanced combinational therapy

Ran Liu, Zheng Liu, Mohan Chen, Hang Xing, Penghui Zhang* and Jingjing Zhang*

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Exploring the local solvation structure of redox molecules in a mixed solvent for increasing the Seebeck coefficient of thermocells

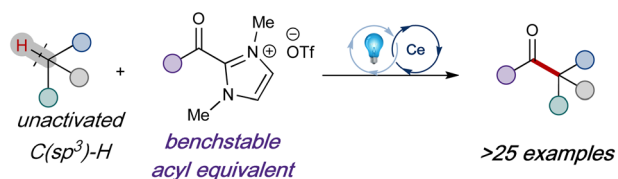
Hirota Inoue, Hongyao Zhou,* Hideo Ando, Sakuya Nakagawa and Teppei Yamada*



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Photoinduced cerium-catalyzed C–H acylation of unactivated alkanes

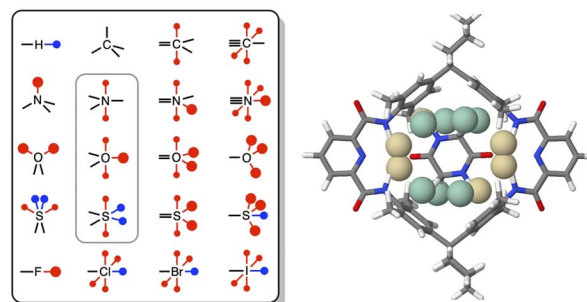
Jing Cao, Joshua L. Zhu and Karl A. Scheidt*



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An atomic surface site interaction point description of non-covalent interactions

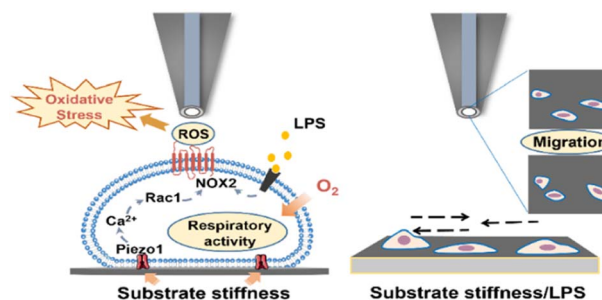
Maria Chiara Storer, Katarzyna J. Zator, Derek P. Reynolds and Christopher A. Hunter*



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Matrix stiffness-dependent microglia activation in response to inflammatory cues: *in situ* investigation by scanning electrochemical microscopy

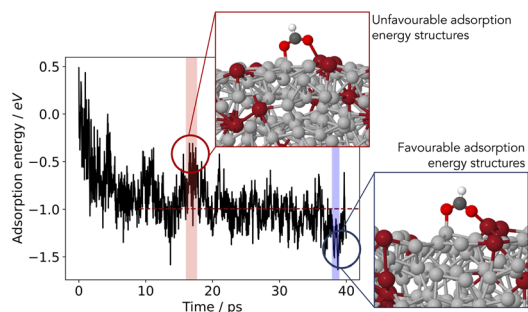
Yulin Liu, Junjie Zhang, Yabei Li, Yuxiang Zhao, Shuake Kuermanbayi, Jian Zhuang, Hua Zhang, Feng Xu* and Fei Li*



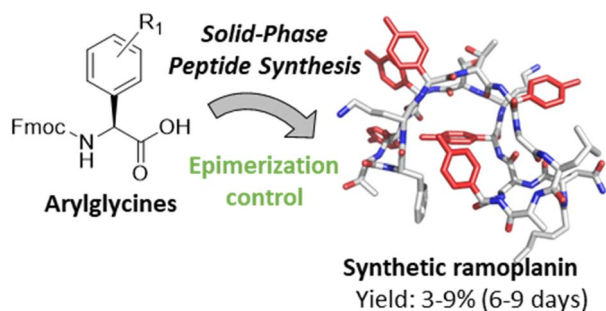
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Dynamic sampling of liquid metal structures for theoretical studies on catalysis

Charlie Ruffman, Krista G. Steenbergen, Anna L. Garden and Nicola Gaston*



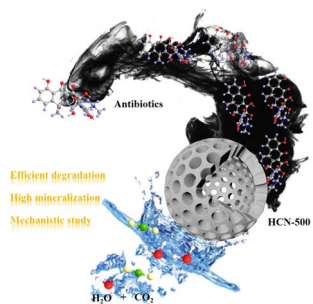
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Synthetic ramoplanin analogues are accessible by effective incorporation of arylglycines in solid-phase peptide synthesis

Edward Marschall, Rachel W. Cass, Komal M. Prasad, James D. Swarbrick, Alasdair I. McKay, Jennifer A. E. Payne, Max J. Cryle* and Julien Tailhades*

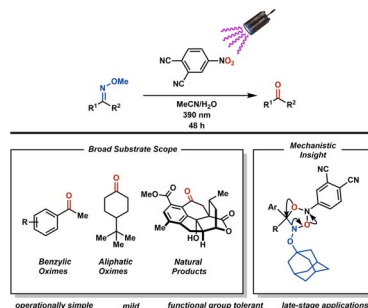
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Using waste to treat waste: facile synthesis of hollow carbon nanospheres from lignin for water decontamination

Xiang Liu,* Zixuan Hao, Chen Fang, Kun Pang, Jiaying Yan, Yingping Huang, Di Huang* and Didier Astruc*

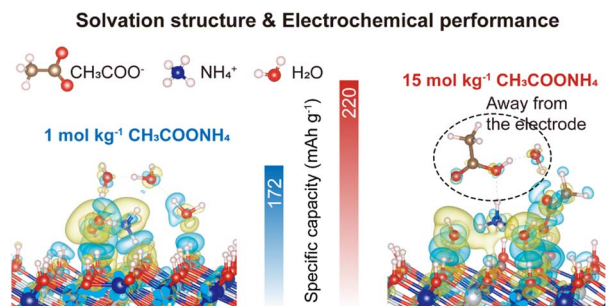
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Oxidative cleavage of ketoximes to ketones using photoexcited nitroarenes

Lucas T. Göttemann, Stefan Wiesler and Richmond Sarpong*

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A salt-concentrated electrolyte for aqueous ammonium-ion hybrid batteries

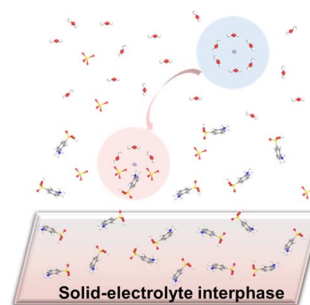
Jianming Meng, Yu Song,* Jing Wang,* Peng Hei, Chang Liu, Mengxue Li, Yulai Lin and Xiao-Xia Liu*



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Interface regulation of the Zn anode by using a low concentration electrolyte additive for aqueous Zn batteries

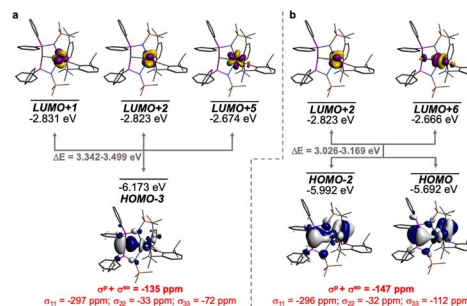
Kuo Wang, Qianrui Li, Guoli Zhang, Shuo Li, Tong Qiu, Xiao-Xia Liu and Xiaoqi Sun*



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$^{13}\text{C}_{\text{carbene}}$ nuclear magnetic resonance chemical shift analysis confirms $\text{Ce}^{\text{IV}}=\text{C}$ double bonding in cerium(IV)-diphosphonioalkylidene complexes

Cameron F. Baker, John A. Seed, Ralph W. Adams, Daniel Lee* and Stephen T. Liddle*

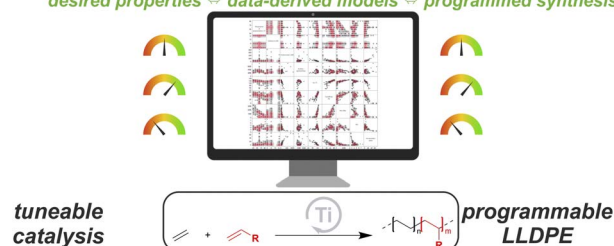


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Towards designer polyolefins: highly tuneable olefin copolymerisation using a single permethylindenyl post-metallocene catalyst

Clement G. Collins Rice, Louis J. Morris, Jean-Charles Buffet, Zoë R. Turner and Dermot O'Hare*

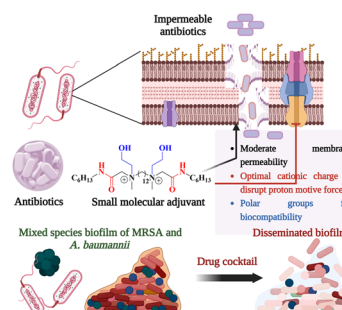
✓ highly active PHENI* Ti catalyst ✓ olefin agnostic
 desired properties ↔ data-derived models ↔ programmed synthesis



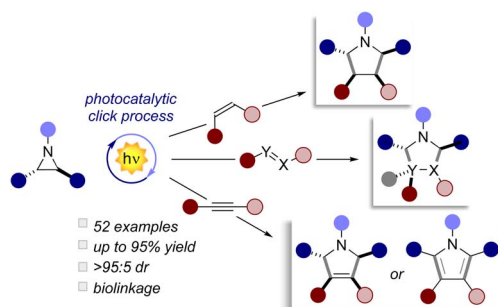
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Small molecular adjuvants repurpose antibiotics towards Gram-negative bacterial infections and multispecies bacterial biofilms

Rajib Dey, Sudip Mukherjee, Riya Mukherjee and Jayanta Haldar*



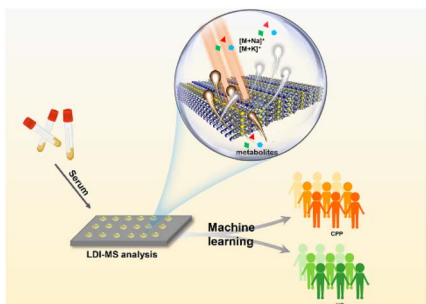
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Photocatalytic (3 + 2) dipolar cycloadditions of aziridines driven by visible-light

Daniele Mazzarella, Tommaso Bortolato, Giorgio Pelosi and Luca Dell'Amico*

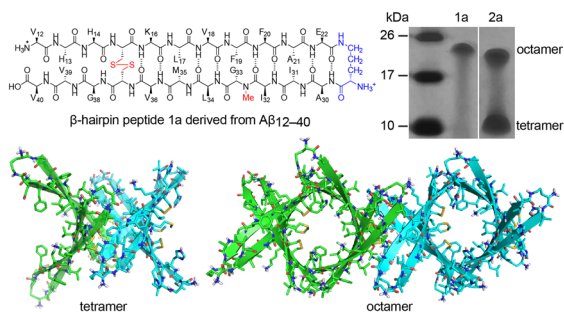
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Organic metal chalcogenide-assisted metabolic molecular diagnosis of central precocious puberty

Dan Ouyang, Chuanzhe Wang, Chao Zhong, Juan Lin, Gang Xu, Guane Wang* and Zian Lin*

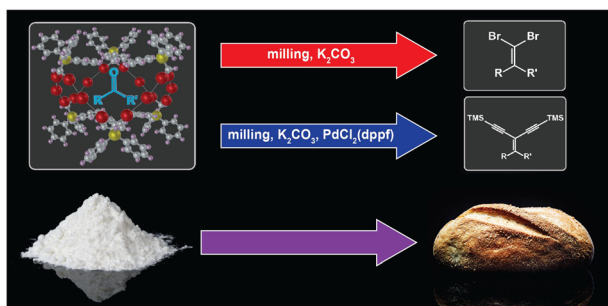
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A β-barrel-like tetramer formed by a β-hairpin derived from Aβ

Tuan D. Samdin, Chelsea R. Jones, Gretchen Guaglianone, Adam G. Kreutzer, J. Alfredo Freitas, Michał Wierzbicki and James S. Nowick*

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Supramolecular "baking powder": a hexameric halogen-bonded phosphonium salt cage encapsulates and functionalises small-molecule carbonyl compounds

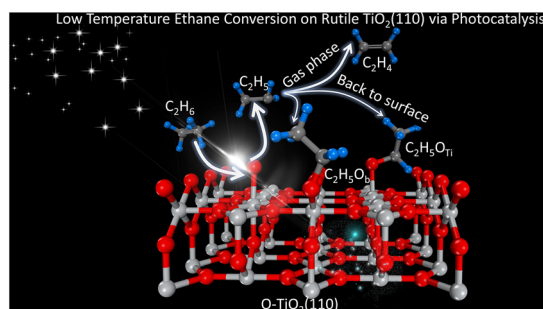
Joseph M. Marrett, Hatem M. Titi, Yong Teoh and Tomislav Frišćić*



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Photocatalytic ethane conversion on rutile TiO₂(110): identifying the role of the ethyl radical

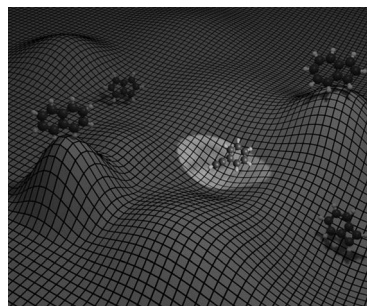
Fangliang Li, Yuemiao Lai, Yi Zeng, Xiao Chen, Tao Wang, Xueming Yang and Qing Guo*



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New light on the imbroglia surrounding the C₈H₆⁺ isomers formed from ion–molecule reactions

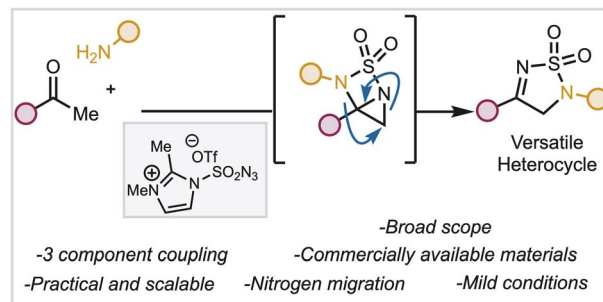
Corentin Rossi, Giel Muller, Roland Thissen, Claire Romanzin, Christian Alcaraz, Sandesh Gondarry, Paul M. Mayer and Ugo Jacovella*



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Convergent synthesis of thiodiazole dioxides from simple ketones and amines through an unusual nitrogen-migration mechanism

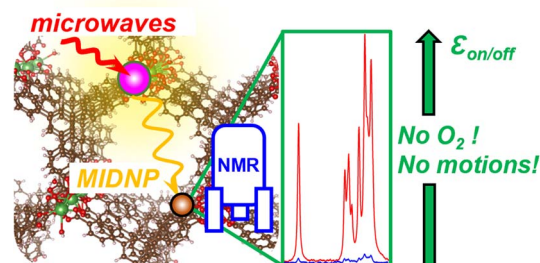
Kunlayanee Punjajom, Paul P. Sinclair, Ishika Saha, Mark Seierstad, Michael K. Ameriks, Pablo García-Reynaga,* Terry P. Lebold* and Richmond Sarpong*



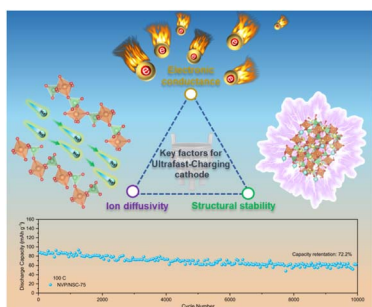
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Endogenous metal-ion dynamic nuclear polarization for NMR signal enhancement in metal organic frameworks

Ilia B. Moroz, Yishay Feldman, Raanan Carmieli, Xinyu Liu and Michal Leskes*



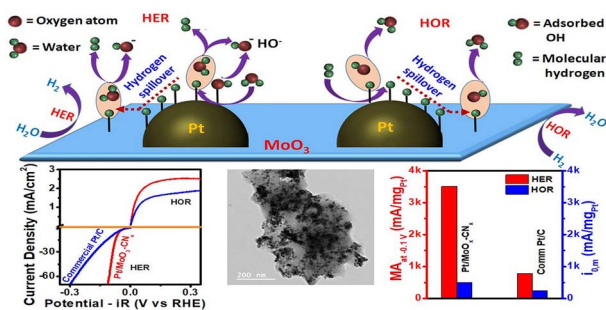
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Boosting the interfacial dynamics and thermodynamics in polyanion cathode by carbon dots for ultrafast-charging sodium ion batteries

Yujin Li, Yu Mei, Roya Momen, Bai Song, Yujie Huang, Xue Zhong, Hanrui Ding, Wentao Deng, Guoqiang Zou, Hongshuai Hou* and Xiaobo Ji

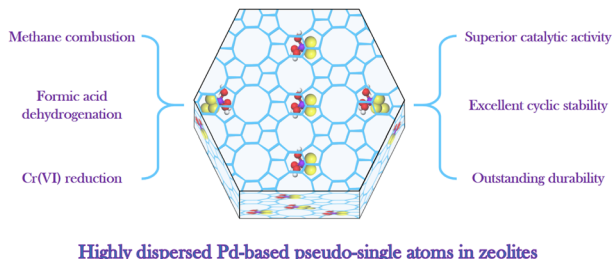
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Hydrogen spillover enhances alkaline hydrogen electrocatalysis on interface-rich metallic Pt-supported MoO₃

Rajib Samanta, Biplab Kumar Manna, Ravi Trivedi, Brahmananda Chakraborty and Sudip Barman*

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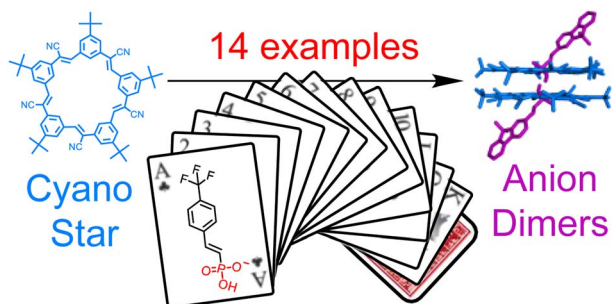


Highly dispersed Pd-based pseudo-single atoms in zeolites

Highly dispersed Pd-based pseudo-single atoms in zeolites for hydrogen generation and pollutant disposal

Kai Zhang, Ning Wang,* Yali Meng, Tianjun Zhang, Pu Zhao, Qiming Sun* and Jihong Yu*

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A library of vinyl phosphonate anions dimerize with cyanostars, form supramolecular polymers and undergo statistical sorting

Yusheng Chen, Anastasia Kuvayskaya, Maren Pink, Alan Sellinger and Amar H. Flood*

