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Chemical Communications

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Inside cover

See Frerk-Ulfert Wehmeyer and Robert Langer, pp. 6004–6007. Image reproduced by permission of Robert Langer, Frerk-Ulfert Wehmeyer and Ellen Ohst from *Chem. Commun.*, 2023, 59, 6004. Artwork by Ellen Ohst.

HIGHLIGHT

5943

Recent progress on the design and applications of superhalogens

Ambrish Kumar Srivastava

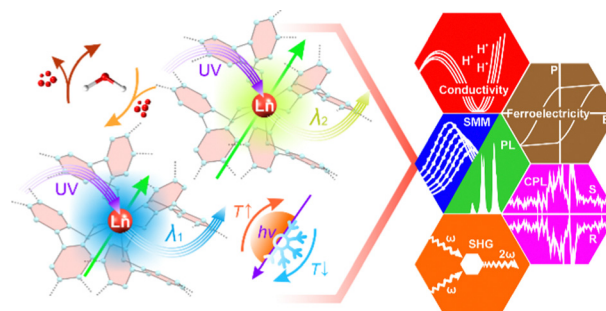


FEATURE ARTICLES

5961

Multifunctionality of luminescent molecular nanomagnets based on lanthanide complexes

Robert Jankowski, Maciej Wyczesany and Szymon Chorazy*



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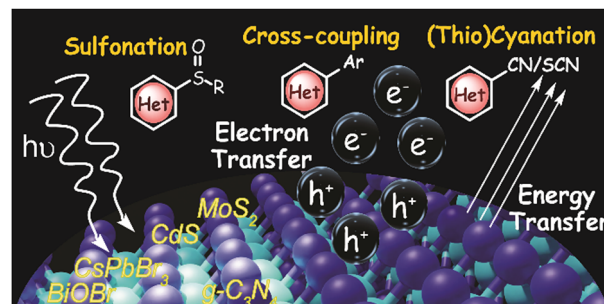


FEATURE ARTICLES

5987

Nanomaterials in photocatalysed organic transformations: development, prospects and challenges

Komal Jaiswal, Madhusmita Mahanta and Mrinmoy De*

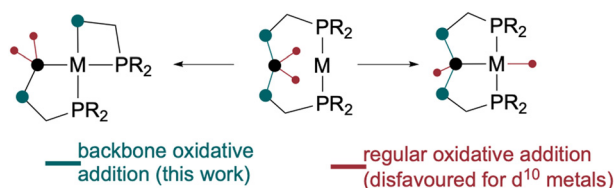


COMMUNICATIONS

6004

A hampered oxidative addition of pre-coordinated pincer ligands can favour alternative pathways of activation

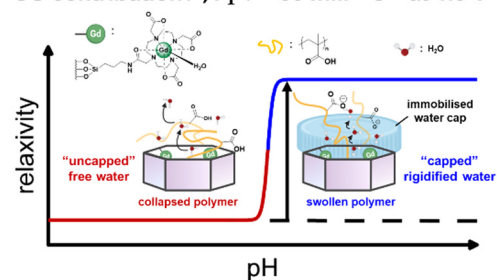
Frerk-Ulfert Wehmeyer and Robert Langer*



6008

Ultrahigh magnetic resonance contrast switching with water gated polymer–silica nanoparticles

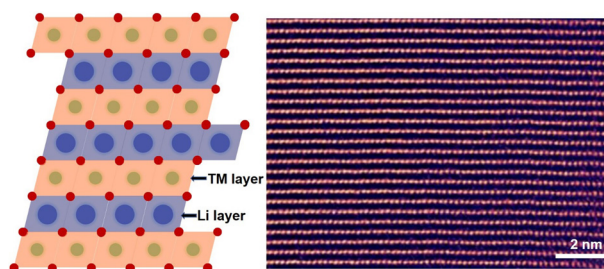
Daohe Yuan, Connor M. Ellis, Ferenc E. Mózes and Jason J. Davis*

OS contribution \uparrow , $r_1 \uparrow > 50 \text{ mM}^{-1} \text{ s}^{-1}$ at 1.5 T

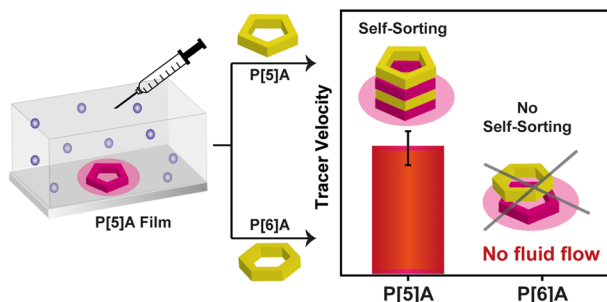
6012

Fabrication of a $\text{LiNi}_{0.5}\text{Mn}_{0.4}\text{Ti}_{0.03}\text{Mg}_{0.03}\text{Nb}_{0.01}\text{Mo}_{0.03}\text{O}_2$ cathode for low-cost long-life lithium-ion batteries

Kangwen Qiu,* Liuyang Bai, Jun Song, Yuge Ouyang, Jinbing Cheng* and Yongsong Luo



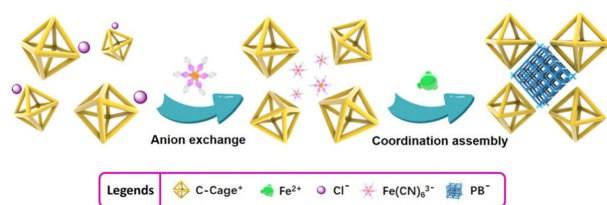
6016



Autonomous macroscopic signal deciphering the geometric self-sorting of pillar[n]arenes

Mujeeb Alam, Rekha Sangwan, Chinmayee Agashe, Arshdeep Kaur Gill and Debabrata Patra*

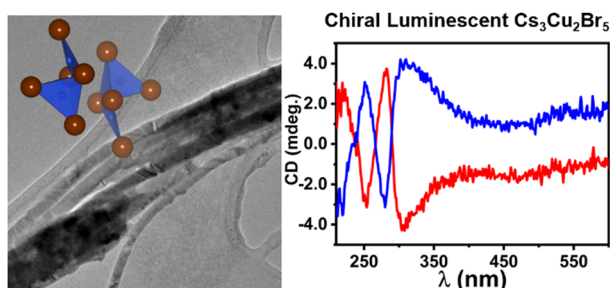
6020



Cooperative cage hybrids enabled by electrostatic marriage

Liyong Zhu, Xinchun Yang* and Jian-Ke Sun*

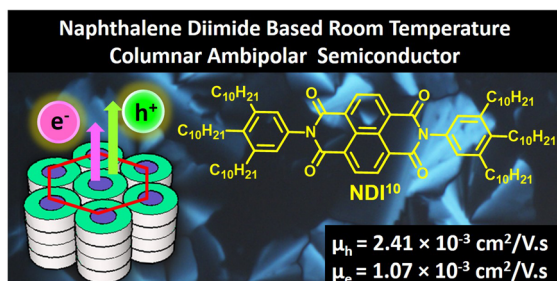
6024



Chirality in luminescent $\text{Cs}_3\text{Cu}_2\text{Br}_5$ microcrystals produced *via* ligand-assisted reprecipitation

Lorenzo Branzi,* Aoife Kavanagh, Michele Back, Adolfo Speghini,* Yurii K. Gun'ko* and Alvise Benedetti*

6028



First example of ambipolar naphthalene diimide exhibiting a room temperature columnar phase

Paresh Kumar Behera, Kajal Yadav, Nandan Kumar, Ravindra Kumar Gupta, D. S. Shankar Rao, Upendra Kumar Pandey* and Ammathnadu Sudhakar Achalkumar*

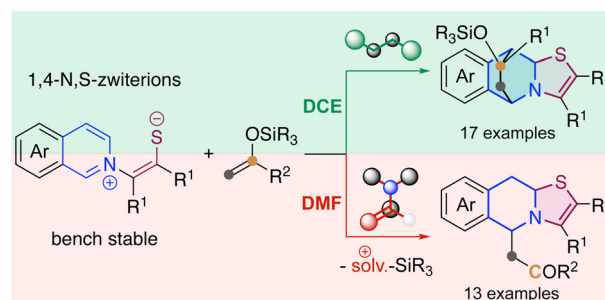


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Divergent access to fused *N*-heterocycle-thiazolines by solvent-dependent reaction of isoquinolinium thiolates with silylketene acetals

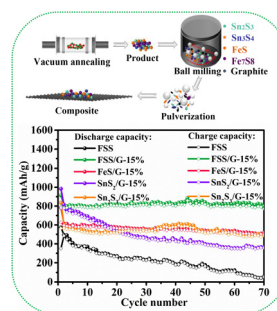
Lukas Schifferer, Leon Hoppmann, Robin Groeters, Christian Mück-Lichtenfeld, Constantin G. Daniliuc and Olga García Mancheño*



6036

Polycrystalline Fe- and Sn-based sulfides for high-capacity sodium-ion battery anodes

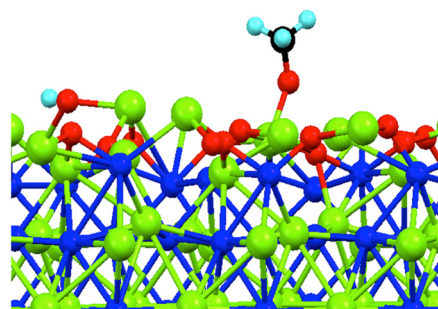
Xinxin Zhu, Peng Wang, Yihong Ding,* Ying Chu, Jie Lin, Shiqiang Zhao,* Huile Jin and Tianbiao Zeng*



6040

Cost-effective, high-performance Ni_3Sn_4 electrocatalysts for methanol oxidation reaction in acidic environments

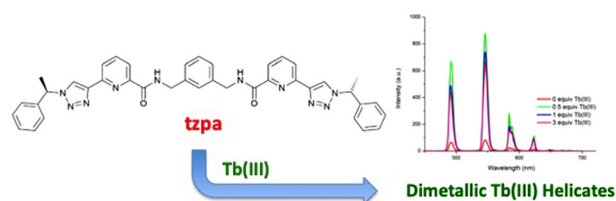
Danil W. Boukhvalov, Gianluca D'Olimpio, Junzhe Liu, Corneliu Ghica, Marian Cosmin Istrate, Chia-Nung Kuo, Grazia Giuseppina Politano, Chin Shan Lue, Piero Torelli, Lixue Zhang* and Antonio Politano*



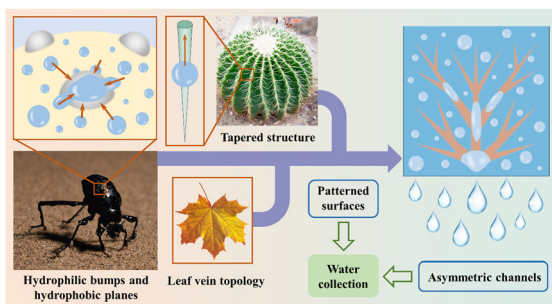
6044

Formation of lanthanide luminescent di-metallic helicates in solution using a bis-tridentate (1,2,3-triazol-4-yl)-picolinamide (tzpa) ligand

Isabel N. Hegarty, Dawn E. Barry, Joseph P. Byrne, Oxana Kotova and Thorfinnur Gunnlaugsson*



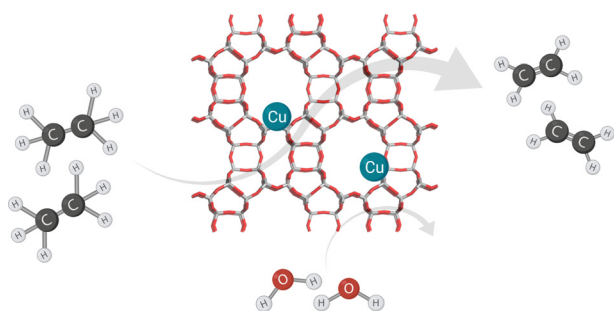
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Design and construction of a Laplace and wettability gradient field for efficient water collection

Qiuyue Wang, Fuchao Yang* and Zhiguang Guo

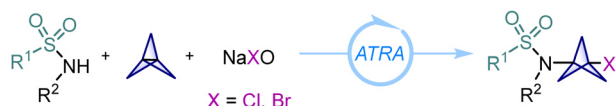
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Cu-loaded zeolites enable the selective activation of ethane to ethylene at low temperatures and pressure

Karoline Kvande, Sebastian Proding, Bjørn Gading Solemsli, Silvia Bordiga, Elisa Borfecchia, Unni Olsbye, Pablo Beato and Stian Svelle*

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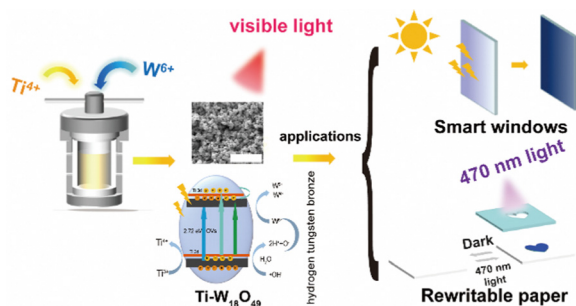


- Catalyst-free
- One-step synthesis
- Mild conditions
- Good functional group tolerance
- High atom economy

Synthesis of C3-halo substituted bicyclo[1.1.1]pentylamines via halosulfoamidation of [1.1.1]propellane with sodium hypohalites and sulfonamides

Zhi Li, Deyou Lan, Wei Zhou, Jiacheng Li, Hui Zhu, Chuanming Yu and Xinpeng Jiang*

6060



Coupling Ti doping with oxygen vacancies in tungsten oxide for high-performance photochromism applications

Jiamin Tang, Hongxi Gu,* Yating Zhao, Mengdi Tan, Weiwei Zhao, Rong Ma, Sheng Zhang and Dengwei Hu

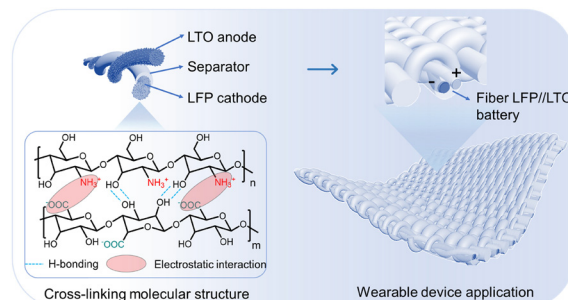


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High-performance fiber-shaped Li-ion battery enabled by a surface-reinforced self-supporting electrode

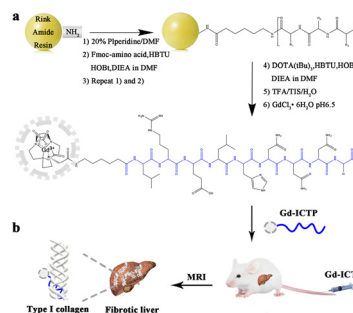
Cong Liu, Yining Lao, Fan Yang, Xiaoqi Gong, Xiaotong Wang, Lu Jiang,* Zhiping Zeng* and Dingshan Yu*



6068

A robust collagen-targeting MRI peptide contrast agent for *in vivo* imaging of hepatic fibrosis

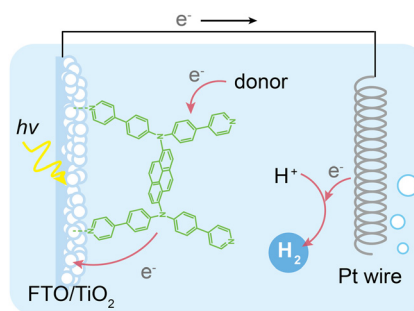
Zhao Liu, Linge Nian, Xiangdong Cai, Yue Hu, Junqiang Lei* and Jianxi Xiao*



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Photoelectrochemical cells with a pyridine-anchored organic dye photoanode for efficient H_2 generation by water reduction

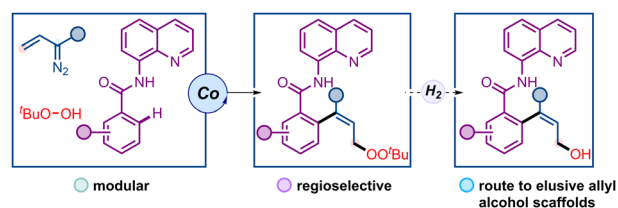
Kun Tang, Jiang-Yang Shao and Yu-Wu Zhong*



6076

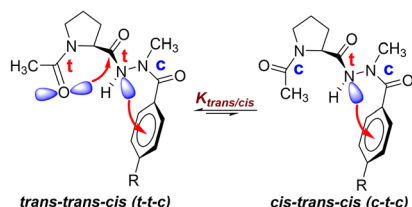
A three component 1,3-difunctionalization of vinyl diazo esters enabled by a cobalt catalyzed C–H activation/carbene migratory insertion

Nandkishor Prakash Khot, Prajyot Jayadev Nagtilak, Nitish Kumar Deo and Manmohan Kapur*



6080

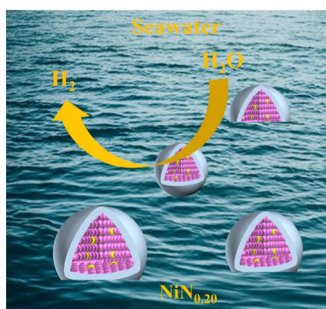
Synergistic $n \rightarrow \pi^*$ and $n_N \rightarrow \pi^*_{Ar}$ interactions stabilize *trans* Xaa-Pro amide geometry



Synergistic $n \rightarrow \pi^*$ and $n_N \rightarrow \pi^*_{Ar}$ interactions in C-terminal modified prolines: effect on Xaa-Pro *cis/trans* equilibrium

Jugal Kishore Rai Deka, Debashree Borah, Paramesh Das, Biswajit Sahariah, Pratap Vishnoi and Bani Kanta Sarma*

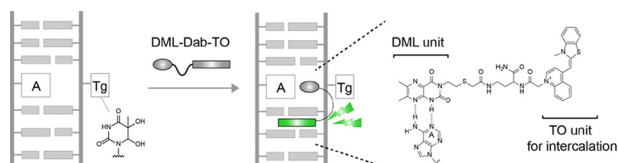
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Nitrogen substitution induced lattice contraction in nickel nanoparticles for electrochemical hydrogen evolution from simulated seawater

Baghendra Singh, Ajit Kumar Singh, Adyasa Priyadarsini, Yu-Cheng Huang, Sanchaita Dey, Toufik Ansari, Shaohua Shen, Goutam Kumar Lahiri,* Chung-Li Dong,* Bhabani S. Mallik* and Arindam Indra*

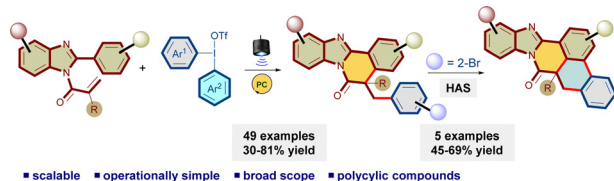
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Synthetic DNA binders for fluorescent sensing of thymine glycol-containing DNA duplexes and inhibition of endonuclease activity

Yusuke Sato,* Yoshihide Takaku, Toshiaki Nakano, Ken Akamatsu,* Dai Inamura and Seiichi Nishizawa*

6092



Visible light photoredox-catalyzed arylative cyclization to access benzimidazo[2,1-a]isoquinolin-6(5H)-ones

Prahallad Meher, Raj Kumar Samanta, Sourav Manna and Sandip Murarka*

