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Inside cover

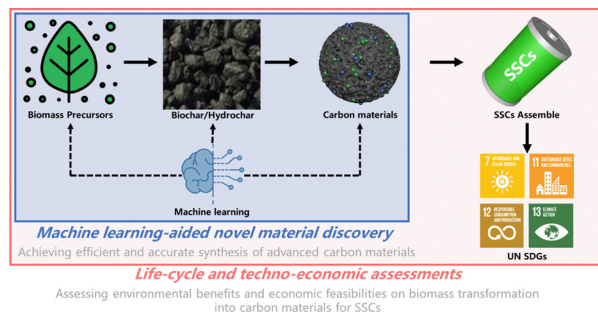
See Montree Sawangphruk *et al.*, pp. 14380–14383. Image reproduced by permission of Montree Sawangphruk from *Chem. Commun.*, 2024, 60, 14380.

HIGHLIGHTS

14303

Sustainably transforming biomass into advanced carbon materials for solid-state supercapacitors: a review

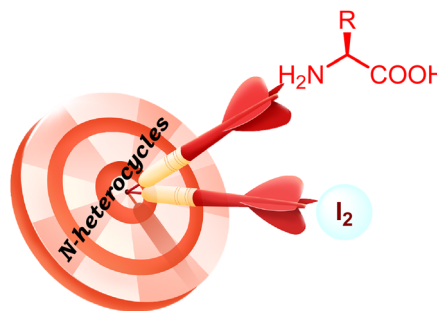
Ruibo Fan, Beichen Xue, Pengfei Tian, Xuesong Zhang, Xiangzhou Yuan* and Huiyan Zhang



14318

Recent advances in the synthesis of N-heterocycles from α -amino acids mediated by iodine

Dong-Sheng Yang, Jia-Chen Xiang* and An-Xin Wu*



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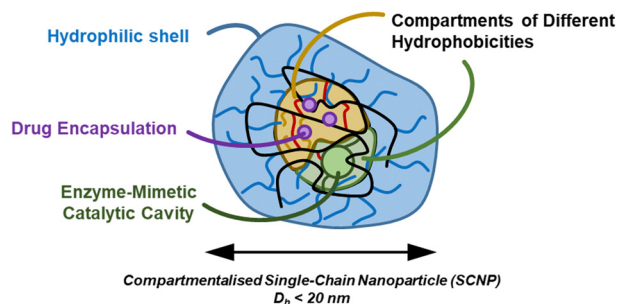
Fundamental questions
Elemental answers

FEATURE ARTICLES

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Compartmentalised single-chain nanoparticles and their function

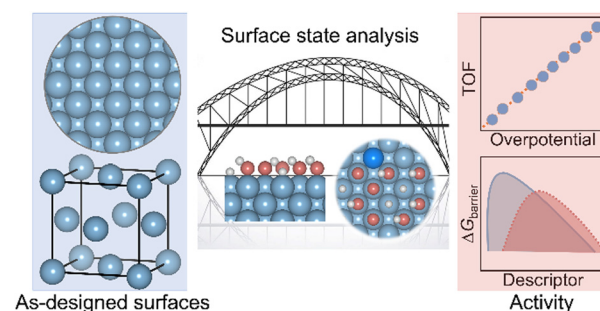
Justus F. Thümmeler and Wolfgang H. Binder*



14346

Surface coverage and reconstruction analyses bridge the correlation between structure and activity for electrocatalysis

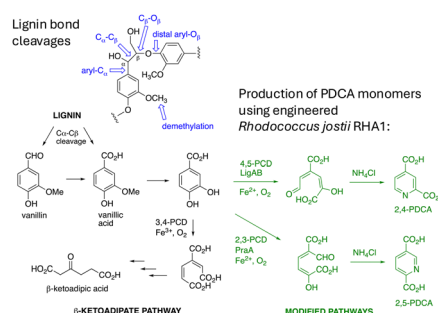
Zhongyuan Guo, Tianyi Wang, Jiang Xu,* Ang Cao* and Hao Li*



14360

Sustainable production of aromatic chemicals from lignin using enzymes and engineered microbes

Victoria Sodr  and Timothy D. H. Bugg*

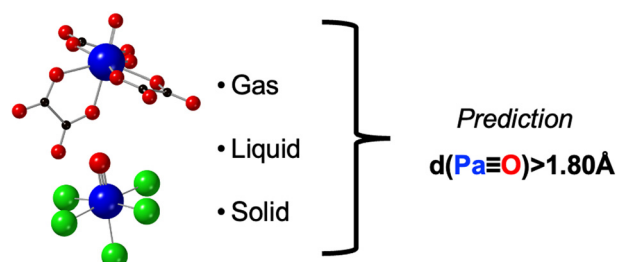


COMMUNICATIONS

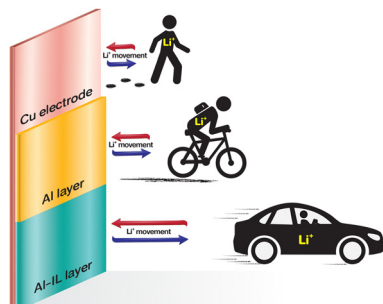
14376

Is the protactinium(v) mono-oxo bond weaker than what we thought?

Tamara Shaaban, Hanna Oher, Jean Aupiais, Julie Champion, Andr  Severo Peirera Gomes, Claire Le Naour, Melody Maloubier, Florent R al, Eric Renault, Xavier Rocquefelte, Bruno Siberchicot, Val rie Vallet and R mi Maurice*



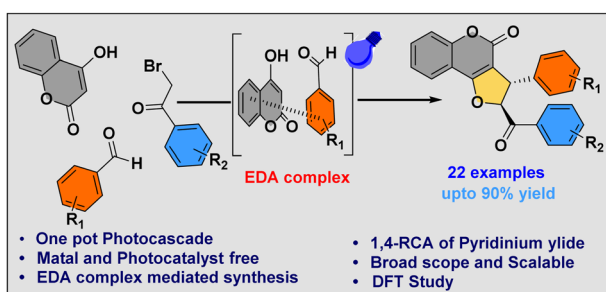
14380



Preconcentration of lithium salt in nanoporous alumina on Cu foil as a concentrated lithium semi-solid layer for anode-free Li-metal batteries

Nichakarn Anansuksawat, Thitiphum Sangsanit, Surat Prempluem, Kan Homlamai, Poramane Chiochan, Ronnachai Songthan, Worapol Tejangkura and Montree Sawangphruk*

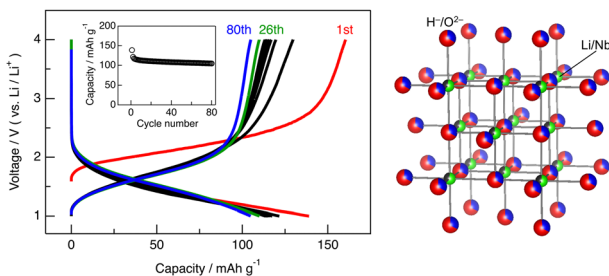
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Electron donor–acceptor complex enabled photocascade strategy for the synthesis of *trans*-dihydrofuro[3,2-*c*]chromen-4-one scaffolds via radical conjugate addition of pyridinium ylide

Sovan Dey, Arindam Das, Ram Naresh Yadav, Palash Jyoti Boruah, Koushik Sarkar, Amit Kumar Paul and Md. Firoj Hossain*

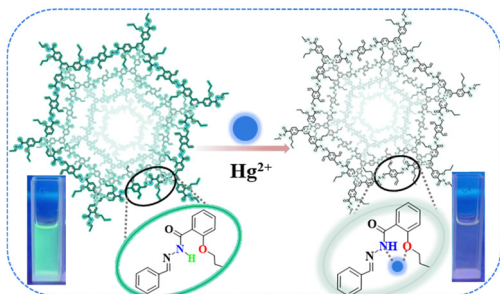
14388



Li₂NbHO₂: a new transition-metal oxyhydride with rock-salt-type structure

Fumitaka Takeiri, Keiko Kusumoto, Kosuke Kawai, Hiroshi Yaguchi, Takashi Saito, Kazuhiro Mori, Saburo Hosokawa, Masashi Okubo and Genki Kobayashi*

14391



Hydrazone-linked covalent organic frameworks for fluorescence detection of Hg²⁺

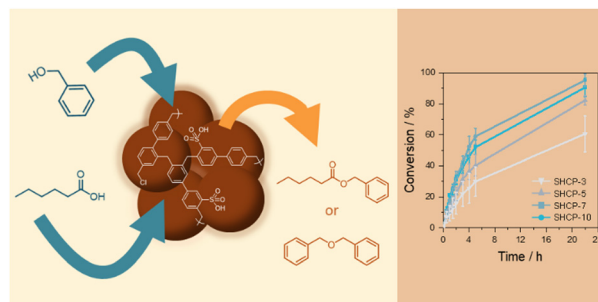
Xuefeng Wang, Zhaowei Yang, Lingsuo Meng, Xuehui Li, Hongtao Wei, Jing Ning,* Shitao Wang, Dapeng Cao* and Long Hao



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Tunable sulfonated hypercrosslinked polymers for selective esterification: insights into performance and stability

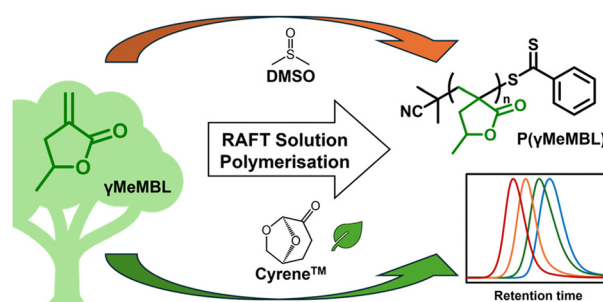
Paul Schweng, Dorian Guerin-Faucher, Freddy Kleitz* and Robert T. Woodward*



14399

RAFT solution polymerisation of bio-based γ -methyl- α -methylene- γ -butyrolactone monomer in DMSO and Cyrene

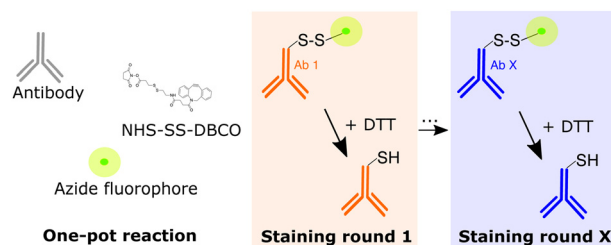
Oliver J. Harris, Ryan R. Larder, Beth Jordan, Imogen Prior, Rita El-Khoury, Khaled O. Sebakhy and Fiona L. Hatton*



14403

Simple generation of cleavable labels for multiplexed imaging

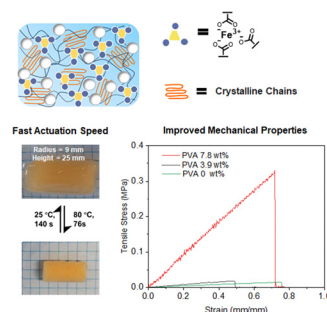
Vincent Van Deuren,* Silke Denis, Robin Van den Eynde, Jonathan Sai-Hong Chui, Francesca Bosisio, Frederik De Smet, Wim Dehaen, Wim Vandenberg and Peter Dedecker



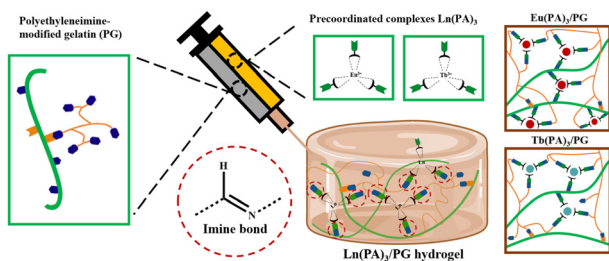
14407

Designing fast-response porous hydrogel actuators with improved toughness

Maryam Adavoudi Jolfaei, Yufeng Zhao, Geoffrey M. Spinks* and Zhen Jiang*



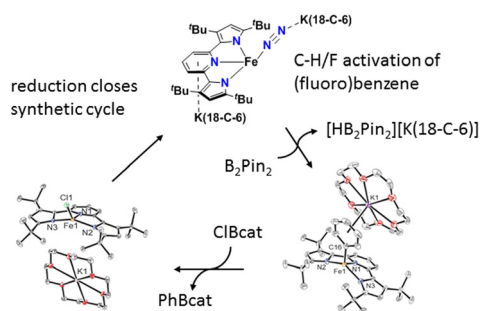
14411



Fabrication of gelatin hydrogels using pre-coordinated lanthanide complexes *via* imine crosslinking

Chen-Cheng Yu, Yu Yun Hsu, Yu-Chia Su, Yi-Chen Yang, Tzu-Ying Wang and Yi-Cheun Yeh*

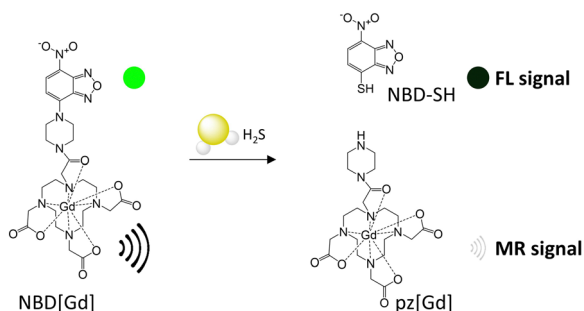
14415



C_{sp²}-H/F bond activation and borylation with iron

Ethan Zars, Lisa Pick, Achala Kankanamge, Michael R. Gau, Karsten Meyer and Daniel J. Mindiola*

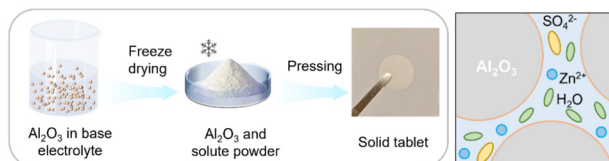
14419



A water-soluble Gd(III)-based fluorescence/T₁-MR dual-modality probe for H₂S sensing

Ho-Nam Mak, Xuanyi Lu, Siyu Pan, Yanjuan Gu, Lijun Jiang* and Wing-Tak Wong*

14423



A liquid-infiltrated Al₂O₃ framework electrolyte enables aqueous zinc batteries

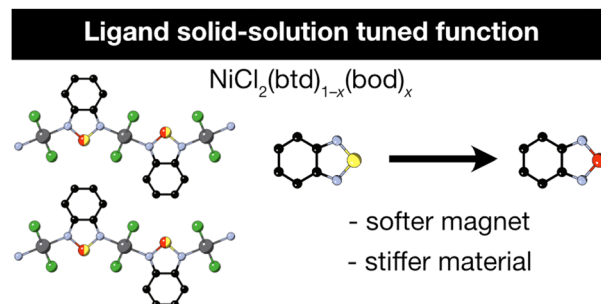
Rongyu Deng, Yi Yuan, Zixuan Li, Alex W. Robertson* and Feixiang Wu*



14427

Ligand solid-solution tuning of magnetic and mechanical properties of the van der Waals metal–organic magnet $\text{NiCl}_2(\text{btd})_{1-x}(\text{bod})_x$

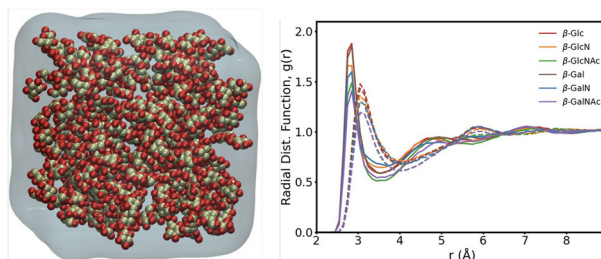
Emily Myatt, Simrun Lata, Jem Pitcairn, Dominik Daisenberger, Silva M. Kronawitter, Sebastian A. Hallweger, Gregor Kieslich, Stephen P. Argent, Jeremiah P. Tidey and Matthew J. Cliffe*



14431

Polarizable AMOEBA force field predicts thin and dense hydration layer around monosaccharides

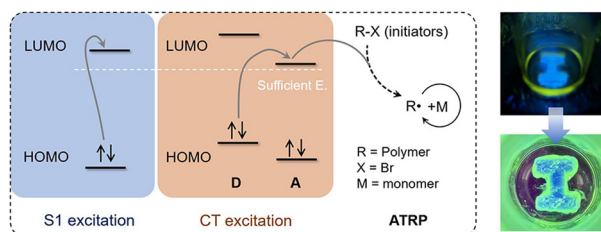
Luke A. Newman, Mackenzie G. Patton, Breyanna A. Rodriguez, Ethan W. Sumner and Valerie Vaissier Welborn*



14435

Metal-free photocatalysts with charge-transfer excited states enable visible light-driven atom transfer radical polymerization

Yuchen Huang, Yangxin Liu, Yingde Yan, Yanjun Gong, Yifan Zhang,* Yanke Che and Jincai Zhao



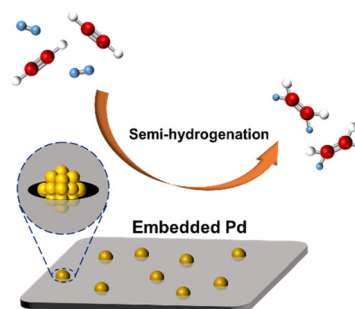
Metal-free donor-acceptor type photocatalysts:

Lower excitation energy; Visible light driven O-ATRP; Low polymerization dispersity.

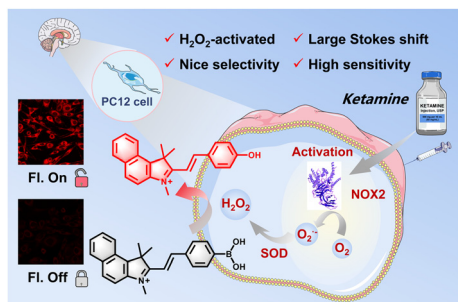
14439

Semi-hydrogenation of alkynes to alkenes over Pd nanoparticles embedded in Mo_2C prepared from a high-temperature pulse

Chang Zhou, Haitao Han, Jian Zhang,* Xiaoxue Mu, Jianbin Huang, Dongquan Lin and Feng-Shou Xiao*



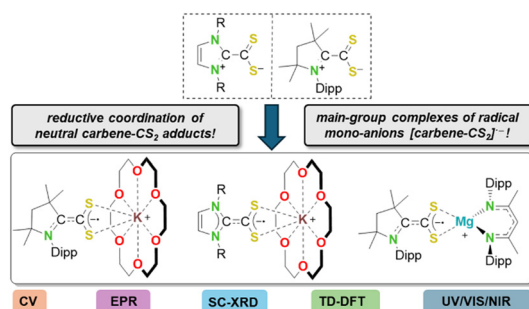
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A red turn-on fluorescent probe reveals elevated H₂O₂ in cell anesthesia

Longjie Du, Yu Ning, Wentao Li, Jianfei Kan, Jianchun Li, Jinhong Wang,* Min Wang,* Yanxiang Li and Jin Zhou*

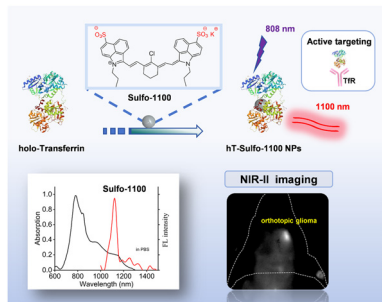
14447



Radical anions of 1,1-azoliumdithiocarboxylates

M. S. Luff, K. Oppel, I. Krummenacher, H. Braunschweig and U. Radius*

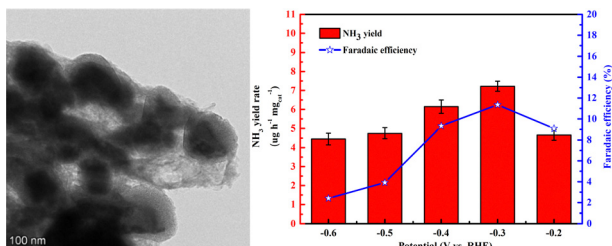
14451



A novel water-soluble NIR-II cyanine dye for fast targeted through-skull fluorescence imaging of orthotopic glioma

Qian Wei, Huixian Jia, Haoyuan Zhao, Wei Tang* and Xinrui Duan*

14455



Electrocatalytic reduction of N₂ to NH₃ by MIL-88-derived pod-like Fe₇Se₈/C nanomaterials under ambient conditions

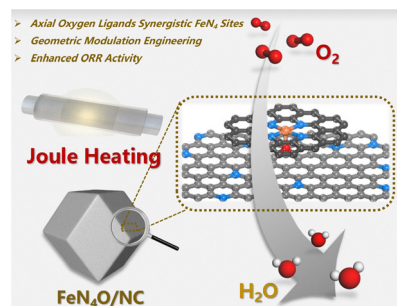
Gongyao Nie, Huanhuan Zhang, Lanhua Yi,* Xiao Ma, Wei Yi,* Jiawei Wan, Yebo Lu* and Xingzhu Wang*



14459

Axial oxygen-bridged Fe₄O/NC produced by ultrafast Joule heating for efficient oxygen reduction reaction

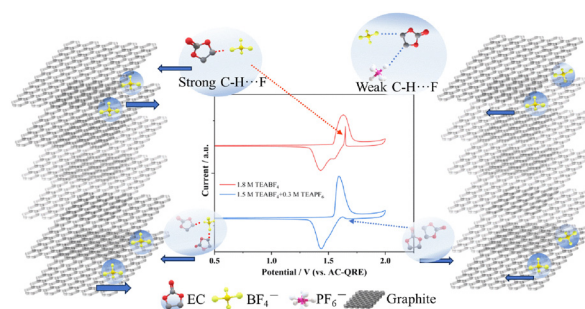
Feng Liu, Xinyu Guo, Yan Zhong, Shaqi Fu, Jingsha Li, Chunmei Zhang, Heng Zhang, Fenghui Ye, Shuai Yuan, Chuangang Hu* and Chunxian Guo*



14463

Uncovering the unusual anodic current during tetrafluoroborate anion deintercalation from a graphite cathode in ethylene carbonate

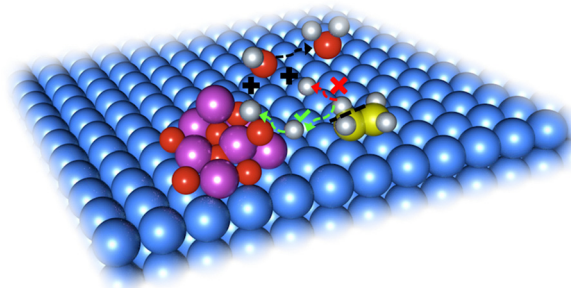
Haibo Liu, Yunju Wang, Guobao Xu* and Hongyu Wang*



14467

Hydrogen spillover for boosted catalytic activity towards hydrazine oxidation

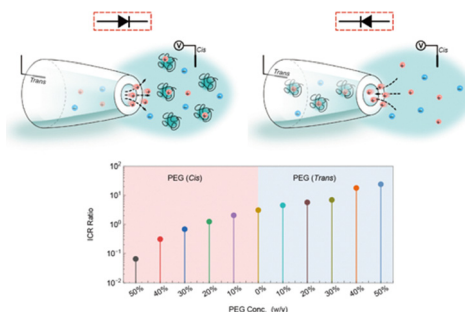
Shuyuan Pan, Yuhua Xie, Chen Li,* Chunsheng Li, Yan Sun* and Zehui Yang*



14471

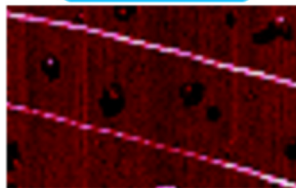
A switchable and facile ionic diode modulated by polyethylene glycol

Fei Zheng, HongLuan Li, Jun Yang, Haiyan Wang, Guangle Qin, Dapeng Chen and Jingjie Sha*



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L-peptide



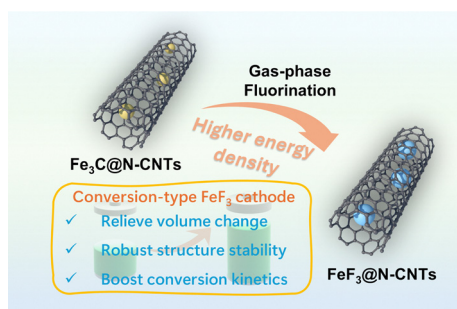
D-peptide



Enantiomeric peptides self-assembling into fibrils with the same handedness

YongFang Zheng, ShiXian Chen, KeJing Mao and Hu Zhu*

14479



Spatially confined FeF₃ cathodes in N-doped carbon nanotubes for lithium storage

Jun Li, Xifei Li,* Mengyao Li, Qinting Jiang, Junqian Liu, Ruixian Duan, Guiqiang Cao, Jingjing Wang and Wenbin Li

