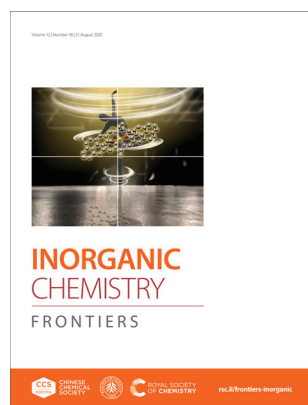


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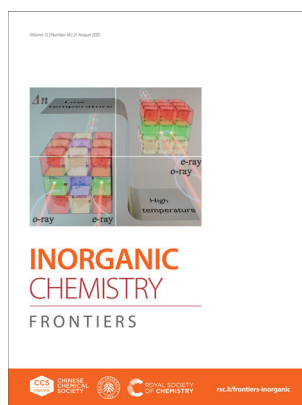
ISSN 2052-1553 CODEN ICFNAW 12(16) 4733–4920 (2025)



Cover

See Masahiro Ikeshita, Yoshitane Imai, Takashi Tsuno *et al.*, pp. 4769–4775.

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Inside cover

See Xiao-Gang Chen *et al.*, pp. 4776–4784.

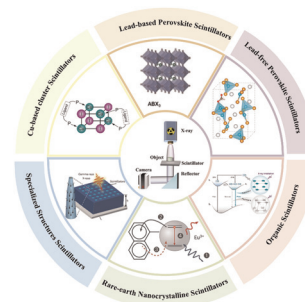
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REVIEW

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Innovations in scintillator materials for X-ray detection

Kuilin Li, Wenqing Li, Qi Nie* and Xiao Luo*

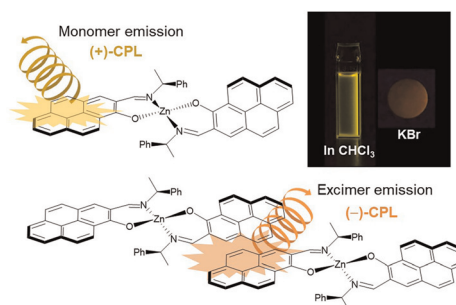


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Controlling circularly polarized luminescence of a pyrene modified chiral Zn(II) complex based on a temperature-dependent diastereomer equilibrium and solid-state excimer formation

Miyu Satake, Masahiro Ikeshita,* Daiya Suzuki, Yoshitane Imai* and Takashi Tsuno*



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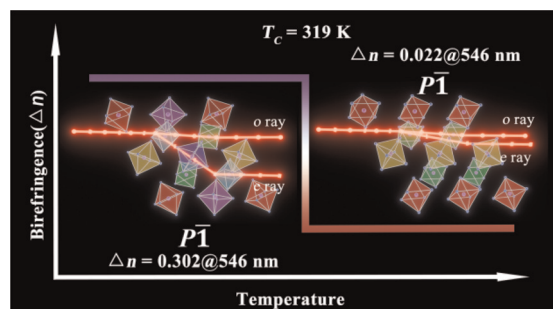
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RESEARCH ARTICLES

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Large birefringence switching in a new zero-dimensional cyanide perovskite ferroelastic material

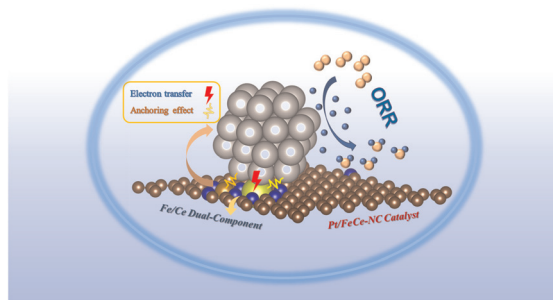
Jun-Si Zhou, Luan-Ying Ji, Shu-Yi Liu and Xiao-Gang Chen*



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Optimizing oxygen reduction reaction performance in Pt-based catalysts through Fe/Ce dual-component interface engineering on nitrogen-doped carbon

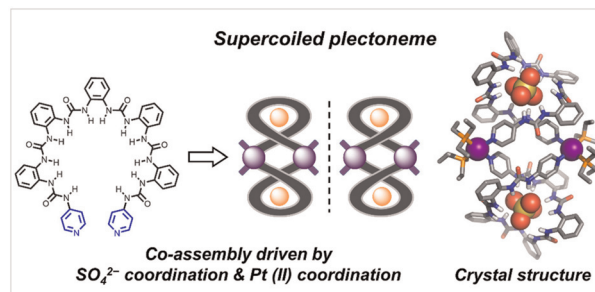
Zigang Zhao, Pan Guo, Bo Liu, Miao Ma, Lixiao Shen,* Yunlong Zhang,* Lei Zhao,* Guiling Wang* and Zhenbo Wang*



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Doubly crossed supercoils built by cooperative anion and metal coordination

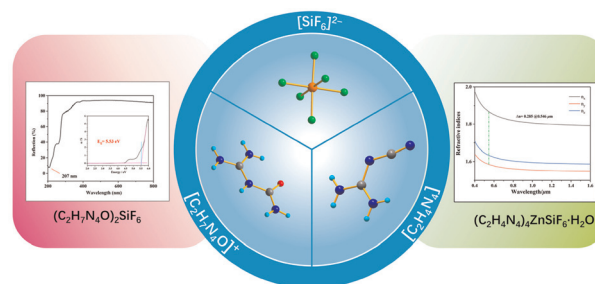
Wei Zhao,* Hongfei Li, Xinyu Lian, Cheng Jin, Di Meng, Boyang Li, Xiaoyan Zheng,* Xiao-Juan Yang and Biao Wu*



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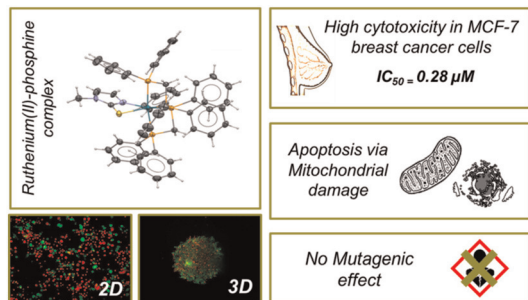
Greatly enhancing birefringence of fluorosilicates through the synergetic effect of functional units

Liang Ma, Yi-Lei Lv, Bing-Wei Miao, Guo-Ren Zhu, Wenlong Liu, Sheng-Ping Guo* and Ru-Ling Tang*



RESEARCH ARTICLES

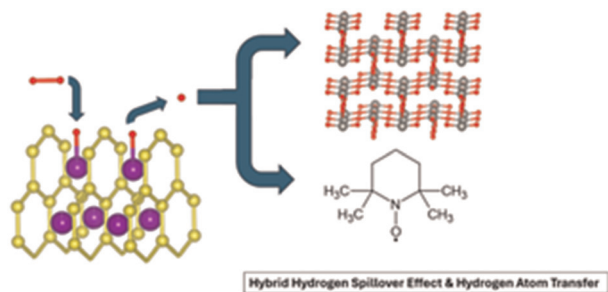
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Non-mutagenic Ru(II)-phosphine-based complexes induce mitochondria-mediated apoptosis in breast cancer cells: from 2D to 3D investigations

M. V. Palmeira-Mello,* T. Teixeira, A. R. Costa, A. M. Machado, R. A. De Grandis, L. P. de Oliveira, C. A. F. Moraes, J. H. de Araujo-Neto, V. M. Deflon, A. D. Andricopulo, J. Ellena, H. S. Selistre-de-Araújo, F. V. Rocha and A. A. Batista*

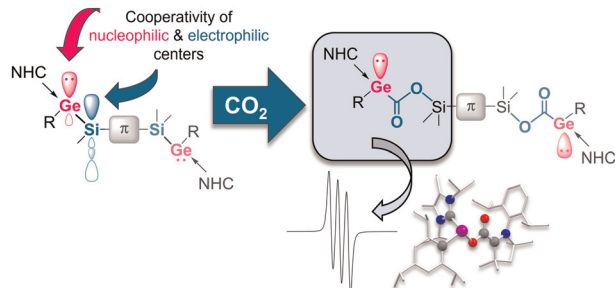
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Tailoring high-entropy borides for hydrogenation: crystal morphology and catalytic pathways

Abraham A. Rosenberg, Daniel T. Lintz, Juncheng Li, Yiren Zhang, Joseph T. Doane, Miranda N. Bristol, Alma Kolakji, Ting Wang* and Michael T. Yeung*

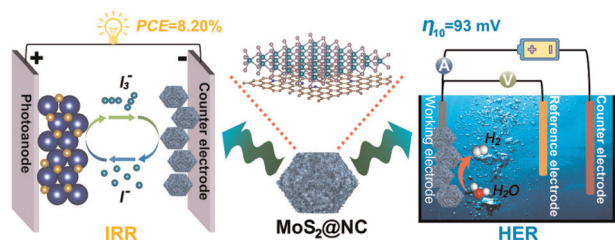
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Silagermylenation of C=O bonds and radical fragmentation of CO_2 -expanded bis(germylene) by a cyclic (alkyl)(amino)carbene

Anna-Lena Thömmes, Robin Völker, Bernd Morgenstern, Michael Zimmer, Dominik Munz, Christopher W. M. Kay and David Scheschkewitz*

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Boosting hydrogen evolution and triiodide reduction via electronic coupling on a (1T, 2H) MoS₂@N-doped carbon dodecahedron

Lan Yu, Chengxu Liu, Li Sun, Wei Kan, Ying Xie, Xiuwen Wang,* Yuying Cao, Bing Zhao* and Chunmei Lv*

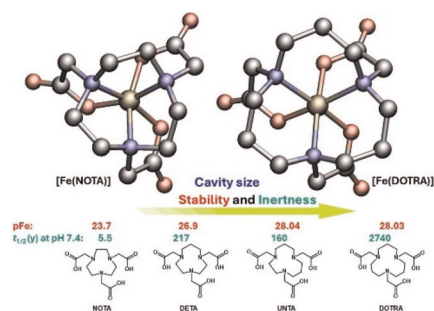


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The timeless relevance of size-match selectivity in macrocyclic Fe(III) complexes

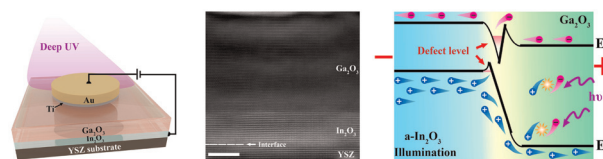
Sara Camorali, Alessandro Nucera, Marco Saccone, Fabio Carniato, Mauro Botta, Francesco Blasi, Zsolt Baranyai* and Lorenzo Tei*



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Interfacial defect engineering to boost deep-ultraviolet photodetection based on a wide-bandgap semiconductor heterostructure

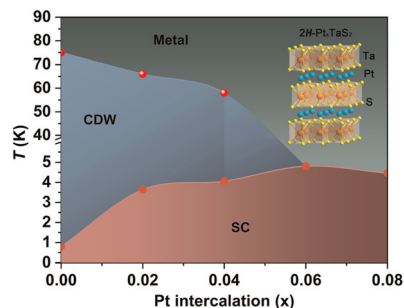
Han Wu, Lincong Shu, Sihan Yan, Shulin Sha, Qinghua Zhang, Zeng Liu, Shan Li, Weihua Tang, Yuehui Wang, Jiaying Shen, Zhenping Wu, Kun Lin, Qiang Li, Jun Miao and Xianran Xing*



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Superconductivity in platinum-intercalated 2H-TaS₂

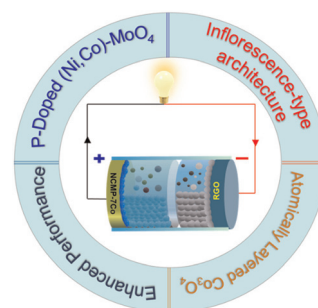
Lijia Zhou, Xiangjiang Dong, Qiang Li and Xianran Xing*



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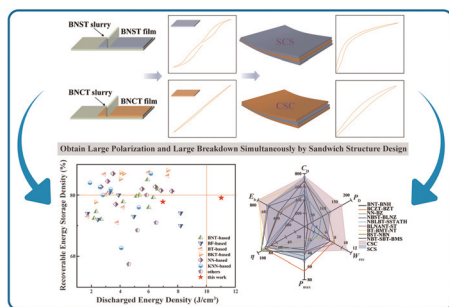
Design of an inflorescence-type phosphorus-doped (Ni,Co)-molybdate architecture with an atomically thin cobalt oxide layer for high-efficiency energy storage systems

Sangeeta Adhikari, Amarnath T. Sivagurunathan and Do-Heyoung Kim*



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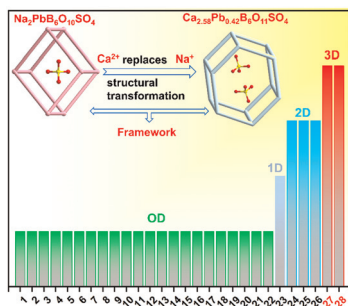
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High capacitive performances obtained in sandwich structured $\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$ -based dielectric ceramics

Tengyue Liu, Ben Jia, Jiaqi Wang, Yuliang Zhou, Peng Zheng,* Wangfeng Bai,* Qiaolan Fan, Liang Zheng and Yang Zhang

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$\text{Na}_2\text{PbB}_6\text{O}_{10}\text{SO}_4$ and $\text{Ca}_{2.58}\text{Pb}_{0.42}\text{B}_6\text{O}_{11}\text{SO}_4$: first borate-sulfates featuring 3D porous borate anionic frameworks

Huan Pei, Zijian Li, Shaohua Liu, Xueling Hou* and Fangfang Zhang*

