

Journal of Materials Chemistry C

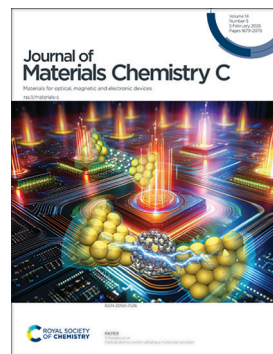
Materials for optical, magnetic and electronic devices

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Cover

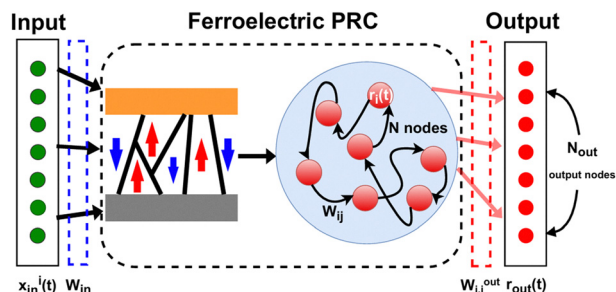
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REVIEWS

1691

Ferroelectric devices as physical reservoirs: enabling nonlinear dynamics and memory in neuromorphic systems

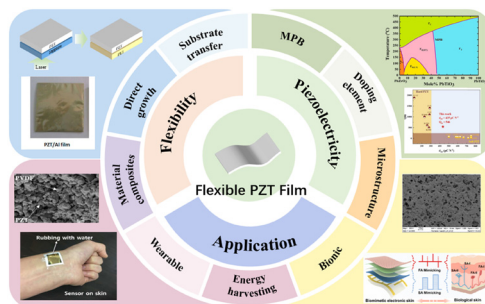
Moonseek Jeong, Da Hyun Kim, Su In Hwang,
Taegy Kwon, Jung Ho Yoon* and Min Hyuk Park*



1708

Preparation, performance optimization and application progress of flexible lead zirconate titanate films

Xiangqiang Liu, Zhifu Yin,* Xue Yang* and Zhiwu Han



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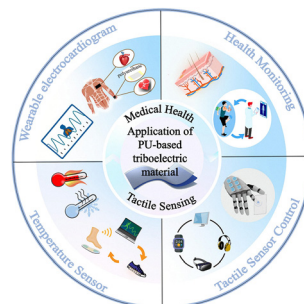
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REVIEWS

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Recent advances in the performance modulation of polyurethane-based triboelectric materials for wearable devices

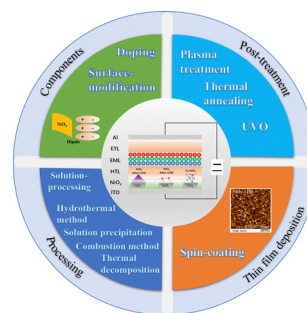
Xiaoting Zhu, Zihui Yan, Xuyang Zou, Ning Yu, Guo-Hua Hu, Shixian Zhang, Jun Du, Shiming Zhang, Wei Wu* and Hui Zhao*



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Progress in nickel oxide semiconductors for quantum dot-based electroluminescent devices

Shanfeng Xu, Miaoning Liu, Bo Li, Fensha Cai, Shan Pang, Xiaohong Jiang* and Zuliang Du*

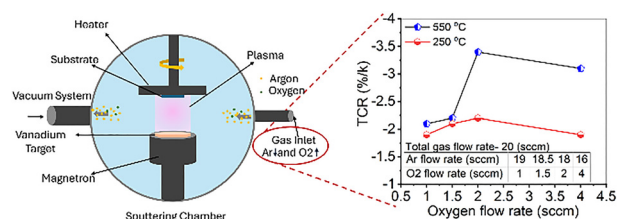


COMMUNICATIONS

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Unravelling the mechanism of phase fraction modulation via process parameter tuning and first-principles study for enhanced TCR in VO_x-based uncooled microbolometers

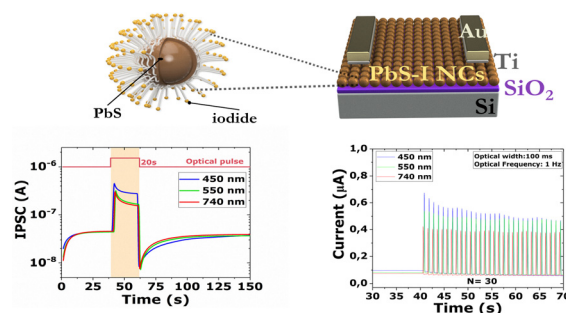
Sooraj Kumar, Gagan Kumar Sharma, Ujjwal Chitnis, Shalini Singh, Jay Krishna Anand, Poojalakshmi Vageeswaran, Rajesh Kumar Sharma, Shankar Dutta, Santanu Das, Dibyajyoti Ghosh, Davinder Kaur and Ankur Goswami*



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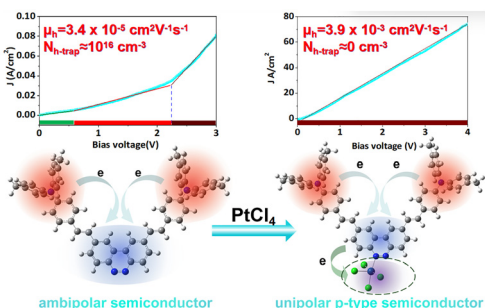
Optoelectronic inhibitory synapses in the visible range from PbS nanocrystal arrays

Chrysi Panagopoulou,* Panagiotis Bousoulas, Apostolos Kalafatis, Spyros Orfanoudakis, Charalampos Tsiouostas, Alexandros Banis, Polychronis Tspas, Athanassios G. Kontos, Thomas Stergiopoulos* and Dimitris Tsoukalas



COMMUNICATIONS

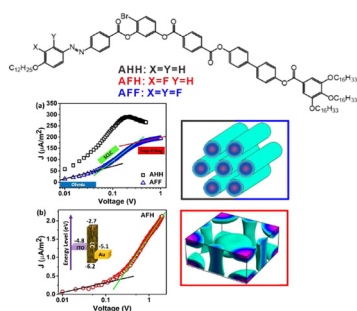
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Coordination-induced p-type selectivity and enhanced hole mobility in an ambipolar organic semiconductor via electron passivation

Kaining Wang, Kun Gong, Kejian Jiang, Wenhui Feng, Wei Li, Dongzhi Liu* and Xueqin Zhou*

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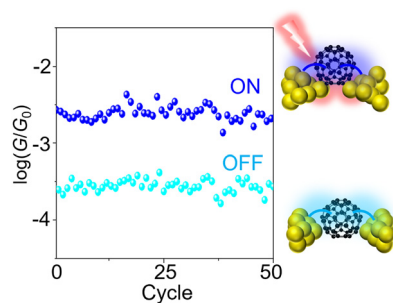


Controlling self-assembly and charge transport in photo-responsive nanostructured materials

Yu Cao,* Tejal Nirgude, Frédéric Dubois, Dharmendra Pratap Singh,* Fengcheng Xi, Feng Liu and Mohamed Alaasar*

PAPERS

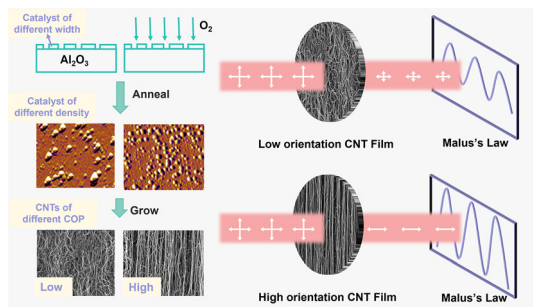
1805



Optical atomic switch utilizing a molecular junction

Risako Hamase, Kanji Homma, Tomoaki Nishino, Kazuhito Tsukagoshi and Satoshi Kaneko*

1811



Alignment-dependent polarization properties of self-assembled carbon nanotube films

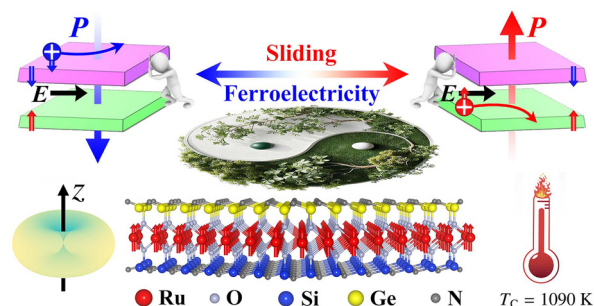
Zhiyu Chen, Yiming Li, Zhendong Luo, Yanji Yi, Lianjie Xu, Zhao Zhang, Xiqi Wu, Tao Wang, Peng Zhang* and Yang Zhao*



1821

Switchable room-temperature valley polarization in a Janus $\text{GeRuO}_2\text{SiN}_2$ native ferrovalley monolayer and its self-assembled sliding multiferroics

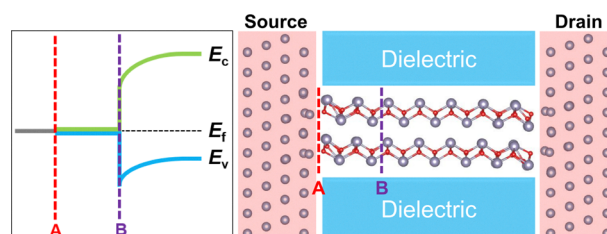
Yun-Jing Zhao, Bokai Zhang and Zhi-Yong Wang*



1838

Monolayer and bilayer tin monoxide in edge contact with common metals: a first-principles investigation

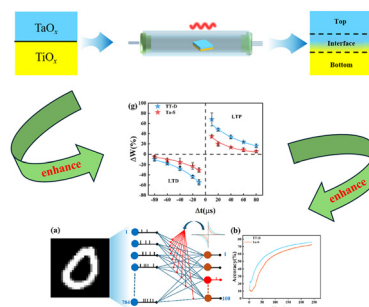
Binhao Wang, Yujia Tian, Devesh R. Kripalani, Swee Lee Gan, Ming Xue and Kun Zhou*



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Bidirectional optimization of STDP conductance update characteristics for neural computing

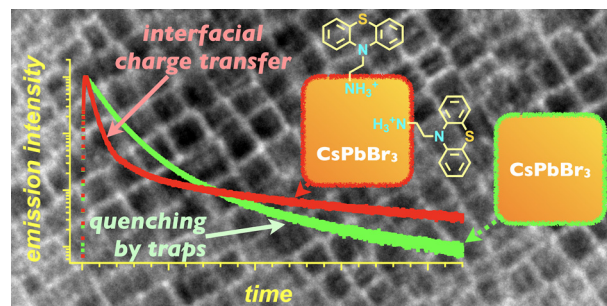
Jiayi Liu, Hongjia Song,* Linyan Yao, Gaokuo Zhong,* Xiangli Zhong and Jinbin Wang



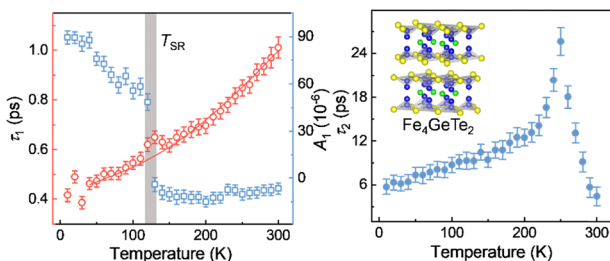
1861

Dual benefits from "wiring" charge-transfer moieties to perovskite surfaces

Jesse Tamayo, Maryann Morales, Pauline Do, Cambria Bennett, Maximillian F. Mayther and Valentine I. Vullev*



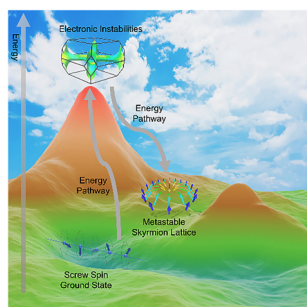
1879



Ultrafast carrier and coherent phonon dynamics in van der Waals metallic ferromagnet Fe_4GeTe_2

Yang Mi* and Daihan Gan

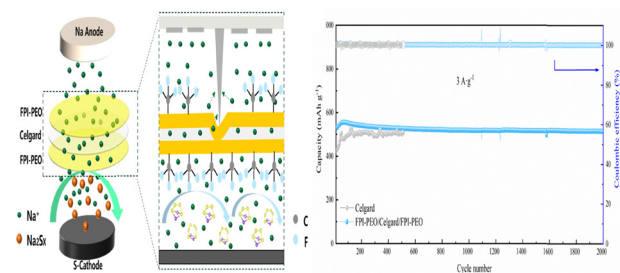
1886



Antibonding and electronic instabilities in GdRu_2X_2 ($\text{X} = \text{Si}, \text{Ge}, \text{and Sn}$): a new pathway toward developing centrosymmetric skyrmion materials

Dasuni N. Rathnaweera, Xudong Huai, K. Ramesh Kumar, YiXu Wang, Jane Schlesinger, Christopher J. Bartel, Sumanta Tewari, Michał J. Winiarski, Richard Dronskowski and Thao T. Tran*

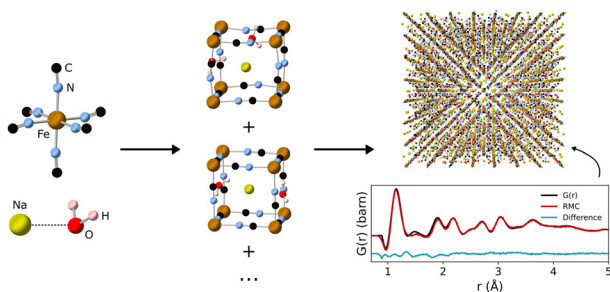
1902



A sandwich structure FPI-PEO/Celgard/FPI-PEO separator with polysulfide shuttle suppression and dendrite puncture resistance for room-temperature sodium-sulfur batteries

Xiaoguang Jiao, Chao Yang, Kaixuan Ma, Suyu Ge, Huanhuan Zhu, Caihong Feng, Qingze Jiao and Yun Zhao*

1912



Local structure of hydrated and dehydrated Prussian white cathode materials

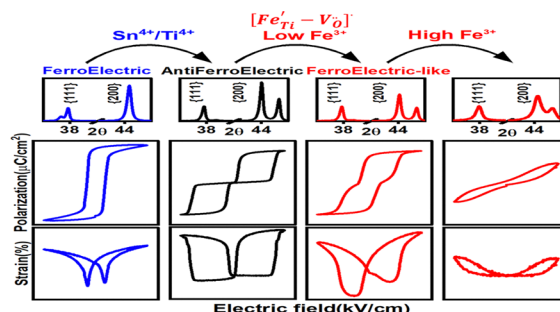
Ida Nielsen,* Maksim Eremenko, Yuanpeng Zhang, Matthew G. Tucker and William R. Brant*



1924

Introducing vacancy defects to induce ferroelectric-like switching in antiferroelectric oxides

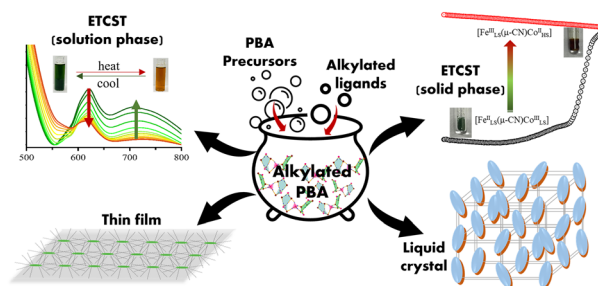
Anil Adukkadan,* Pooja Punetha and Rajeev Ranjan



1933

Bifunctional $[\text{Fe}_6\text{Co}_7]$ cyanide bridged assemblies: electron transfer coupled spin transition and liquid crystal properties

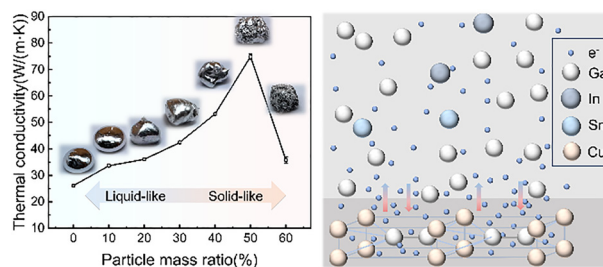
Jyoti Yadav, Ranjan Kharel, Ritabrata De, Santanu Kumar Pal, Bhart Kumar, Pradip Kumar Mondal and Sanjit Konar*



1940

Composite thermal interface materials of gallium-based liquid metals and CuGa_2 with high thermal conductivity and long-term stability

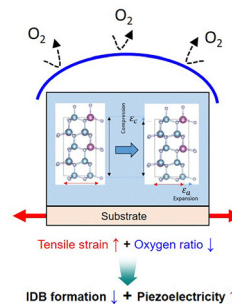
Guanghao Sang, Xin Zhang, Wei Li, Yuqing Li, Yijiang Chen, Xilong Zhang, Huize Song, Yuntao Cui* and Zhongshan Deng*



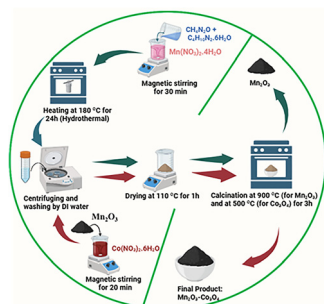
1949

The effect of defects on the formation of inversion domain boundaries in AlScN and their structural/electronic property improvement

Taesoon Hwang, Andrew C. Kummel* and Kyeongjae Cho*



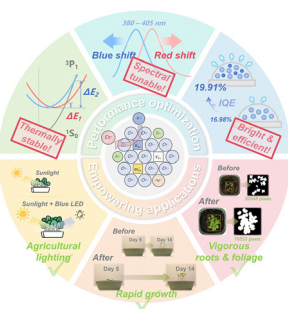
1957



Mn₂O₃–Co₃O₄ nanocomposites as advanced electrode materials: achieving high specific capacitance and excellent cycling stability

Alisha Dhakal,* Felio A. Perez and Sanjay R. Mishra*

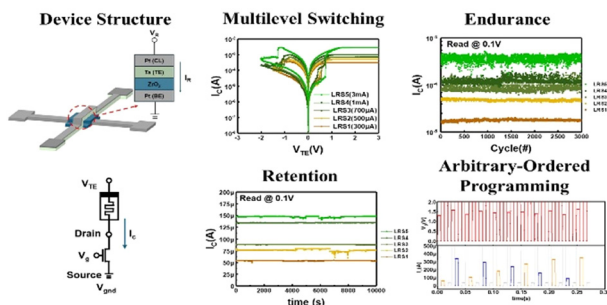
1970



Beyond single-ion doping: K⁺–Bi³⁺ synergy enables crop-tailored blue luminescence through crystal field engineering

Shengtao Ren, Yang Li, Hao Xu, Hui Li, Linlin Wang, Baochen Wang, Ximing Kong, Mingpan Wei, Zhaoxia Hou and Ziyao Wang*

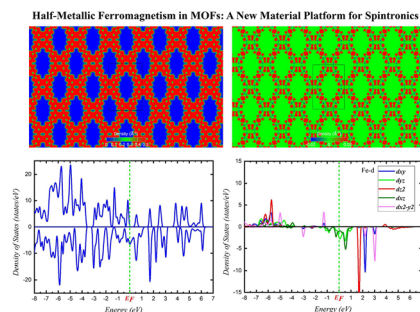
1981



Arbitrary-ordered pulsed programming achieving 11 well-separated programming levels via a multilevel transistor–memristor series configuration

Jing-Ci Gao, Kuan-Han Lin, Wei-Lun Chen, Kai-Shin Hsu, Chi-Chen Chen and Jen-Sue Chen*

1992



Biphenylene molecules with iron atoms: new half-metallic ferromagnetic MOF for advanced spintronic devices

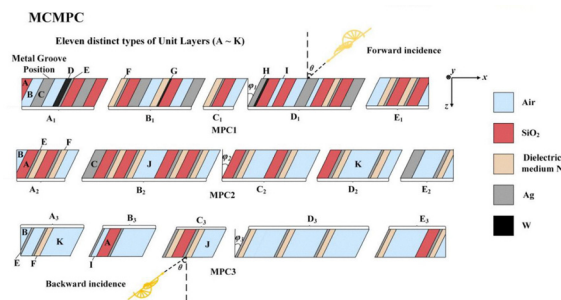
Adam Hassan Denawi



2000

Theoretical giant circular dichroism and broadband asymmetric absorption enabled by multilayered chiral metastructure-photonic crystals in the near-infrared regime

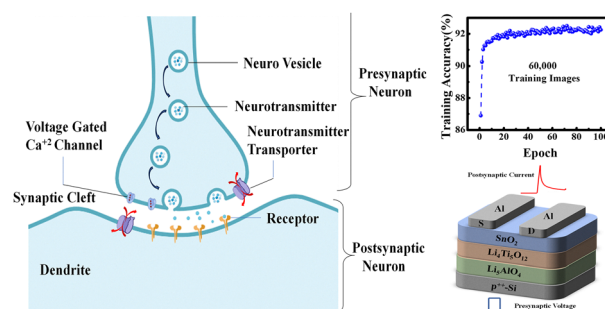
Shu-Hui Zhu and Hai-Feng Zhang*



2013

Solution-processed metal oxide synaptic transistor with bilayer Li-ion-conducting gate dielectric

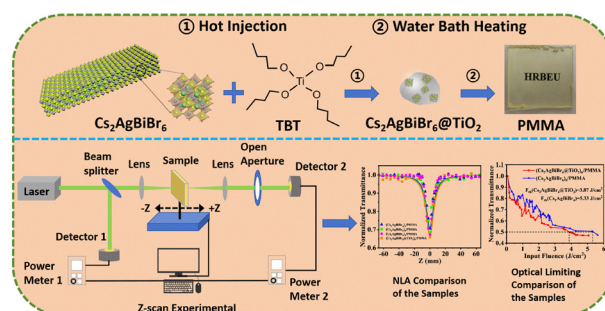
Rajarshi Chakraborty, Roshan Kumar Singh, Subarna Pramanik, Priyanka Chetri, Akhilesh Kumar Yadav, Pijush Kanti Aich, Pranjit Barman and Bhola Nath Pat*



2024

Cs₂AgBiBr₆@TiO₂ nanocomposites with enhanced nonlinear absorption and electrochemical properties

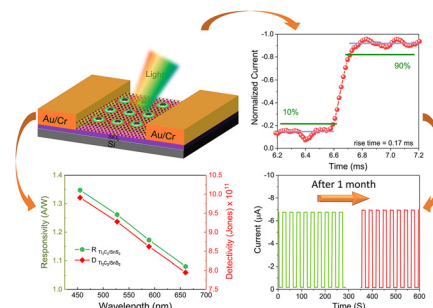
He Liu, Gaozhao Chen, Xiong Shen, Wentao Hao and Qiuyun Ouyang*



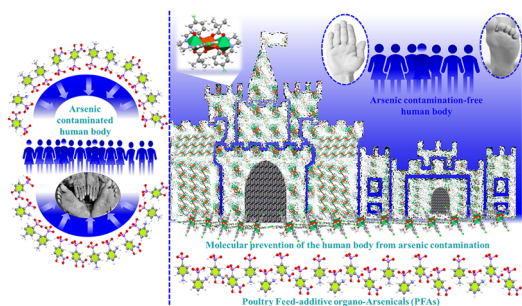
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MXene-TMD heterostructure photodetectors: engineering the Ti₃C₂/SnS₂ interface for high-speed visible light detection

Chayan Das, Suresh Kumar, Jeny Gosai, Mubashir Mushtaq Ganaie, Anjali Sharma, Mahesh Kumar, Ankur Solanki, Arup K. Rath and Satyajit Sahu*



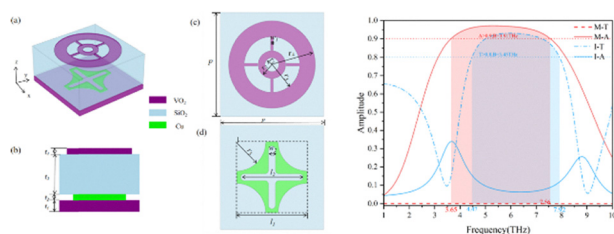
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Strategic synthesis of $[\text{Ni}^{\text{II}}]_2\text{Fe}^{\text{III}}$ heterotrimetallic chemophores for selective sensing of poultry feed-additive organo-arsenicals (PFAs)

Somrita Nag, Koushik Pramanik, Moumita Mondal, Pijush Malpaharia, Swapan K. Chandra* and Priyabrata Banerjee*

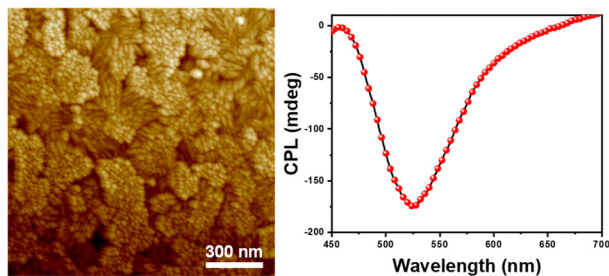
2056



A terahertz temperature-controlled switch based on dual-pattern structure: achieving transmission and shielding in the same frequency band

Mingyuan Guo, Chao Li,* Dong Wang, Song Gao, Yue Che, Jiaran Xiong and Yang Li

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Anisotropy in bulk-like lead halide perovskite nanorods triggers circularly polarized photoluminescence

Chengqiang Wang,* Pingyuan Yan, Tao Song, Muyan Zhu, Zihan Wu, Zihui Zhou, Zhongqi Xie, Heng Li and ChuanXiang Sheng*

