

Journal of Materials Chemistry C

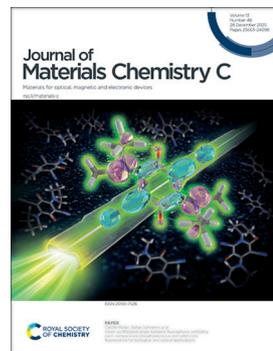
Materials for optical, magnetic and electronic devices

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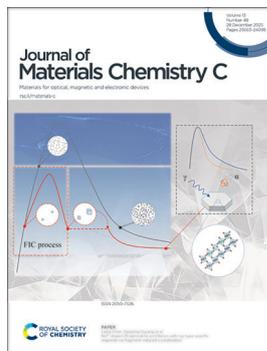
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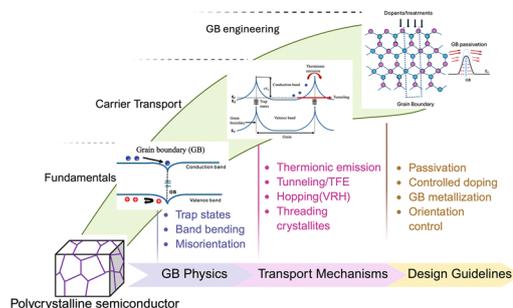
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Carrier transport mechanisms in polycrystalline semiconductors: from grain boundary physics to device performance

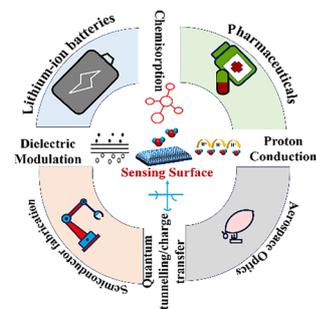
Israt Jahan, Jesus Dustin Arellano and Zhisheng Shi*



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Design principles for ultra-low humidity sensors: a mechanism-oriented review

Noor Alam and Yonggao Yin*



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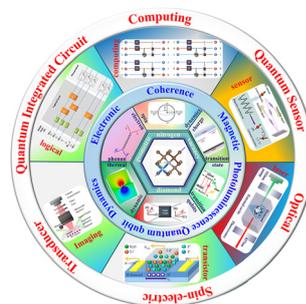
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REVIEWS

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Multiscale engineering of diamond nitrogen-vacancy centres: from atomic defect dynamics to functional quantum devices

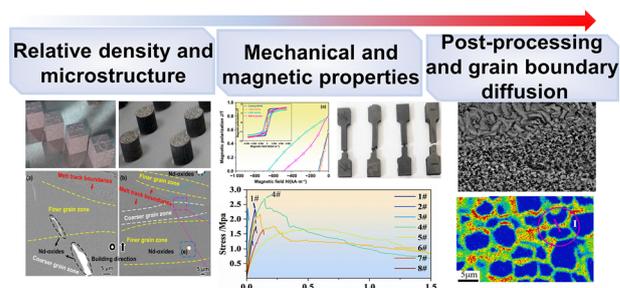
Ming-Hui Shang, Yong Xu,* Zhao Liang, Xiangdong Yang, Jinju Zheng and Weiyu Yang*



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Interplay of the laser energy density and microstructure on the properties of NdFeB manufactured by laser powder bed fusion: a review

Hao Dong, Guoxuan Ming, Ketai He,* Xiaowei Meng, Yangwei Du and Chaofang Dong



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Fabrication of tetrabenzoporphyrin thin-film transistors with hydrogen-bonding networks via a thermal precursor approach and effect of the amide-group position

So Ueno, Mitsuaki Yamauchi,* Hiroshi Matsuda, Nobutaka Shioya, Keitaro Yamamoto, Yoshiyuki Mizuhata, Takeshi Hasegawa and Hiroko Yamada*

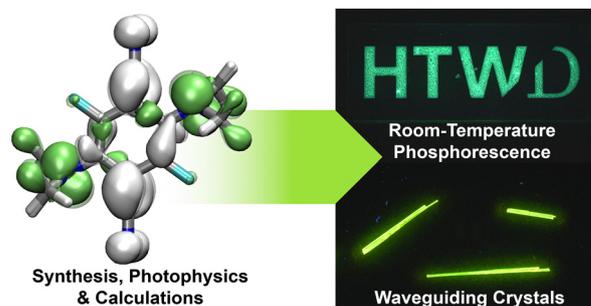


PAPERS

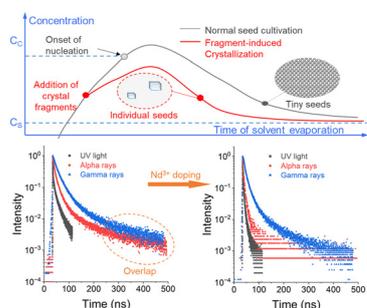
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Green-synthesized single-benzene fluorophores exhibiting room-temperature phosphorescence and solid-state fluorescence for biological and optical applications

Maximilian Kramp, Durga Prasad Karothu, Juan Camilo Zschommer, Patrick Commins, Thomas Prestel, Verena Ibl, Panče Naumov, Carolin Müller* and Stefan Schramm*



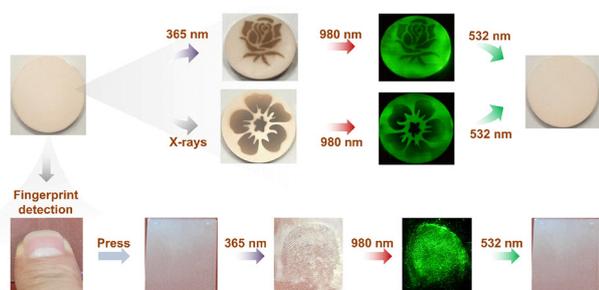
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Nd³⁺-doped 2D perovskite scintillators with ray-type-specific response *via* fragment-induced crystallization

Xinlong Shang, Yang Li, Liang Chen,* Quan Zhang, Leidang Zhou, Naizhe Zhao, Jinlu Ruan, Shiyi He, Fangbao Wang, Yapeng Zhang and Xiaoping Ouyang*

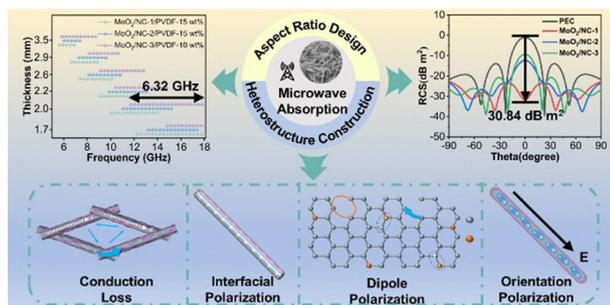
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Multifunctional Bi₂TeO₅:Er³⁺ with dual-stimuli photochromism and switchable upconversion for optical security

Asad Ullah, Asif Ali Haider, Jiayan Liao,* Xue Bai, Anjun Huang, Imran Khan, Yangke Cun, Yuewei Li, Yingfan Li, Zhiguo Song, Jianbei Qiu and Zhengwen Yang*

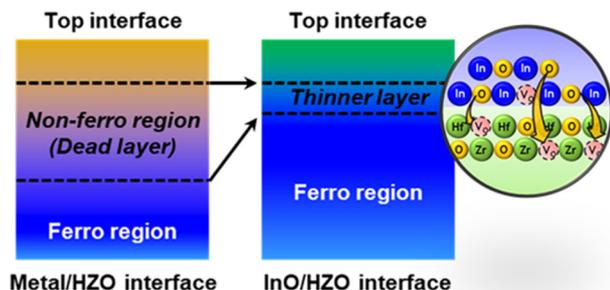
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Aspect ratio design and heterostructure construction of MoO₂/NC nanorods for broadband microwave absorption

Yidan He, Yunliang Dai, Yuke Zheng and Xiaojuan Zhang*

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An ultra-thin InO interlayer as an oxygen reservoir for defect passivation and enhanced ferroelectricity in hafnia devices

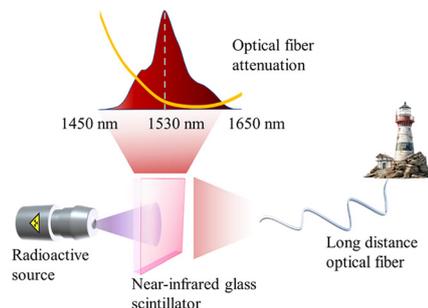
Junghyeon Hwang, Chaeheon Kim, Jinho Ahn* and Sanghun Jeon*



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Assessment of rare earth ion-doped near-infrared glass scintillators

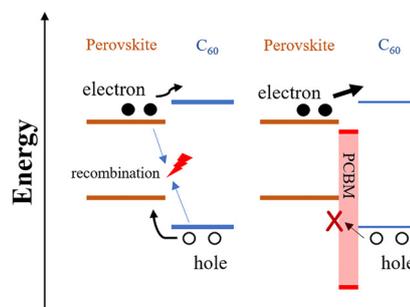
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Tin–lead perovskite solar cells featuring buffer layer structures: a combined theoretical and experimental study

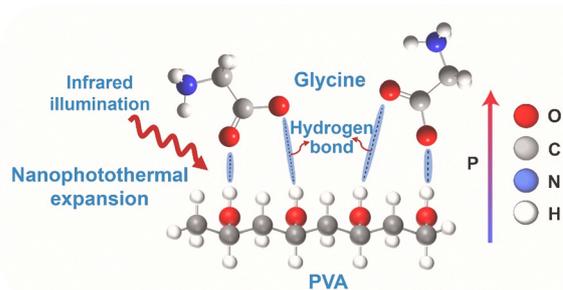
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Infrared photothermal enhancement of piezoelectricity in γ -glycine/PVA films via targeted interfacial hydrogen bond engineering

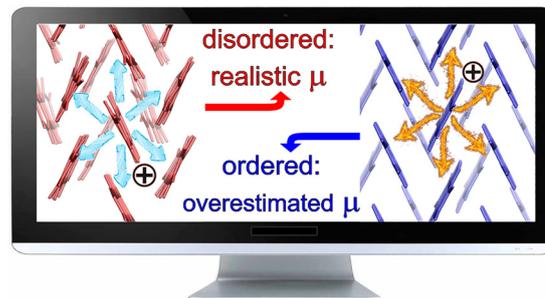
Lei Wang, Kaimin Du, Wentong Du, Kunyu Zhao and Huarong Zeng*



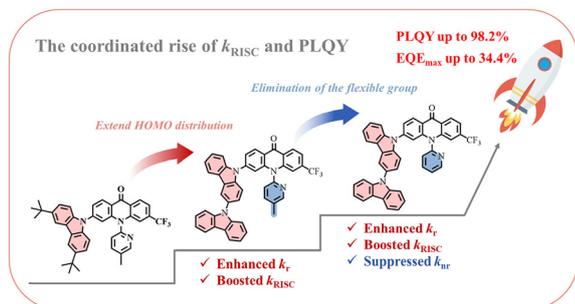
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Effect of thermal disorder on the electronic structure and the charge mobility of acenes

Alessandro Landi,* Francesco Ambrosio,* Anna Leo, Daniele Padula, Giacomo Prampolini and Andrea Peluso*



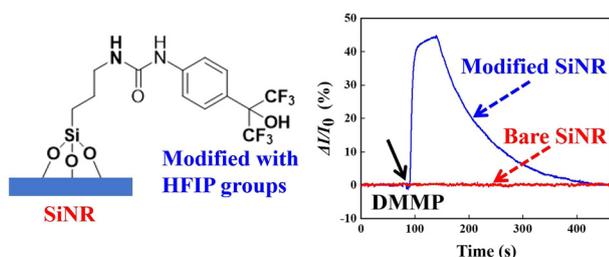
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Boosting EQE to nearly 35% in acridone-based TADF materials via HOMO delocalization and nonradiation suppression

Jingjie Yang, Jing Jin, Jiuyan Li,* Jiahui Wang, Hongyu Chen, Meiling Mao, Yongqiang Mei* and Di Liu*

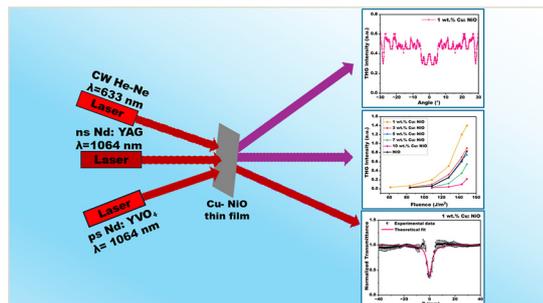
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Novel molecule design for surface modification enables highly selective DMMP detection with silicon nanoribbon FET sensors

Runsheng Zang, Jun Shen, Jiahao Qin, Haizhen Li, Yongchao Zheng,* Yuan Cheng, Xiujuan Zhang* and Bingchang Zhang*

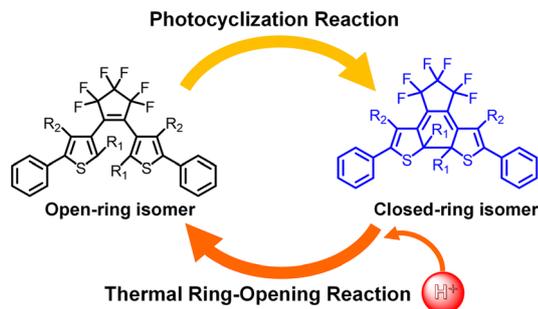
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Tuning the excitation-regime-dependent nonlinear optical responses of Cu-doped NiO thin films for harmonic generation and ultrafast photonic applications

Ramseena Thundiyil, P. Poornesh,* Katarzyna Ozga, Jaroslaw Jedryka, Dominique Guichaoua, Said Taboukhat, Saikat Chattopadhyay and Bouchta Sahraoui

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Acid-assisted thermal ring-opening reaction of photochromic diarylethene closed-ring isomers

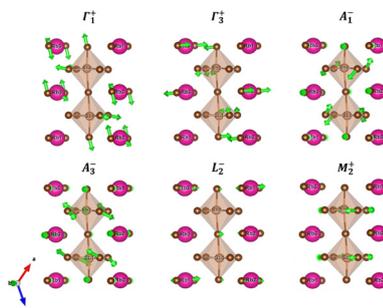
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Structure–property coupling in lead-free halides $\text{Rb}_3\text{Sb}_2\text{Br}_9$ and $\text{Rb}_3\text{Sb}_2\text{Br}_6\text{I}_3$ obtained by mechanochemistry

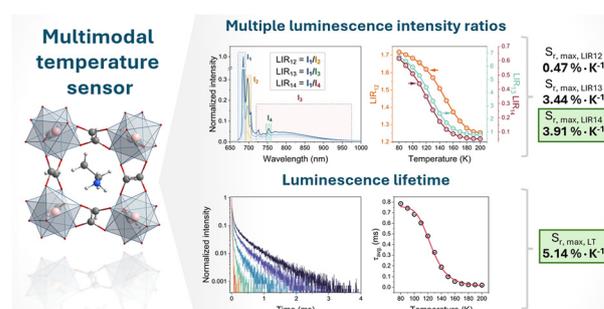
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Multimodal temperature sensing in hybrid perovskites doped with Cr^{3+} : a strategy for optimizing luminescent thermometers

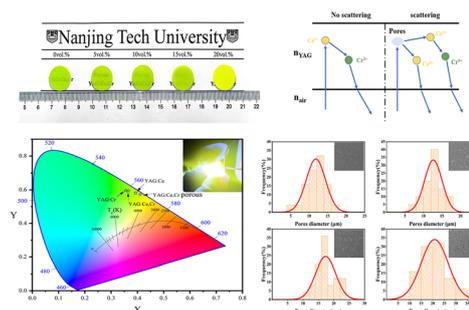
Adam Kabański,* Kacper Caputa and Dagmara Stefańska*



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Non-spherical pore scattering-enhanced $\text{YAG}:\text{Ce}^{3+}$, Cr^{3+} ceramics: efficient light converters for high-brightness laser illumination

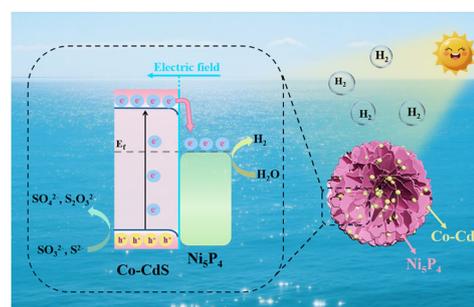
Ningdong Yang, Yulong Ji, Haikui Zhu,* Yigang Qian and Lixi Wang*



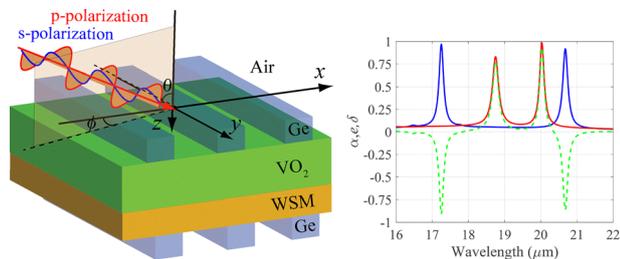
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Enhancing photocatalytic hydrogen evolution of metal sulfides via a Co-CdS/ Ni_5P_4 ohmic junction

Mengru Bao, Zhenyu An, Jiao Zhang, Yongxin Chen, Xin Guo, Xueying Yang* and Zhiliang Jin



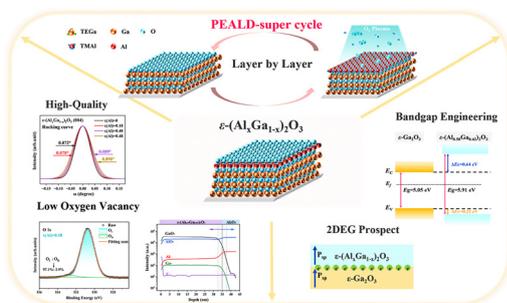
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Magnet-free nonreciprocal thermal emitters via VO_2 -Weyl semimetal double-sided grating metasurfaces

Qi Fang, Wenyang Ma, Fenglin Xian and Gaige Zheng*

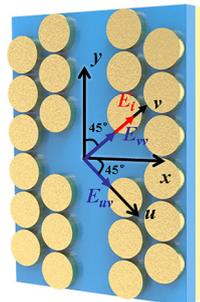
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Plasma-enhanced ALD growth of $\epsilon\text{-(Al}_x\text{Ga}_{1-x})_2\text{O}_3$ alloy films with high Al content and tunable band offsets

Jinteng Zhang, Xiaohong Zeng, Liang Yu, Shuhao Zhang, Quan Miao, Zicheng Xing, Zhiyun Li, Nan Hu, Rong Huang, Yang Shen, Yecheng Ding, Zhitai Jia,* Ying Wu* and Sunan Ding*

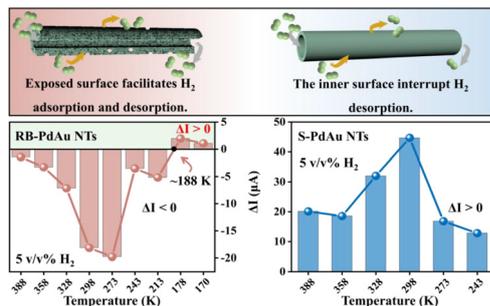
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Improving the performance of polarization conversion in the near-infrared with low insertion loss by the metasurface

Qi Chen, Si-Yuan Liao, Jun-Jie Luo, Jia-Hao Zou and Hai-Feng Zhang*

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Palladium and gold nanotube arrays with tuned surfaces for low-temperature hydrogen sensing

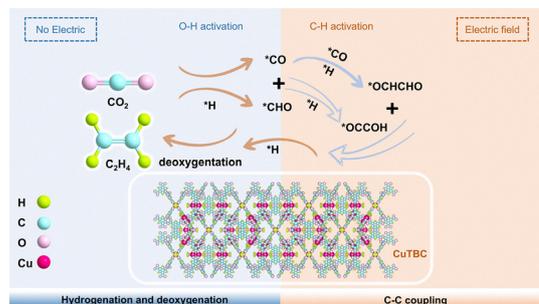
Zhenxu Li, Xinhua Zhao, Yi Zhang, Zhu Zhang, Tingting Wang and Dachi Yang*



24007

Enhancing C₂ production in CO₂ electroreduction using hierarchical copper–organic links: a molecular engineering approach for advanced metal–organic framework catalysts

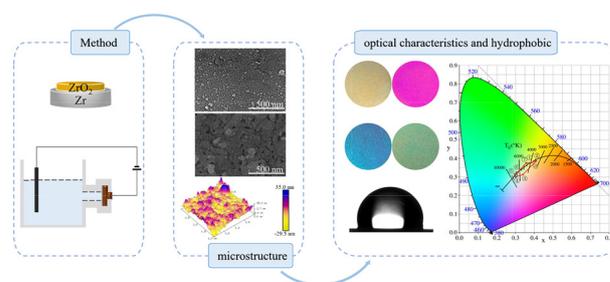
Yaoqi Wei, Ziwei Lu, Yucui Wei, Fengyun Zhang, Ying Chen, Wenting Qiu, Zhentian Xu,* Huanhuan Zhang* and Xiangfei Liang*



24014

Preparation, color formation mechanisms and hydrophobic properties of anodic zirconia films

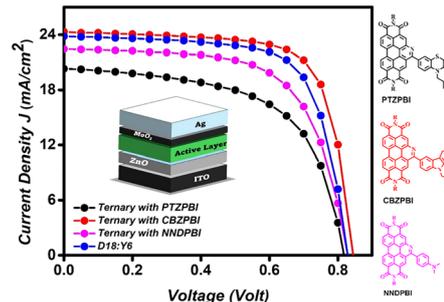
Panzhe Hou, Lingna Jia, Tianen Liu, Guangyu Wen, Junmeng Zhang, Lihu Liu, Peipei Lu* and Huiyuan Sun*



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Donor-functionalized aza-benzannulated peryleneimide-based ternary blend efficient inverted organic solar cells

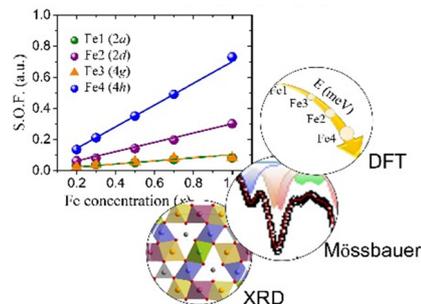
Mohd Wazid, Tarun, Upendra Kumar Pandey* and Rajneesh Misra*



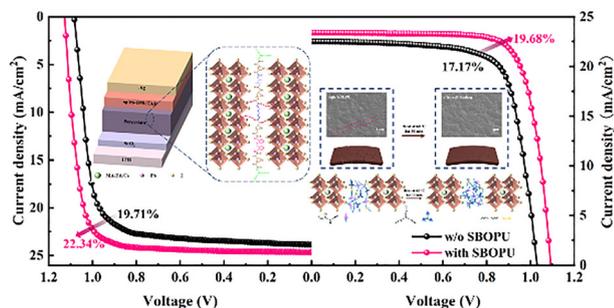
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Insight into the cation distribution in Co₂Co_{1-x}Fe_x(BO₃)O₂ (0.0 < x < 1.0): X-ray diffraction, Mössbauer spectroscopy, and DFT investigations

Yu. S. Gokhfeld, N. V. Kazak, V. S. Zhandun,* A. D. Vasiliev, Yu. V. Knyazev, D. A. Velikanov, S. Yu. Gavrilkin, O. A. Kondratev, A. O. Belyaeva, L. N. Bezmaternykh and S. G. Ovchinnikov



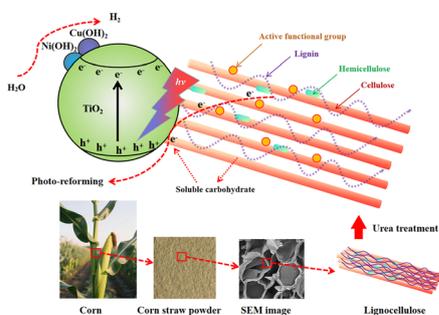
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Synergistic dynamic bonds in self-repairing elastomers boost efficiency and bendability of flexible perovskite photovoltaics

Xueying Li, Lixin Song,* Ruizhi Duan, Nan Liu, Xinyi Zheng, Pingfan Du and Jie Xiong

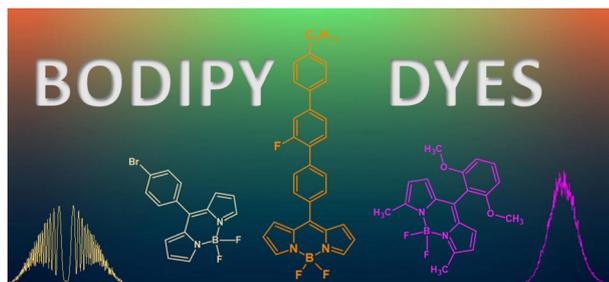
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A low-cost strategy for photocatalytic hydrogen production by using non-noble metal catalysts and biomass as a sacrificial agent

Dongyao Lin* and Peijie Wang

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Versatile BODIPY dyes for advanced optoelectronics: random lasing, harmonics generation, and OLED application

Piotr Leśniak, Paulina Wójcicka, Adam Szukalski,* Rafał Wysokiński, Bouchta Sahraoui, Dorota Zajęc, Przemysław Kula, Jarosław Myśliwiec and Alina Szukalska*

