

Journal of Materials Chemistry C

Materials for optical, magnetic and electronic devices

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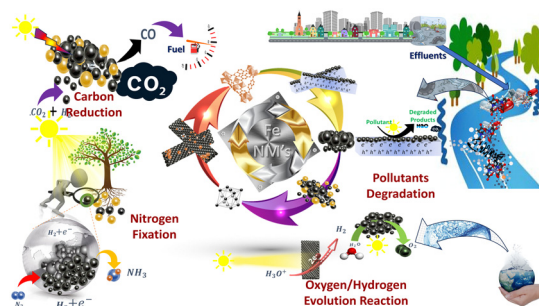
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REVIEWS

12653

Recent advances and perspectives on iron-based photocatalysts

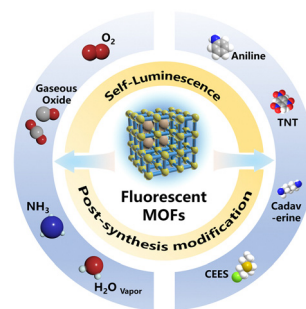
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Research progress in fluorescent gas sensors based on MOFs

Ruixiao Dong, Zhengqi Shen, Huizi Li,* Jiangong Cheng* and Yanyan Fu*



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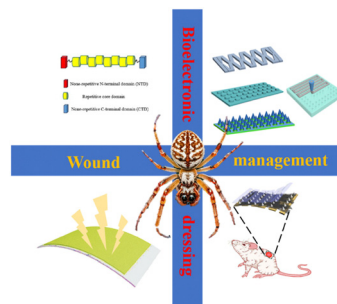


REVIEWS

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Artificial spider bioelectronic dressings for intelligent wound management

Shuhuan Li, Baoyang Lin, Yongji Xiong, Qian Zhou, Bingbing Gao* and Bingfang He

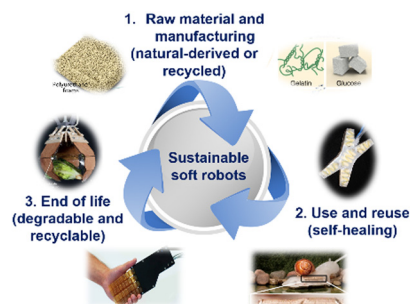


PERSPECTIVE

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The new material science towards sustainable robotics

Wusha Miao and Hedan Bai*

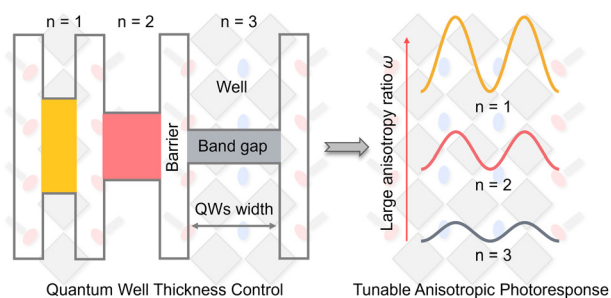


COMMUNICATIONS

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Quantum well thickness control of a hybrid perovskite to achieve a tunable anisotropic photoresponse

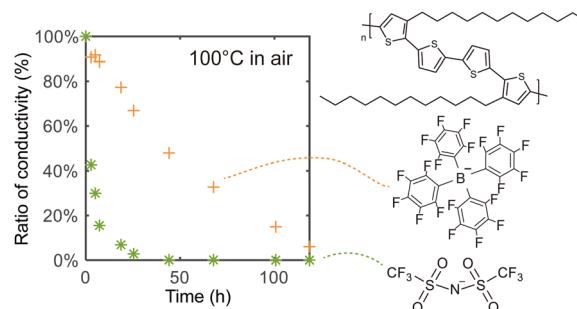
Cheng-Dong Liu, Chang-Chun Fan, Bei-Dou Liang, Wei Wang, Ming-Liang Jin, Chang-Qing Jing, Jing-Meng Zhang and Wen Zhang*



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Chemical doping of a semicrystalline polymeric semiconductor realizing high stability and work function

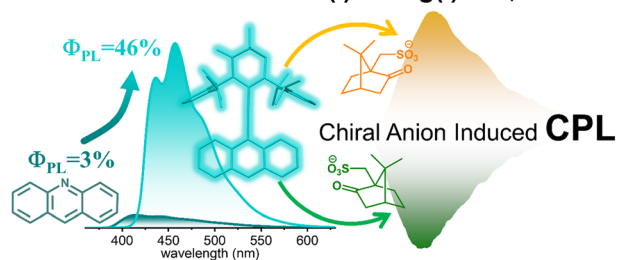
Zhenyun Xiao, Masaki Ishii, Jun Takeya, Katsuhiko Ariga and Yu Yamashita*



COMMUNICATIONS

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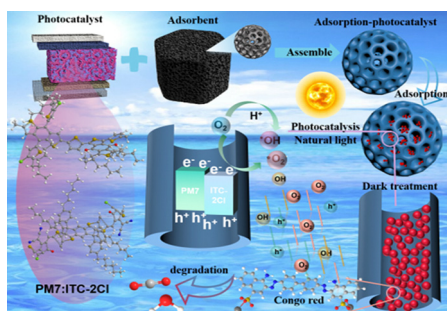
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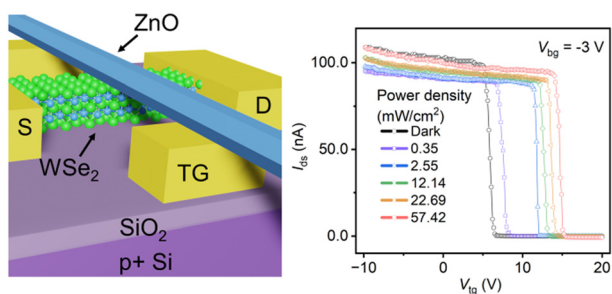
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Carbon-based binary organic photocatalysts for rapid dye degradation under weak light: performance and mechanistic study

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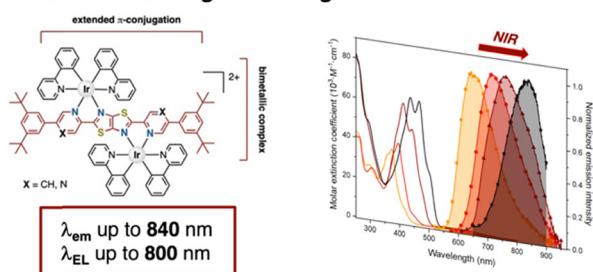
Photovoltage junction memtransistor for optoelectronic in-memory computing

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PAPERS

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Near-Infrared Light-Emitting Electrochemical Cells



Binuclear iridium(III) complexes for efficient near-infrared light-emitting electrochemical cells with electroluminescence up to 800 nm

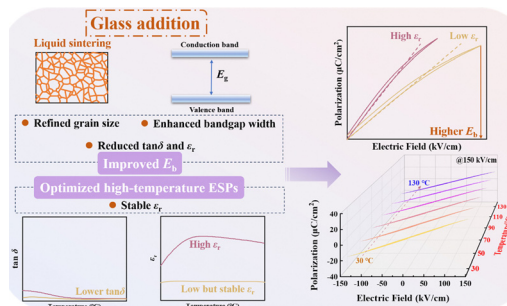
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Glass modified $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ -based energy-storage ceramics for high-temperature applications at low/moderate electric fields

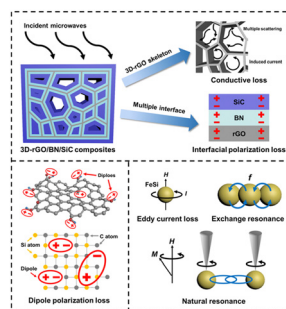
Chunhui Wu, Yongping Pu,* Xiang Lu, Yating Ning, Zhemin Chen, Lei Zhang and Yongqiang Yang



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Evaluation analysis of electromagnetic wave absorption for self-assembled 3D graphene skeleton-supported BN/SiC composites

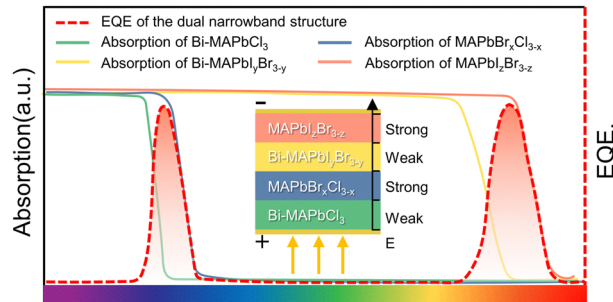
Qiuqi Zhang, Xiao You,* Huiying Ouyang, Yuanhang Yang, Zhenzhong Xing, Haodong Gu, Li Tian, Qingliang Shan, Xiangyu Zhang, Jinshan Yang* and Shaoming Dong*



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Dual narrowband photodetectors based on halide perovskite single crystal heterojunctions with solution-processed epitaxial growth

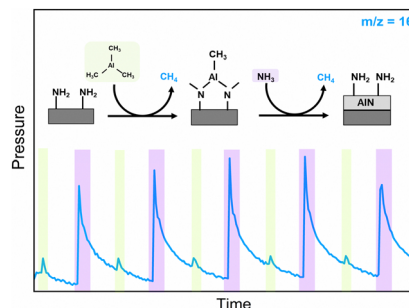
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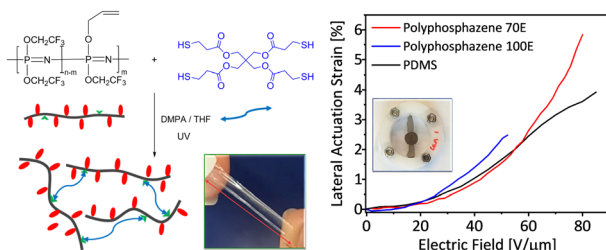
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Surface chemistry in atomic layer deposition of AlN thin films from $\text{Al}(\text{CH}_3)_3$ and NH_3 studied by mass spectrometry

Pamburayi Mpofu, Houyem Hafdi, Pentti Niiranen, Jonas Lauridsen, Oscar Alm, Tommy Larsson and Henrik Pedersen*



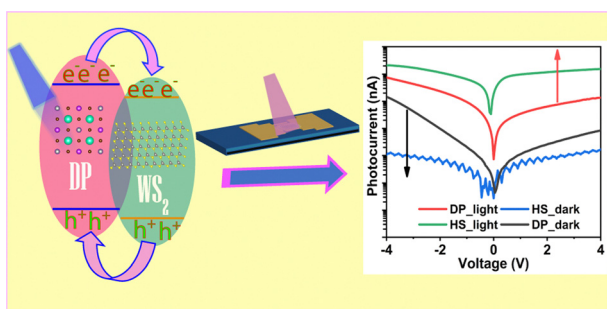
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A polyphosphazene elastomer containing 2,2,2-trifluoroethoxy groups as a dielectric in electrically responsive soft actuators

Cansu Zeytun Karaman, Thulasinath Raman Venkatesan, Johannes von Szczepanski, Frank A. Nüesch and Dorina M. Opris*

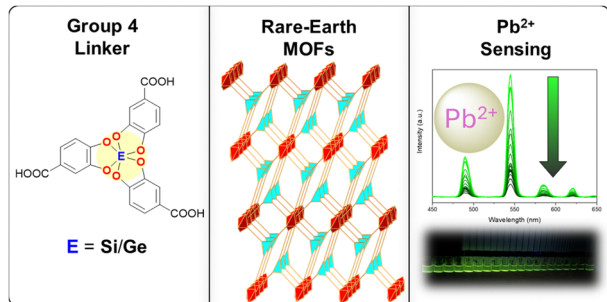
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Facile *in situ* synthesis of double perovskite $\text{Cs}_2\text{AgBiBr}_6/\text{WS}_2$ heterostructure and interfacial charge transfer mediated high-performance ultraviolet photodetection

Ravinder Chahal, Abdul Kaim Mia, Abhilasha Bora and P. K. Giri*

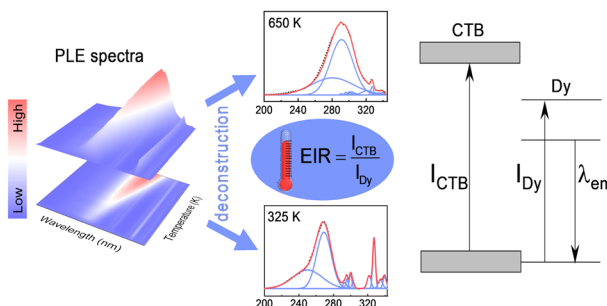
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Hexacoordinate germanate metal–organic frameworks for the detection of Pb^{2+} ions in aqueous solution

Shouyi Tian, Peter N. Horton, Simon J. Coles, Andrew J. P. White, Paul D. Lickiss and Robert P. Davies*

12854



Deconstructing excitation transitions in Dy^{3+} -doped CaWO_4 to develop a new ratiometric luminescent thermometry for achieving ultra-high sensing sensitivity

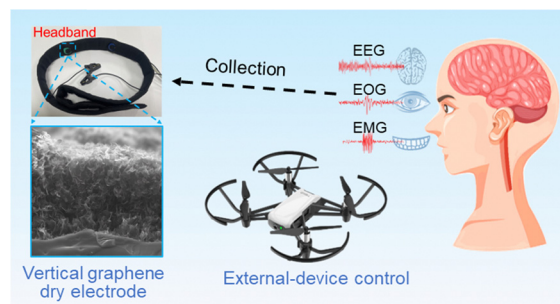
Qianrui Liu, Baosheng Cao,* Miao Gao, Lulu Qiu, Yujie Weng, Yangyang He, Xiaoguang Han* and Bin Dong



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Wearable gold–graphene dry electrode-based headband for effective brain–computer interface applications

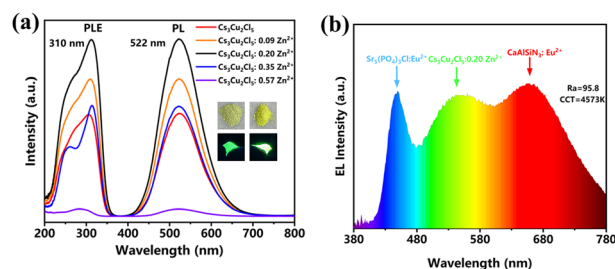
Yuhang Zheng, Yongyue Sun,* Hongji Li,* Xiuwei Xuan, Penghai Li and Mingji Li*



12874

Enhancement of photoluminescence quantum yield in lead-free inorganic copper based halide perovskites via zinc doping

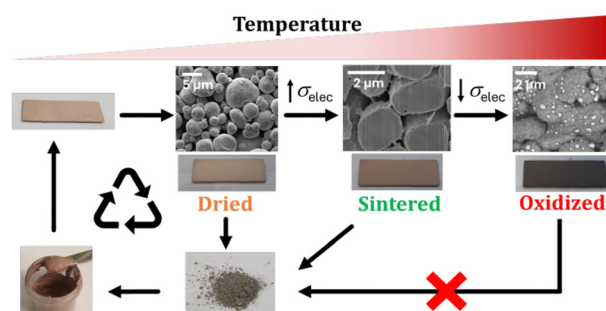
Yuchen Peng, Jing Guo,* Jingrui Guo, Jianghua Wu, Na Zhang, Guoying Zhao, Jingshan Hou, Ganghua Zhang, Yufeng Liu* and Yongzheng Fang*



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Low-temperature sintering of Cu@Ag microparticles in air for recyclable printed electronics

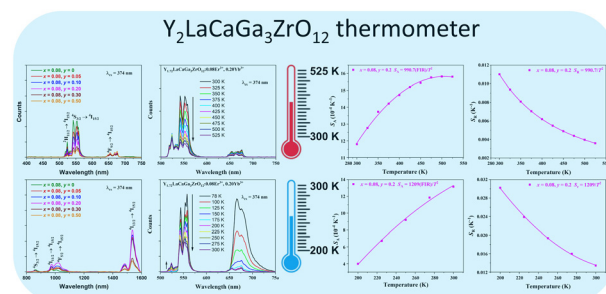
David van Impelen, Lola González-García* and Tobias Kraus*



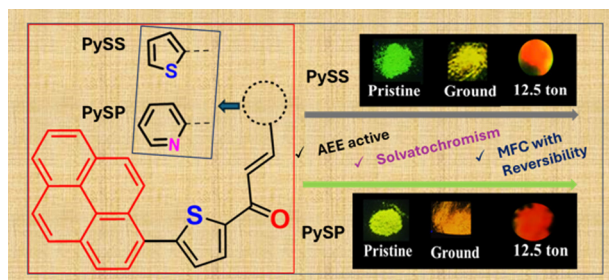
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Synthesis, dual mode luminescence and down-conversion based thermometric properties of novel $Y_{2-x-y}LaCaGa_3ZrO_{12}:xEr^{3+}, yYb^{3+}$ phosphors

Zhurong Mo, Hongli Wen,* Xin Gao, Chong Ta, Zhongfei Mu,* E. A. Dawi and Deshmukh Abdul Hakeem*



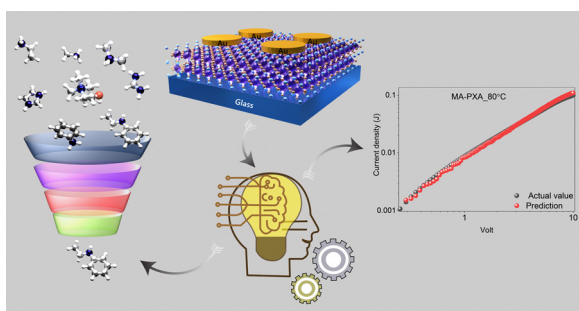
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Precise molecular design for a twisted pyrene-thiophene based mechanofluorochromic probe with large Stokes shift and feasibility study towards security ink and re-writable papers

Ram Prasad Bhatta, Sumit, Vishal Kachwal, Vandana Vishwakarma, Angshuman Roy Choudhury and Inamur Rahaman Laskar*

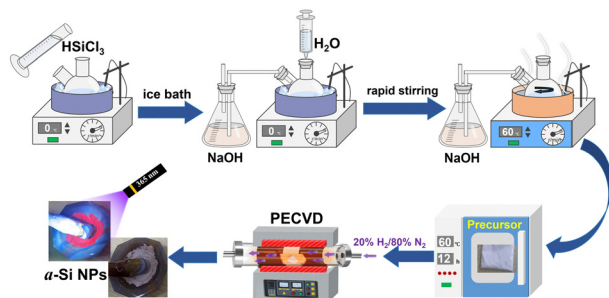
12919



Perovskite single crystal SCLC measurement prediction using a machine learning model

Sarvani Jowhar Khanam, Harinath Kuruva, Salman Abdul Moiz* and Murali Banavoth*

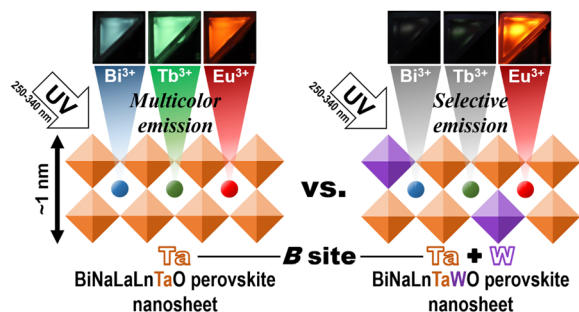
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A near-infrared fluorescence enhancement strategy of amorphous silicon nanoparticles for night vision imaging and visualizing latent fingerprints

Qian Zhang, Wanyin Ge,* Yunting Wang, Di Han, Maohao Yang, Xin Xie, Peng He and Honglei Yin

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Photoluminescence study of perovskite materials derived from tungsten- and lanthanide-containing aurivillius layered perovskite, $\text{Bi}_2\text{Na}_{0.63}\text{Ln}_{0.37}\text{Ta}_{1.75}\text{W}_{0.25}\text{O}_9$

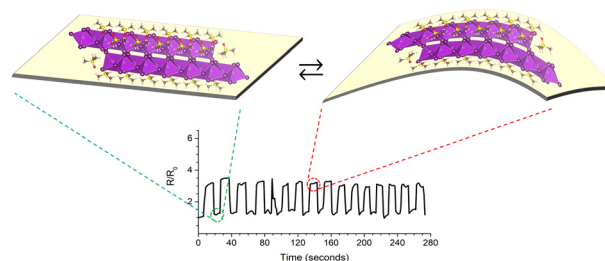
Keisuke Awaya,* Ayaka Yamamoto, Kazuto Hatakeyama and Shintaro Ida*



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Bismuth drives the morphology and piezoresistivity of lead-free $(\text{TMSO})_3\text{Sn}_{3x}\text{Bi}_{2(1-x)}\text{I}_9$ halide perovskite thin films

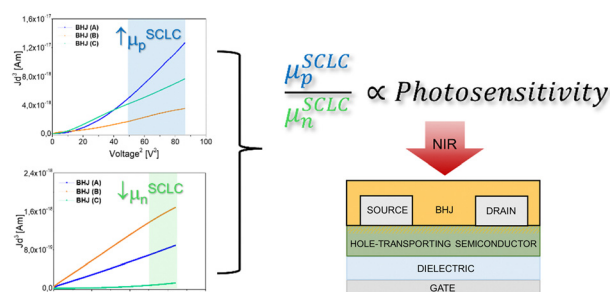
Simone Virga, Giuseppe Arrabito, Vittorio Ferrara, Michelangelo Scopelliti, Alessandro Longo, Bruno Pignataro* and Francesco Giannici*



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Photo-gain optimization in multilayer organic phototransistors by study of space-charge limited current

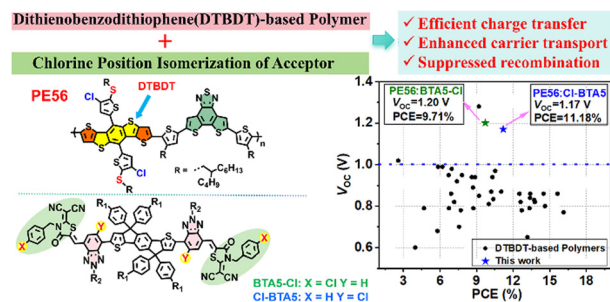
Giulia Baroni, Francesco Reginato, Mario Prosa, Marco Brucale, Federico Prescimone, Mirko Seri, Katherine Gallegos-Rosas, Caterina Soldano, Margherita Bolognesi* and Stefano Toffanin*



12971

Effect of chlorination and position isomerization of benzotriazole-based acceptors on high-voltage organic solar cells based on dithienobenzodithiophene (DTBDT)-containing polymer donor

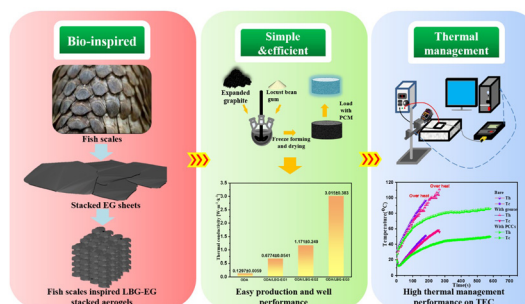
Jinge Zhu, Mengzhen Du, Ailing Tang,* Yuhan Meng, Chao Li,* Qing Guo* and Erjun Zhou*



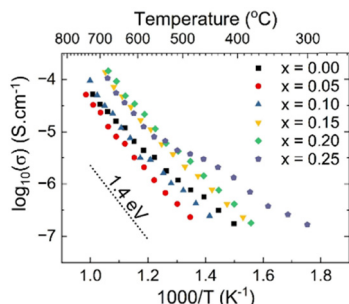
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Fish scales inspired phase change composites with hierarchical porosity and enhanced thermal conductivity for passive thermal management

Yanqing Wang, Weidong Liang,* Hanxue Sun, Jiyan Li, Zhaoqi Zhu and An Li*



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Structural, dielectric, and conduction behaviour of A-site deficient $\text{Sr}_x\text{Na}_{1-2x}\text{NbO}_3$ ceramics

Thomas E. Hooper* and Derek C. Sinclair

13002

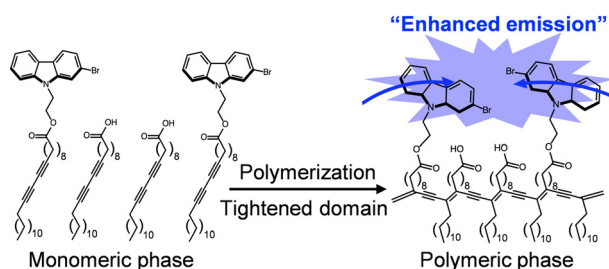
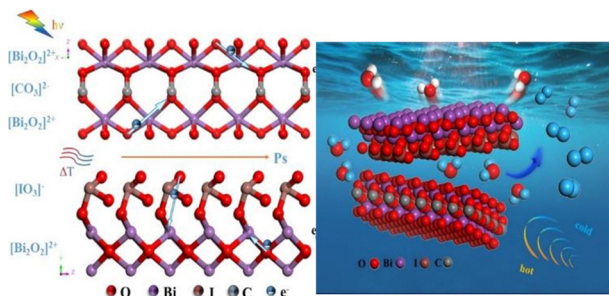


Photo-polymerization-induced tightened domain enhancing the room-temperature phosphorescence emission

Cheng Yuan, Sang Yup Lee, Jingyuan Huang, Yong Ho Cho, Yujie Liu, Dong June Ahn* and Chunzhi Cui*

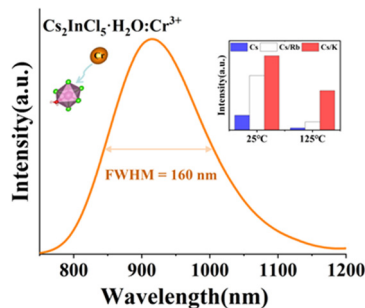
13010



Construction of 2D/2D $\text{BiOIO}_3/\text{Bi}_2\text{O}_2\text{CO}_3$ composite structures with face-to-face contacts can facilitate carrier transfer via a built-in electric field and a polar field for pyro-photo-electric catalysis

Yunfei Wu, Mengnan Ruan, Chengyi Wang, Tingting Zhong and Zhifeng Liu*

13021



Enhancing the thermal stability of the NIR emitting $\text{A}_2\text{InCl}_5\cdot\text{H}_2\text{O}:\text{Cr}^{3+}$ phosphor based on A site regulation

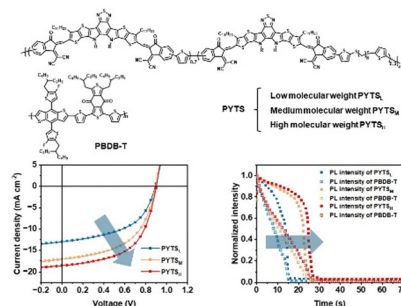
Lingkang Yu, Yining Wang, Xiaole Xing, Zheng Xu and Mengmeng Shang*



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In situ monitoring drying process to disclose the correlation between the molecular weights of a polymer acceptor with a flexible spacer and the performance of all-polymer solar cells

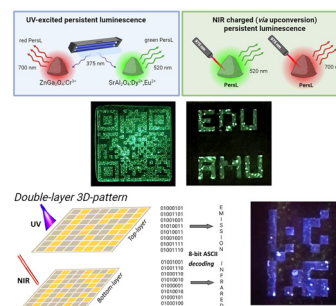
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Unleashing the glow: upconverting nanoparticles recharge persistent luminescent materials – applications in 3D-printing and optical coding

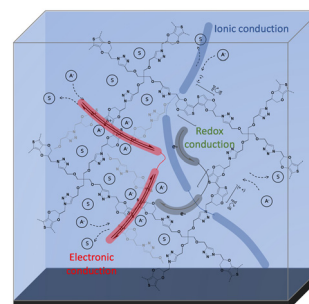
Adrian Drozdowski, Dirk Poelman, Marcin Runowski, Hanoch Hemmerich, Fernando Rivera-López and Tomasz Grzyb*



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Polymerization of EDOT functionalized star-shaped pentaerythritol and study of the structure and conducting properties of polymers

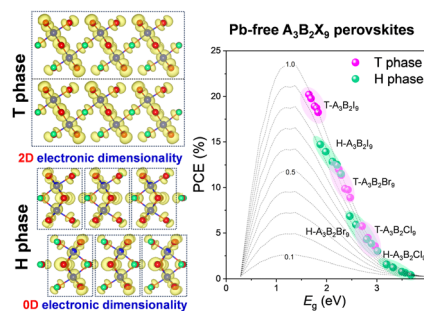
Rana Abdel Samad, Frédéric Gohier, Barbara Daffos, Pierre-Louis Taberna and Charles Cougnon*



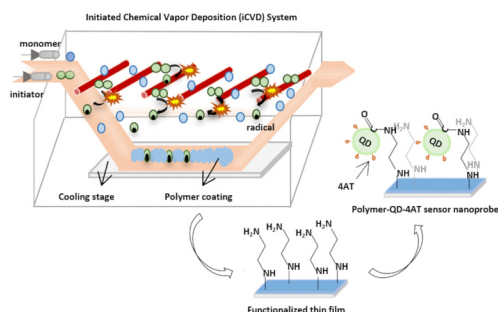
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Unravelling phase-dependent electronic dimensionality and optoelectronic properties in lead-free layered A₃B₂X₉ perovskites for photovoltaic applications

Qingyuan Luo, Dabao Xie, Yiqian Tian, Congmin Zhang, Dan Cao, Xiaoshuang Chen, Pei Liang and Haibo Shu*



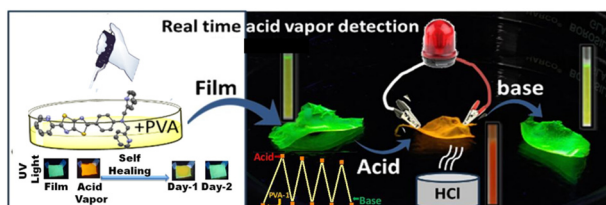
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Reusable polymer-based fluorescent sensor nanoprobe for selective detection of Cd²⁺ ions in real water sources

Merve Karabyık* and Özgenç Ebil

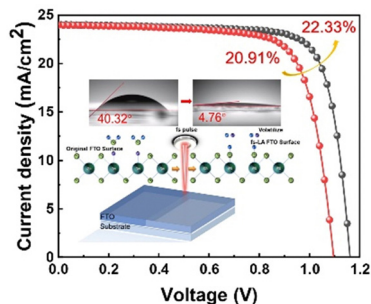
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An asymmetric thiazolo-thiazole derivative as a solvatochromic, reversible and self-color recovery acid–base molecular switch

Sanchita Shah, Neeraj Naithani, Subash Chandra Sahoo, Prakash P. Neelakandan* and Nidhi Tyagi*

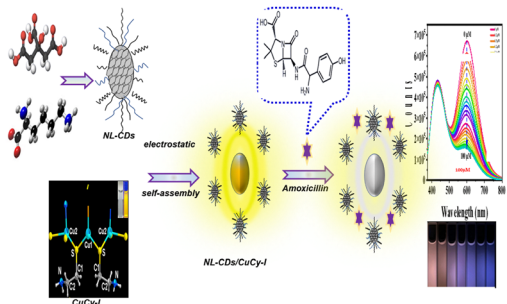
13096



Femtosecond laser annealing of fluorine-doped tin oxide films towards high-performance perovskite photovoltaics

Weihan Li, Nianyao Chai, Xiangyu Chen, Zhongle Zeng, Yunfan Yue, Fengyi Zhao and Xuewen Wang*

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Exploration of novel dual-emission NL-CDs/ Cu–Cy–I ratio fluorescent probe for the sensitive detection of amoxicillin

Bowen Shi, Zirui Yin, Xiaodan Tang,* Hongmei Yu,* Shuanping Cui and Wei Chen*

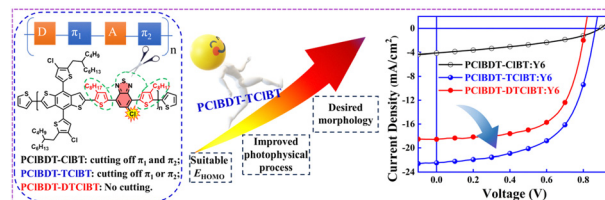


PAPERS

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The optimized energy level, morphology and photophysical procedure boosted the photovoltaic performance of monochlorinated benzothiadiazole-based polymer donors

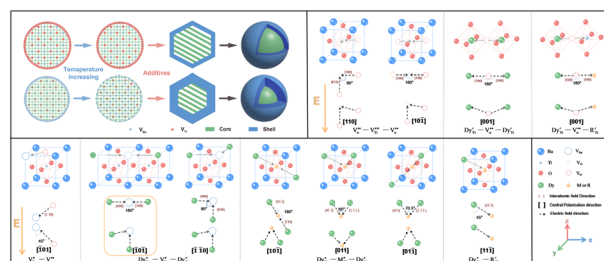
Junfeng Tong,* Wuyan Liu, Lili An, Shilei Qu, Aoxiang Zhang, Pengzhi Guo, Zezhou Liang, Lihe Yan, Chunyan Yang, Jianfeng Li and Yangjun Xia*



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Exceptional dielectric performance of MLCCs enabled by defect-engineered BaTiO₃

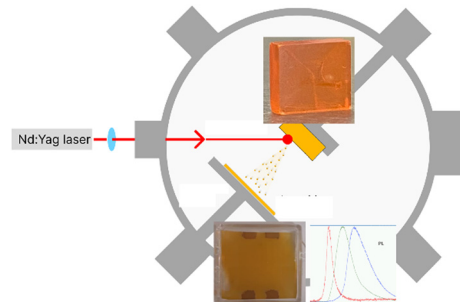
Pengfei Wang, Xiong Huang, Saiwei Luan, Jianwei Zhao, Bo Li, Jun Yang, Zhenxiao Fu,* Xiuhua Cao, Lei Zhang,* Shuhui Yu and Rong Sun



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High quality MAPbBr₃ films via pulsed laser deposition of single-crystalline targets

E. Ghavidel, A. Di Carlo, A. Ishteev, J. Barichello, K. Konstantinova, D. Saranin, V. Campanari, F. Martelli, B. Paci, A. Generosi, M. Guaragno, A. Cricenti, D. Becerrill, M. Luce, F. Matteocci and A. Di Trollo*



CORRECTIONS

13149

Correction: Perovskite single crystal SCLC measurement prediction using a machine learning model

Sarvani Jowhar Khanam, Harinath Kuruva, Salman Abdul Moiz* and Murali Banavoth*



CORRECTIONS

13150

Correction: Photo-gain optimization in multilayer organic phototransistors by study of space-charge limited current

Giulia Baroni, Francesco Reginato, Mario Prosa, Marco Brucale, Federico Prescimone, Mirko Seri, Katherine Gallegos-Rosas, Caterina Soldano, Margherita Bolognesi* and Stefano Toffanin*

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