

Journal of Materials Chemistry C

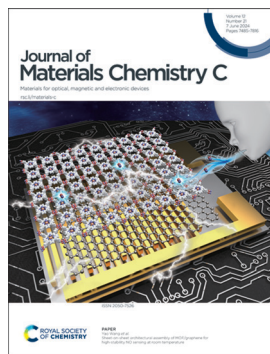
Materials for optical, magnetic and electronic devices

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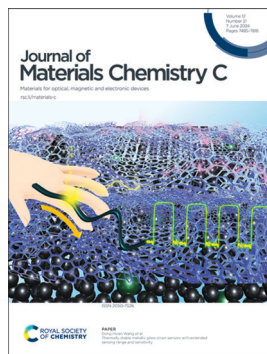
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ISSN 2050-7526 CODEN JMCCCC 12(21) 7485–7816 (2024)



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See Yao Wang *et al.*, pp. 7520–7531.
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Inside cover

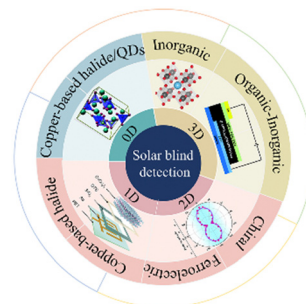
See Dong Hwan Wang *et al.*, pp. 7532–7541.
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REVIEW

7497

Recent progress on solar blind deep ultraviolet photodetectors based on metal halide perovskites

Wanfang Yang, Yutian Lei and Zhiwen Jin*

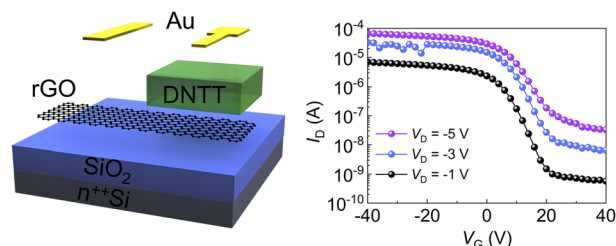


COMMUNICATION

7513

A design strategy for high-performance vertical organic field-effect transistors based on reduced graphene oxide electrodes

Kun Qiao,* Tingfeng Dai and Tao Zou



$$J_{\text{on}} > 134 \text{ mA/cm}^2$$



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Fundamental questions
Elemental answers

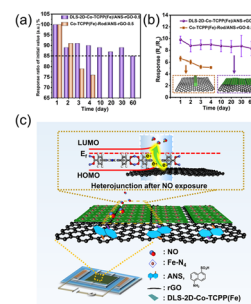


PAPERS

7520

Sheet-on-sheet architectural assembly of MOF/graphene for high-stability NO sensing at room temperature

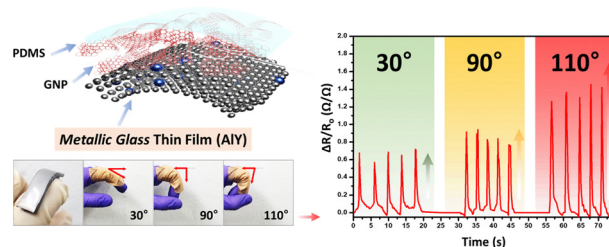
Yanwei Chang, Jingxing Zhang, Ruofei Lu, Weiran Li, Yuchen Feng, Yixun Gao, Haihong Yang, Fengnan Wang, Hao Li, Yi-Kuen Lee, Patrick J. French, Ahmad M. Umar Siddiqui, Yao Wang* and Guofu Zhou



7532

Thermally stable metallic glass strain sensors with extended sensing range and sensitivity

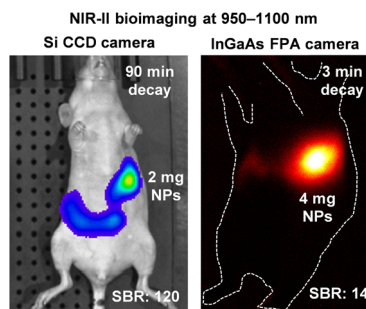
Jae Sang Cho, Woongsik Jang, Keum Hwan Park and Dong Hwan Wang*



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Deep-tissue NIR-II bioimaging performance of Si-based and InGaAs-based imaging devices using short-wave infrared persistent luminescence

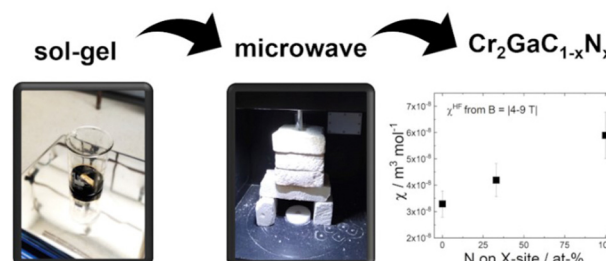
Yafei Chen,* Simona Spinelli and Zhengwei Pan*



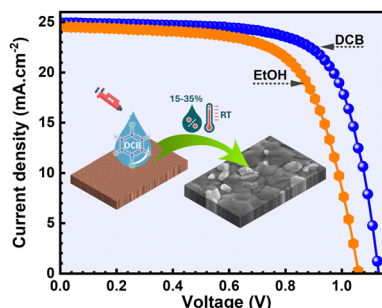
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Between carbide and nitride MAX phases: sol-gel assisted synthesis and characterization of the carbonitride phase Cr₂GaC_{1-x}N_x

Niels Kubitz, Isabel Huck, Hanna Pazniak, Curran Kalha, David Koch, Bo Zhao, Pardeep K. Thakur, Tien-Lin Lee, Aysha A. Riaz, Wolfgang Donner, Hongbin Zhang, Benjamin Moss, Ulf Wiedwald, Anna Regoutz and Christina S. Birkel*



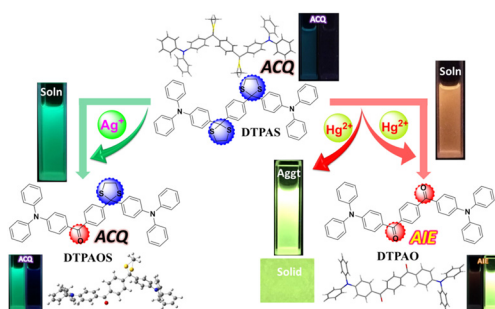
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Anti-solvent engineering enables efficient ambient-processed halide perovskite solar cells

Ivy M. Asuo,* Arezo Mahdavi Varposhti, Enrique D. Gomez and Nutifafa Y. Doumon*

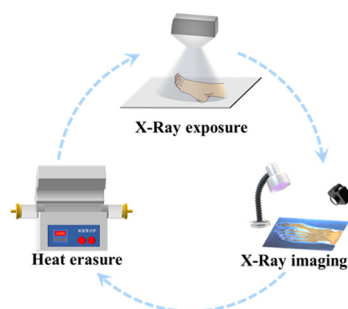
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A novel fluorescent chemosensor enables dual-channel selective “turn-on” detection of Hg²⁺ and Ag⁺ via distinct thiophilic effects, essential mechanisms, and excellent sensing performance for mercury(II) in aggregated states

Zhijun Ruan,* Xinyi Dong, Tao Long,* Shanshan Liu, Yanmei Chen and Junqi Lin*

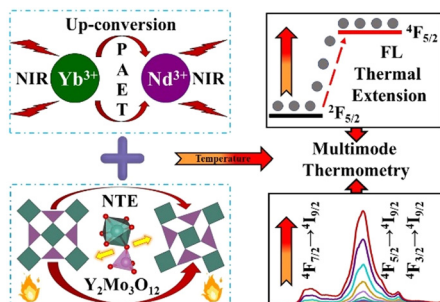
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Valence regulation in europium-doped fluoride phosphor for high-resolution X-ray time-lapse imaging

Jian Zhang, Xin Li, Wei Zeng, Daiyuan Liu, Lan Lu, Heng Dai, Junheng Yuan, Jianxiong Shao, Zhichao Liu, Jie Yu* and Xuhui Xu

7588



Thermally enhanced NIR up-conversion fluorescence multimode thermometry based on Y₂Mo₃O₁₂:Nd³⁺,Yb³⁺

Yexuan Zhang, Minkun Jin, Wang Chen, Ziyang Wu, Zexun Li and Chongfeng Guo*

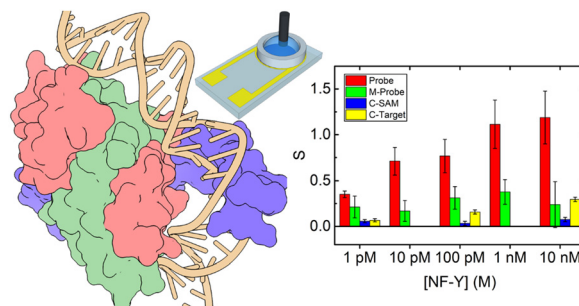


PAPERS

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Investigation of transcription factor–DNA binding with electrolyte-gated organic transistors

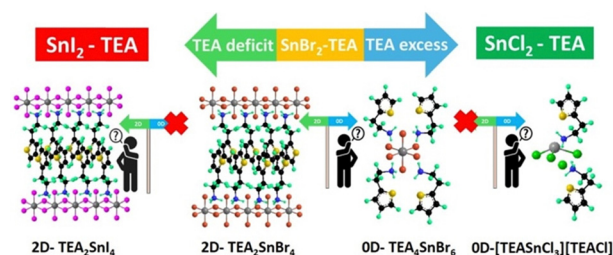
Matteo Sensi,* Andrea Ricci, Giovanna Rigillo, Alessandro Paradisi, Marcello Berto, Nerina Gnesutta, Carol Imbriano, Fabio Biscarini and Carlo Augusto Bortolotti



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Chemically driven dimensionality modulation of hybrid tin(II) halide perovskite microcrystals

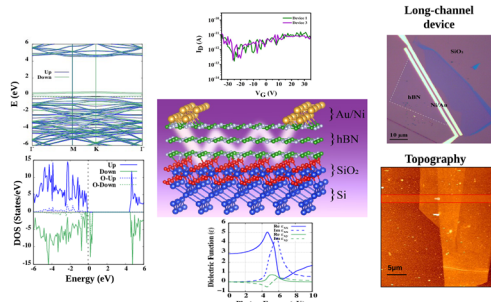
Raúl I. Sánchez-Alarcón, Omar E. Solís, Maria Cristina Momblona-Rincon, Teresa S. Ripolles,* Juan P. Martínez-Pastor, Rafael Abargues* and Pablo P. Boix*



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Current-in-plane tunneling measurement of oxygen-functionalized few-layer boron nitride lateral barriers

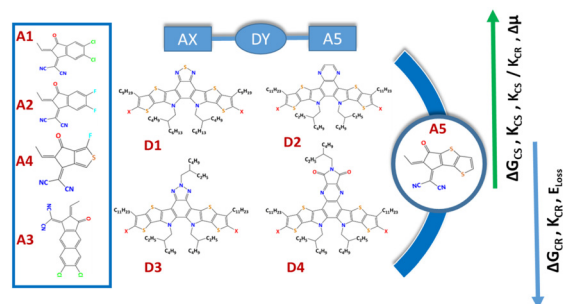
Ziba Torkashvand, Kavos Mirabbaszadeh,* Farzaneh Shayeganfar,* Pawan Kumar Srivastava, Changgu Lee and Mohadesse Beigtan



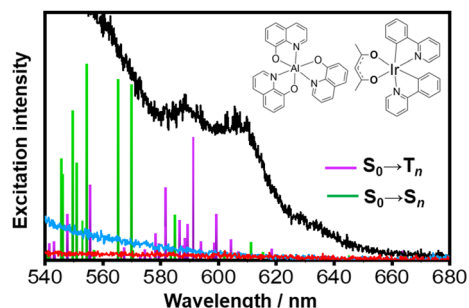
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Unveiling symmetry: a comparative analysis of asymmetric and symmetric non-fullerene acceptors in organic solar cells

Rudranarayan Khatua and Anirban Mondal*



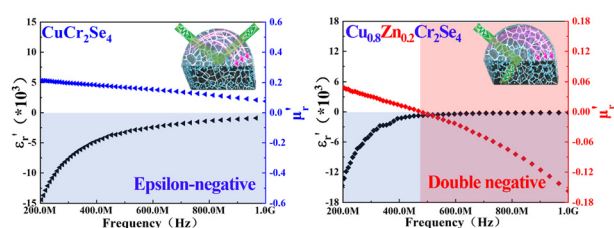
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Crystalline confinement leads to broadening of absorption spectra through activated spin-forbidden transitions in Alq₃-Irppy₂acac engineered crystals

Yufang Nie, Heming Zhang,* Jiaxuan Wang, Lianbao Ke, Semion K. Saikin,* Hai Bi, Wangqiao Chen and Guofu Zhou*

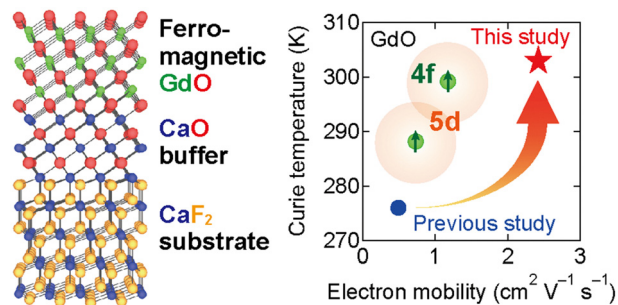
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Modified Lossy epsilon-negative CuCr₂Se₄ toward single-phase metamaterials with double negative parameters via Zn doping

Zechao Xu, Weiye Lu, Kelan Yan,* Runhua Fan and Ningzhong Bao*

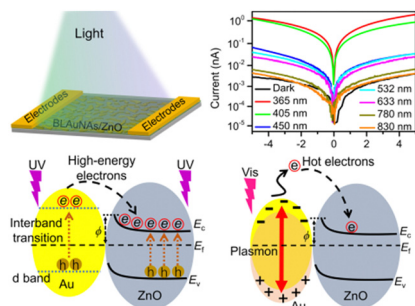
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Enhanced Curie temperature near 300 K in highly crystalline GdO epitaxial thin films concomitant with an anomalous Hall effect

Takato Fukasawa, Dai Kutsuzawa, Daichi Oka,* Kenichi Kaminaga, Daichi Saito, Hirokazu Shimizu, Hiroshi Naganuma and Tomoteru Fukumura*

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Heterostructures made from bone-like plasmonic Au nanoantennas and ZnO quantum dots for broadband photodetectors

Bingwu Liu, Xi Xie, Yuan Feng, Pu Chen, Dong Li, Huan Cheng, Changjun Min,* Qinglin Zhang* and Jiawen Hu*

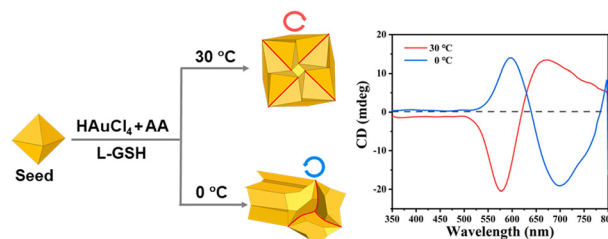


PAPERS

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Tuning chiral morphology of gold nanoparticles with reversed chiral signals by adjusting the reaction temperature of the seed-mediated growth process

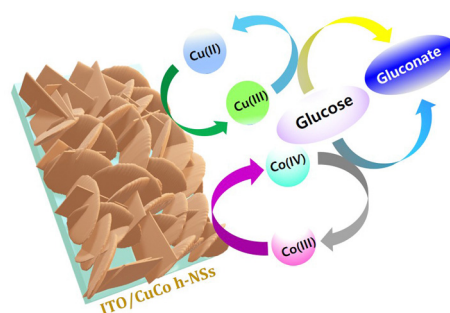
Qingyuan Liu, Miao Zhang, Chunli Xu* and Baoxin Li*



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Methionine-assisted electrodeposition of porous copper cobalt bi-metallic hetero-nanostructures on an indium tin oxide electrode: a disposable and stable electrode for non-enzymatic glucose sensing

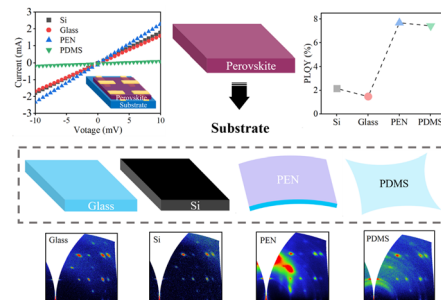
Perumal Viswanathan, Ji Won Kim, Shanmugam Manivannan and Kyuwon Kim*



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Substrate effects on structural and optoelectronic properties of quasi-2D perovskite films

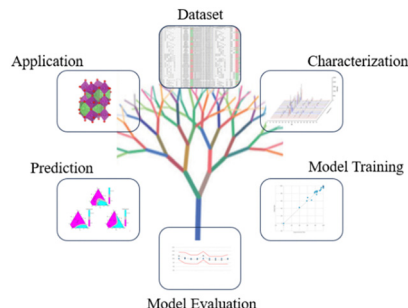
Chenyu Hu, Zhenmei He, Shuochen Wang, Lixuan Kan, Sanfeng Lei, Xixiang Zhu, Jinpeng Li, Kai Wang and Haomiao Yu*



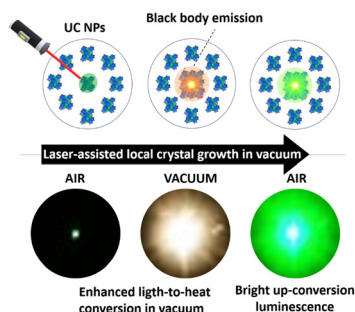
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A chemometric approach for the design of lanthanum-based high entropy perovskite oxides

Luca Angelo Betti, Lisa Rita Magnaghi,* Aldo Bosetti, Raffaella Biesuz and Lorenzo Malavasi*



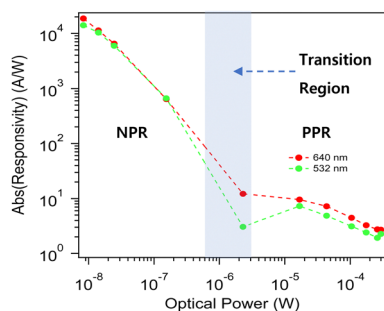
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Vacuum-assisted colossal enhancement of up-conversion luminescence of lanthanide-doped nanoparticles upon NIR laser irradiation – a new strategy for phosphor development

Christian Hernández-Álvarez,* Kevin Soler-Carracedo, Przemysław Woźny, Inocencio R. Martín* and Marcin Runowski*

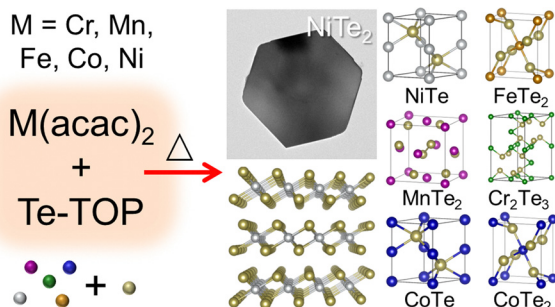
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Transition of photoresponsivity in graphene–insulator–silicon photodetectors

Hong-Ki Park and Jaewu Choi*

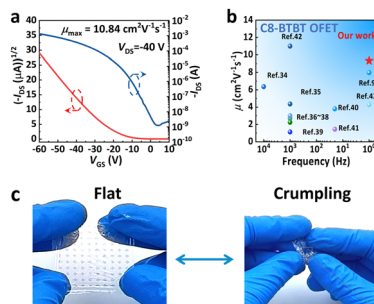
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General synthesis of magnetic binary transition metal telluride nanocrystals

Jingxia Wang, Bin Wang, Yifen Wang, Ruixia Yang, Lanfang Wang, Fang Wang, Xiaohong Xu and Yang Liu*

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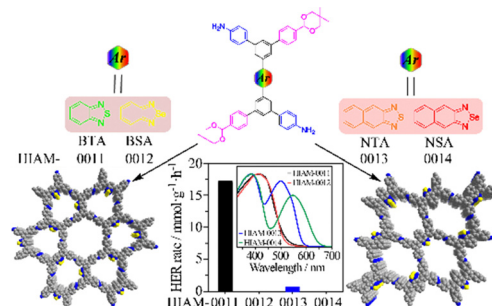
Antisolvent polysulfone dielectric for ultrastable solution-processed high-performance conformal organic transistor array

Mingxin Zhang, Mengqiao Du, Yanhong Tong,* Xue Wang, Jing Sun, Shanlei Guo, Xiaoli Zhao, Qingxin Tang* and Yichun Liu



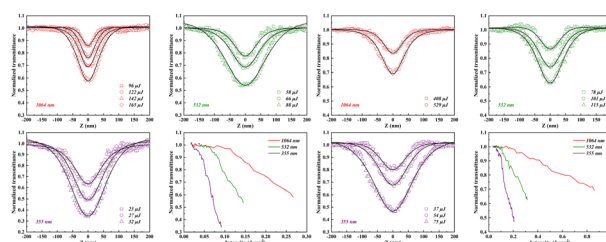
Jia-Xin Guo, Ze-Yang Wang, Chao-Qin Han, Shuai Sun,
Lei Wang,* Gonghao Lu* and Xiao-Yuan Liu*

Jia-Xin Guo, Ze-Yang Wang, Chao-Qin Han, Shuai Sun,
Lei Wang,* Gonghao Lu* and Xiao-Yuan Liu*



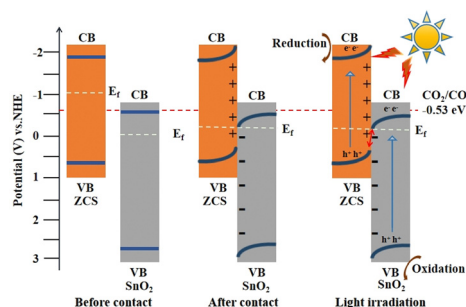
2D Ta₄AlC₃ and Ta₄C₃ nanosheets with excellent ultraviolet optical limiting behavior for laser protection

Binjian Du, Zhenyu Zhao, Zihan Ren, Qianhou Liu and
Fang Zhang*

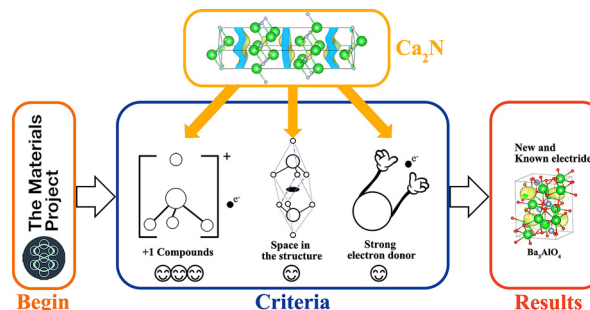


Construction of a Zn_{0.65}Cd_{0.35}S/SnO₂ S-scheme heterojunction for efficient photocatalytic CO₂ reduction

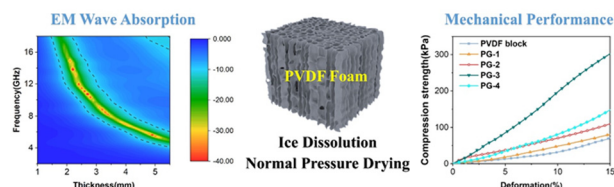
Tao Li, Xiong He, Junhao Wu, Guangyu Pan,
Dandan Wang, Fan Zhang, Limin Gao,*
Haquan Xie and Kui Li*



Assessing the design rules of electrified

Zhikun Yao, Yanzhen Zhao, Wenjun Zhang and
Lee A. Burton*

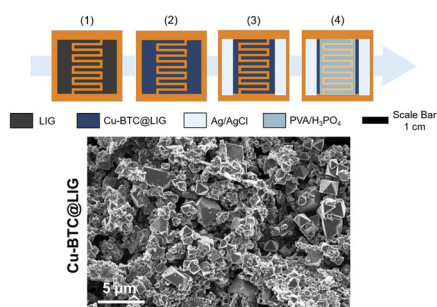
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Enhanced electromagnetic wave absorption and mechanical performances of graphite nanosheet/PVDF foams via ice dissolution and normal pressure drying

Xiaogang Su,* Yu Zhang, Jun Wang and Yaqing Liu*

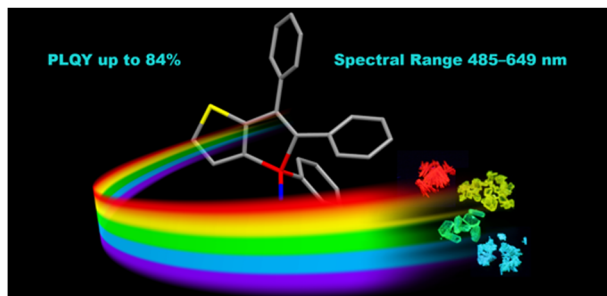
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Simple fabrication of laser-induced graphene functionalized with a copper-based metal-organic framework and its application in solid-state supercapacitors

Samuel Morales-Cámara, Victor Toral, Iñigo J. Vitorica-Yrezabal, Almudena Rivadeneyra, Luis Pereira, Sara Rojas and Francisco J. Romero*

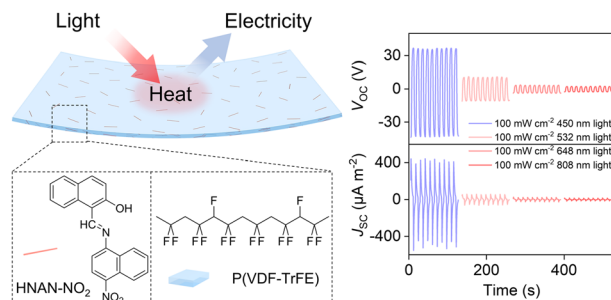
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Thieno[3,2-*b*]phosphole-based AIEgens: facile preparation and dual modulation of solid-state luminescence

Nils König, Justin Mahnke, Yokari Godínez-Loyola, Hendrik Weiske, Julian Appel, Peter Lönnecke, Cristian A. Strasser* and Evamarie Hey-Hawkins*

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Schiff base organic molecular crystals/ferroelectric polymer composite for photo-pyroelectric conversion

Zhaopeng Wang, Jie Liu and Baojin Chu*

