

Journal of Materials Chemistry C

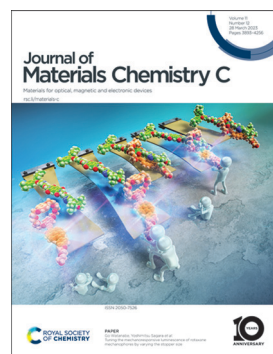
Materials for optical, magnetic and electronic devices

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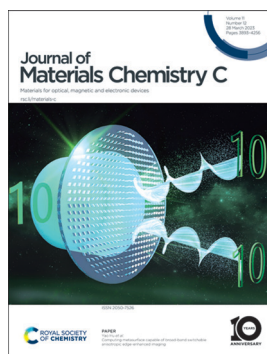
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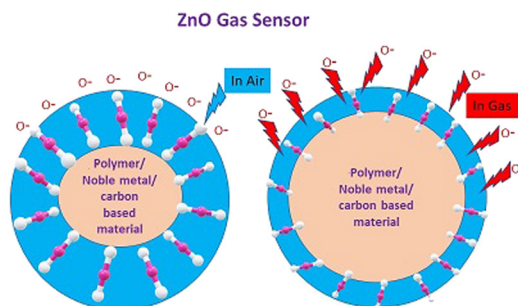
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REVIEW

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Zinc oxide based gas sensors and their derivatives: a critical review

Kurugundla Gopi Krishna, Godavarti Umadevi, Saidireddy Parne* and Nagaraju Pothukanuri*

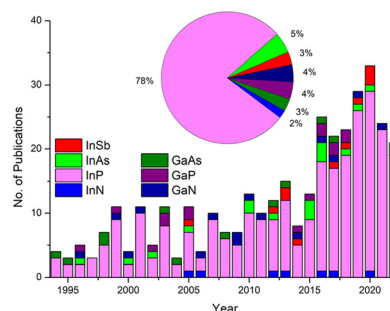


PERSPECTIVE

3926

Colloidal III–V quantum dots: a synthetic perspective

Theodore A. Gazis, Ashleigh J. Cartlidge and Peter D. Matthews*



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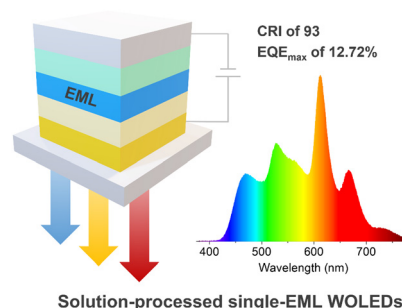


COMMUNICATIONS

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Solution-processed single-emissive-layer WOLEDs with high efficiency and ultra-high color rendering index beyond 90

Dongling Zhou, Gang Cheng,* Weiqiang Liu, Siping Wu and Chi-Ming Che*

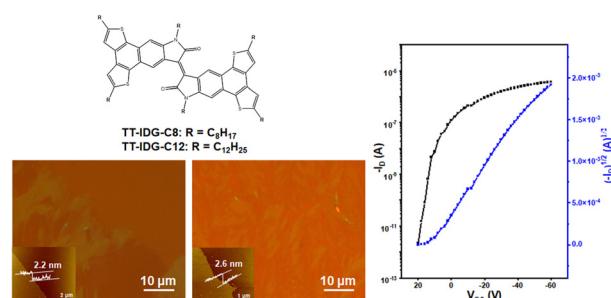


Solution-processed single-EML WOLEDs

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Room-temperature smectic liquid crystal monolayers for field-effect transistors

Chunlei Li, Chunguang Zhu, Yanjun Shi, Jie Liu,* Huajie Chen* and Lang Jiang*

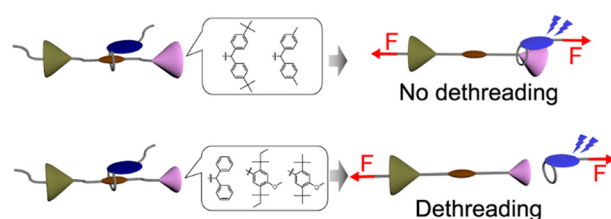


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Tuning the mechanoresponsive luminescence of rotaxane mechanophores by varying the stopper size

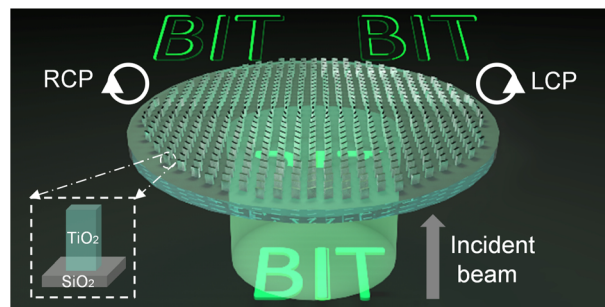
Keiko Hiratsuka, Tatsuya Muramatsu, Takuya Seki, Christoph Weder, Go Watanabe* and Yoshimitsu Sagara*



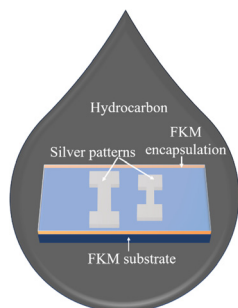
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Computing metasurface capable of broad-band switchable anisotropic edge-enhanced imaging

Qun Hao, Wenli Wang, Jing Wang, Qianhui Li, Yao Hu,* Shaohui Zhang and Liandong Yu



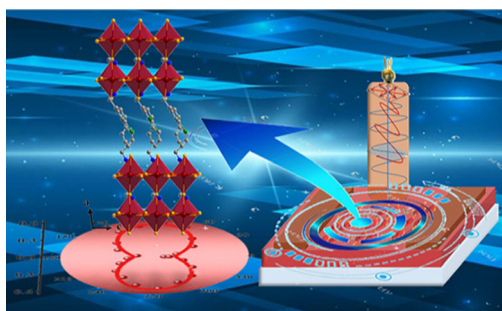
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Encapsulating and inkjet-printing flexible conductive patterns on a fluoroelastomer for harsh hydrocarbon fluid environments

Sahil P. Wankhede, Ali H. Alshehri and Xian Du*

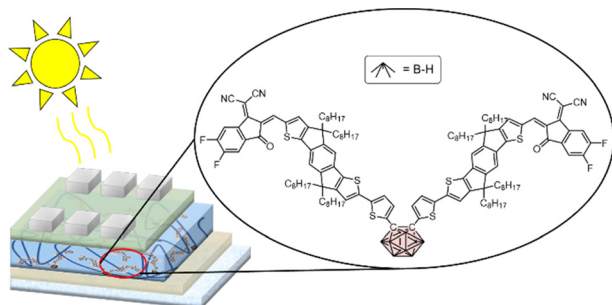
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Polar 2D hybrid perovskite crystals with intrinsic strong linear dichroism for polarization-sensitive and self-powered detection

Yaoyao Chen, Liwei Tang, Yi Liu, Tian Yang, Lina Hua, Xi Zeng, Junhua Luo and Zhihua Sun*

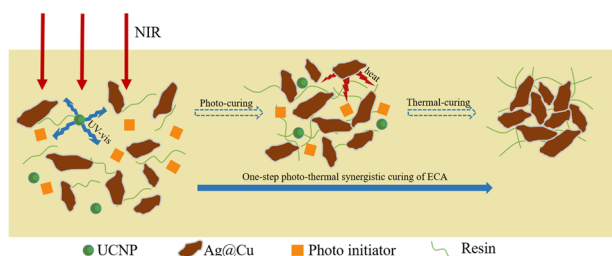
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A comparison of *para*, *meta*, and *ortho*-carborane centred non-fullerene acceptors for organic solar cells

Filip Aniés, Francesco Furlan, Zhuoran Qiao, Valentina Pirela, Matthew Bidwell, Martina Rimmele, Jaime Martín, Nicola Gasparini and Martin Heeney*

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Near-infrared light induced curing of electrically conductive adhesive assisted by upconversion particles

Xiaoyu Wang, Ren Liu and Jing Luo*

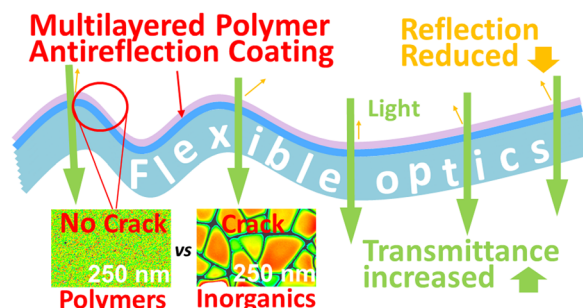


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Elastic broadband antireflection coatings for flexible optics using multi-layered polymer thin films

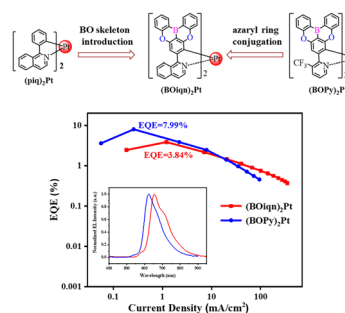
Yineng Zhao, Ni Huo, Sheng Ye and Wyatt E. Tenhaeff*



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High-efficiency deep-red to near-infrared emission from Pt(II) complexes by incorporating an oxygen-bridged triphenylborane skeleton

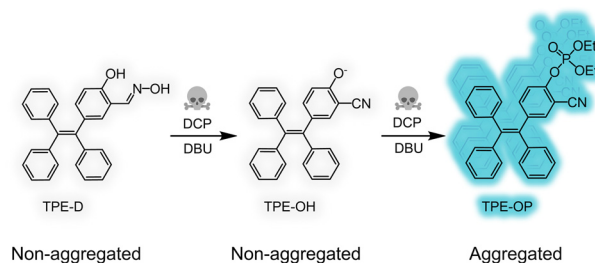
Wei-Qiong Zheng, Kai-Yu Lu, Xiang-Qin Gan, Hu Zhang, Xiu-Qin Yan, Jun-Ting Yu, Ya-Fei Wang, Xiu-Gang Wu* and Wei-Guo Zhu*



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A salicylaldoximate-based AIE probe for the detection of the nerve agent simulant DCP

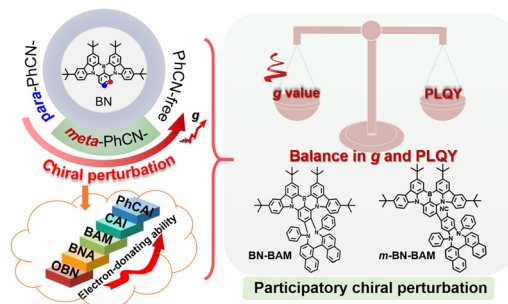
Dan Li, Liang Zong, Daxue Li, Shaohui Sui, Yanhua Xiao, Bo Zhuang, Yongling Shen, Zhiping Huang and Weihui Wu*



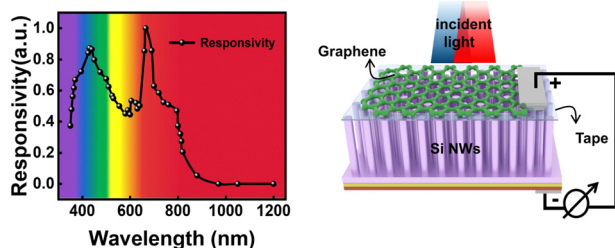
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Design of high-performance circularly polarized multiple resonance-based TADF materials via participatory chiral perturbation

Ping Li, Wenjing Li, Qixin Lv, Runfeng Chen* and Chao Zheng*



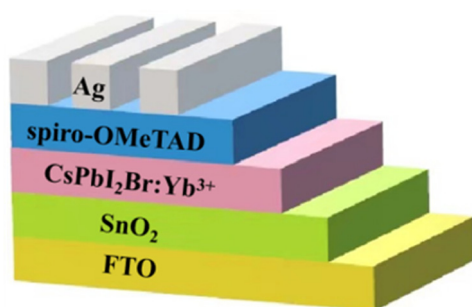
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A dual-band graphene/silicon nanowire array heterojunction photodetector induced by leaky mode resonances

Di-Hua Lin, Fang Wan, Shu-Chang Gong, Can Fu, Feng-Xia Liang* and Lin-Bao Luo*

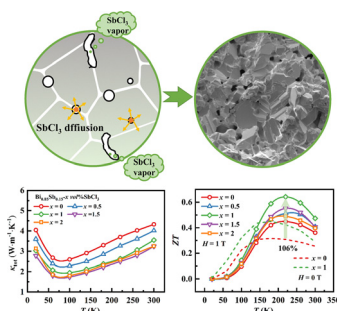
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Lanthanide ion doping enabling highly sensitive and stable all-inorganic CsPbI₂Br perovskite photodetectors

Zhiyuan Fang, Nan Ding, Wen Xu, Tianyuan Wang, Yue Wang, Lu Zi, Junhua Hu, Siyu Lu, Donglei Zhou, Xue Bai and Hongwei Song*

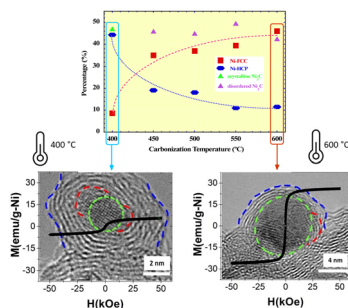
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Cryogenic thermoelectric enhancements in SbCl₃-doped porous Bi_{0.85}Sb_{0.15} alloys

Jian Wang, Feng Luo, Can Zhu, Jiafu Wang, Xiong He, Yan Zhang, Hongxia Liu* and Zhigang Sun*

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Untangling the role of the carbon matrix in the magnetic coupling of Ni@C nanoparticles with mixed FCC/HCP crystal structures

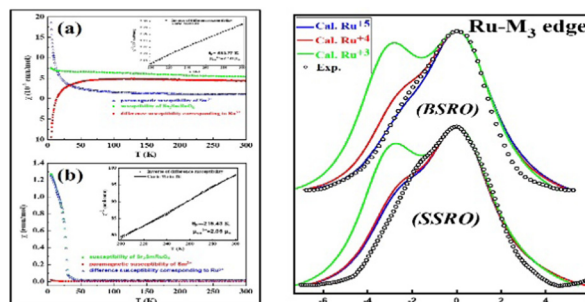
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Evolution of the valence state of Ru metal ions in correlation with the structural and electronic properties of double perovskite ruthenates; $A_2\text{SmRuO}_6$ (where A = Ba & Sr)

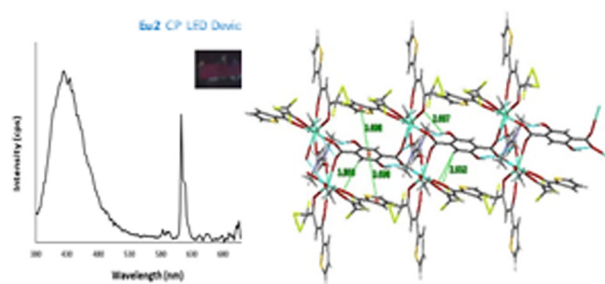
Sahil Dani, Rabia Pandit, Hitesh Sharma, A. Arya, R. J. Choudhary, Navdeep Goyal, Jarnail Singh and Rakesh Kumar*



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An efficient pink luminescent Eu(III) coordination polymer excited on a blue LED chip

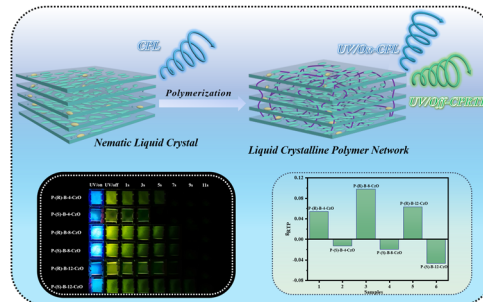
Nafisa A. Abusail, Najat Al Riyami, Rashid Ilmi, Muhammed S. Khan and Nawal K. Al-Rasbi*



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Circularly polarized organic room temperature phosphorescence activated by liquid crystalline polymer networks

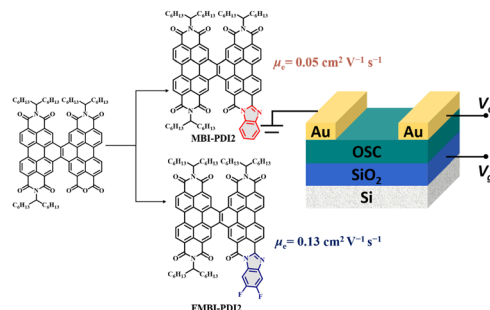
Ao Huang, Jiang Huang, Hui-Ying Luo, Zhi-Wang Luo, Pu Wang,* Ping Wang,* Yan Guan and He-Lou Xie*



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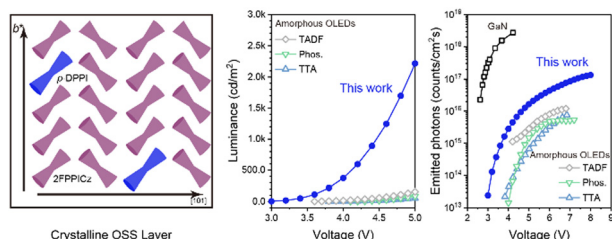
Difluorobenzimidazole-decorated helical perylene diimide dimers for high-performance n-type organic field-effect transistors

Nuoya Li, Li Chen, Guangwei Shao, Jingjing Zhao, Di Wu* and Jianlong Xia*



PAPERS

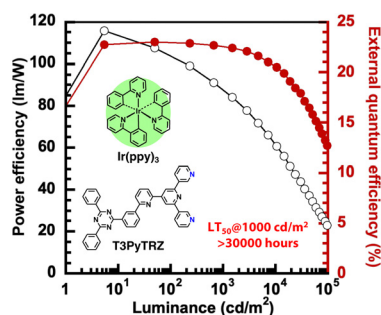
4120



A deep-blue crystalline organic light-emitting diode based on a solid-solution thin-film emitting layer

Peifu Sun, Feng Zhu* and Donghang Yan

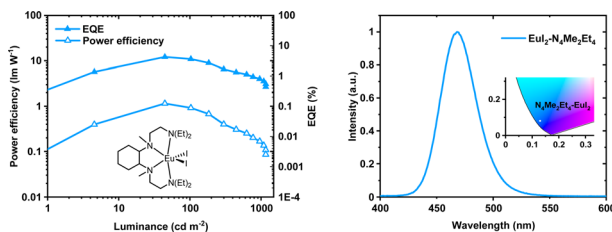
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Tetrapyridine/triphenyltriazine-conjugated electron transporters for low-power-consumption, high-stability phosphorescent OLEDs

Tomoya Kawano, Hisahiro Sasabe,* Yu Saito, Yuhui Chen, Yuma Kori, Takeru Nakamura, Shoki Abe, Tomohiro Maruyama and Junji Kido

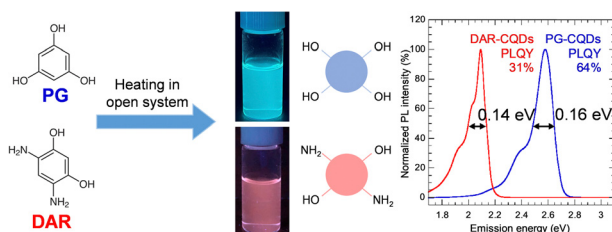
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Europium(III) complexes with substituted triethylenetetramine: new emitters to construct efficient deep blue organic light emitting diodes by spin coating

Hao Qi, Tianming Zhong, Peihao Huo, Jiayin Zheng, Zifeng Zhao, Wenchao Yan, Zuqiang Bian* and Zhiwei Liu*

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Open system synthesis of narrow-bandwidth red-fluorescent carbon quantum dots with a function of multi-metal ion sensing

Rika Katakami, Kohei Sato, Akihiro Ogura, Ken-ichi Takao, Yoshiki Iso* and Tetsuhiko Isobe*

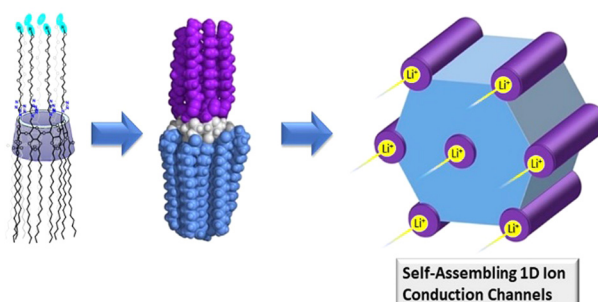


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Functional group polarity-modulated formation of liquid crystals of amphiphilic cyclodextrins

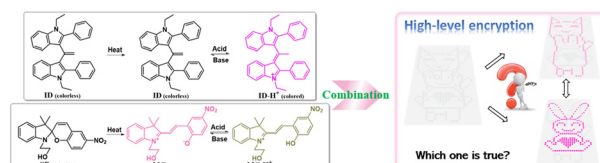
Austin Che, Carson O. Zellman, Diganta Sarkar, Simon Trudel-Lachance, Jayar Espejo, Vladimir K. Michaelis,* Vance E. Williams* and Chang-Chun Ling*



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Multiplexed stimuli-responsive molecules for high-security anti-counterfeiting applications

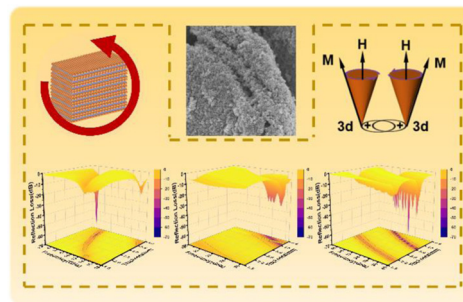
Hongyan Xia, Tommy Loan, Mithun Santra, Kang Xie* and Mark Bradley*



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Magnetic enhanced high-efficiency electromagnetic wave absorbing MXene/Fe₃O₄ composite absorbers at 2–40 GHz

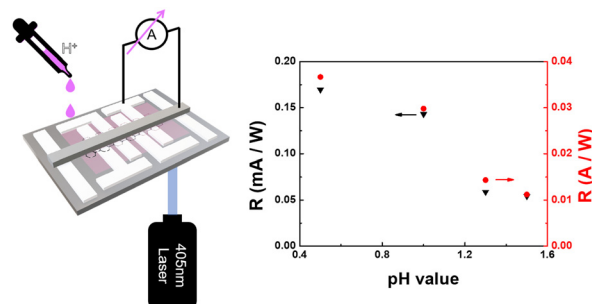
Yan Wang, Haiyan Zhang,* Qibai Wu, Shengkai Li, Heng Gao, Baoshan Wan, Daofeng Wen and Guoxun Zeng



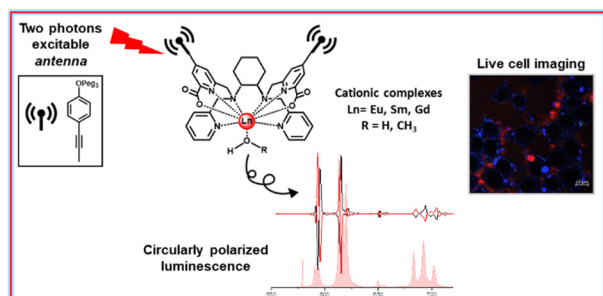
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A pH-value sensitive and self-powered photodetector based on an anthocyanin/graphene heterojunction

Chung Han Yang, Ming Che Lu, Hsia Yu Lin, Guan Zhang Lu and Yang Fang Chen*



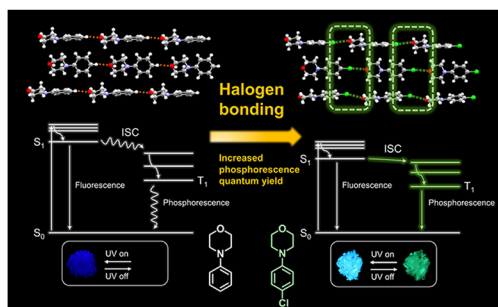
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Circularly polarized activity from two photon excitable europium and samarium chiral bioprobes

Silvia Mizzoni, Silvia Ruggieri, Annika Sickinger, François Riobé, Laure Guy, Margaux Roux, Guillaume Micouin, Akos Banyasz, Olivier Maury,* Bruno Baguenard, Amina Bensalah-Ledoux, Stéphan Guy, Alexei Grichine, Xuan-Nhi Nguyen, Andrea Cimarelli, Martina Sanadar, Andrea Melchior* and Fabio Piccinelli*

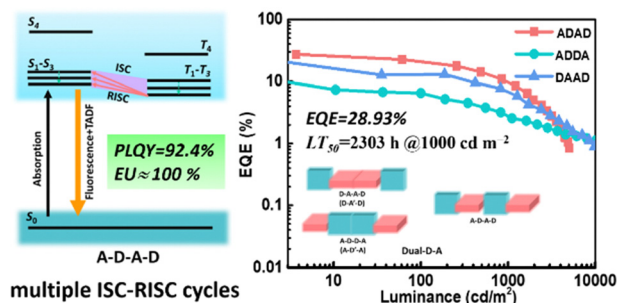
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Modulating room temperature phosphorescence through intermolecular halogen bonding

Dongyan Jiang, Chunya Du, Zhenyu Yan, Shuyuan Ge, Zijun Feng, Liang Wan and Ping Lu*

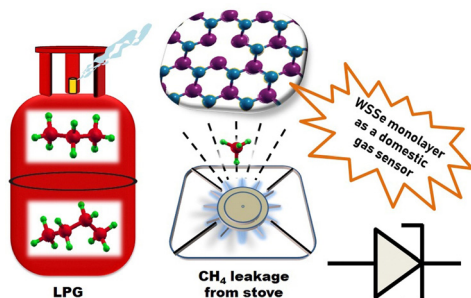
4210



Multiple charge-transfer excited state induced efficient and stable thermally activated delayed fluorescence

Teng Gao, Jianjun Liu,* Guanhao Liu, Yuanyuan Qin, Shaogang Shen, Honglei Gao, Xiangyu Dong, Pengfei Wang, Yong-Jin Pu* and Ying Wang*

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Role of defect engineering in revealing the electronic and sensing applications of Janus WSSe monolayer

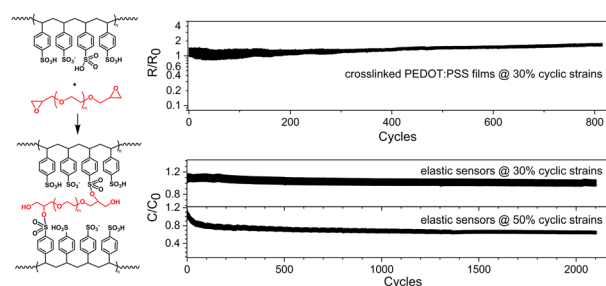
Bindiya Babariya, Sanjeev K. Gupta* and P. N. Gajjar*



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A highly stable elastic electrode via direct covalent crosslinking for strain sensors

Linping Wang, Ben-Lin Hu,* Fengyuan Zhang,
Yinxia Zhang, Junming Li, Tianhua Xu and Run-Wei Li*



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Polaron-assisted electronic transport in ZnP₂ nanowires

F. M. de Oliveira, L. Cabral, L. Villegas-Lelovsky,
Matheus P. Lima, F. F. H. Aragón, G. E. Marques,
A. J. Chiquito and M. D. Teodoro*

