

Journal of Materials Chemistry C

Materials for optical, magnetic and electronic devices

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Cover

See Diego Stéfani Teodoro Martinez, Rafael Furlan de Oliveira *et al.*, pp. 12429–12452. Image reproduced by permission of Rafael Furlan de Oliveira from *J. Mater. Chem. C*, 2023, **11**, 12429.



Inside cover

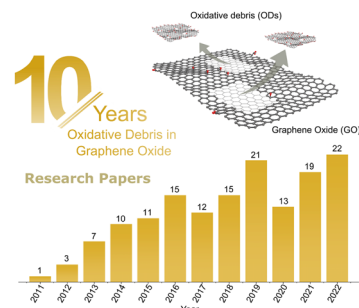
See Long Wang, Hua Wang *et al.*, pp. 12511–12516. Image reproduced by permission of Long Wang from *J. Mater. Chem. C*, 2023, **11**, 12511.

REVIEWS

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Oxidative debris in graphene oxide: a decade of research

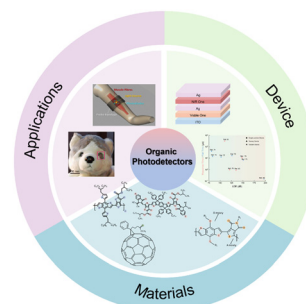
Alessandro Henrique de Lima, Isabella Scarpa, Nathalia Cristine Lima Azevedo, Gabrielle Coelho Lelis, Mathias Strauss, Diego Stéfani Teodoro Martinez* and Rafael Furlan de Oliveira*



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Organic photodetectors: materials, device, and challenges

Xinren Zhang, Jizhong Jiang, Baigong Feng, Hongfei Song* and Liang Shen*



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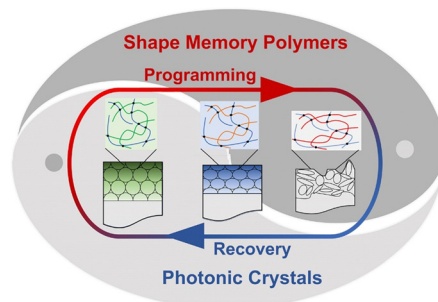


REVIEWS

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Shape memory photonic materials: fabrication and emerging applications

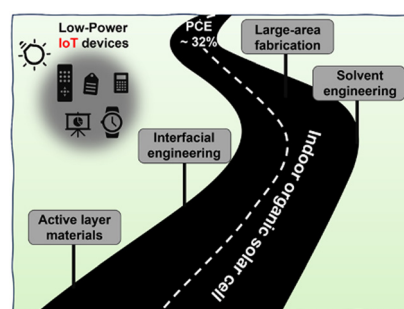
Xiaodong Chen, Zhen Hu, Quanjian Lyu, Miaomiao Li, Lianbin Zhang* and Jintao Zhu*



12486

Indoor organic solar cells for low-power IoT devices: recent progress, challenges, and applications

Rakesh Suthar, Hemraj Dahiya, Supravat Karak* and Ganesh D. Sharma*

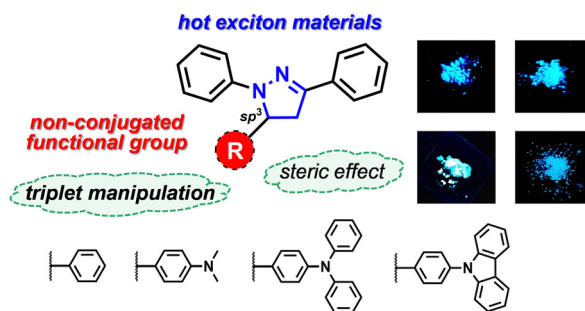


PAPERS

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The crucial role of non-conjugated functional groups in the triplet manipulation of heterocycle aromaticity hot exciton materials

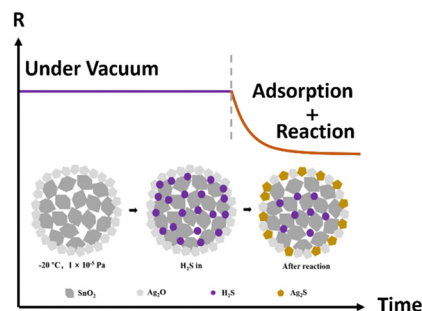
Shaoting Guo, Long Wang,* Xiangbin Tian, Zhenxiang Zhao and Hua Wang*



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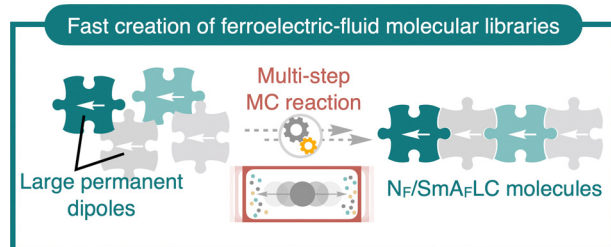
The gas-sensing performance of a core-shell SnO₂-based chemiresistive MEMS sensor for H₂S detection under vacuum

Wenbo Pi, Xi Chen, Qiuyun Fu, Zixiao Lu, Honglang Li, Zaiqi Tang and Wei Luo*



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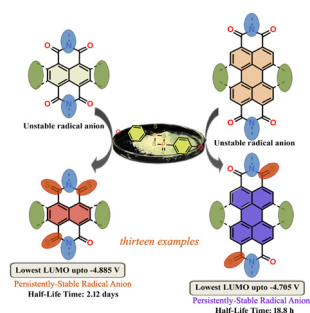
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Rapid, solvent-minimized and sustainable access to various types of ferroelectric-fluid molecules by harnessing mechano-chemical technology

Hiroya Nishikawa,* Motonobu Kuwayama, Atsuko Nihonyanagi, Barun Dhara and Fumito Araoka*

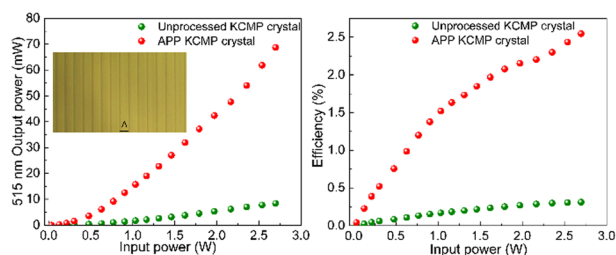
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Synthesis, optical and redox attributes of core-/bay-substituted thionated NDIs, PDIs and their diverse radical anions

Kalyanashis Mandal, Devendra Yadav, Poonam Saini and Pritam Mukhopadhyay*

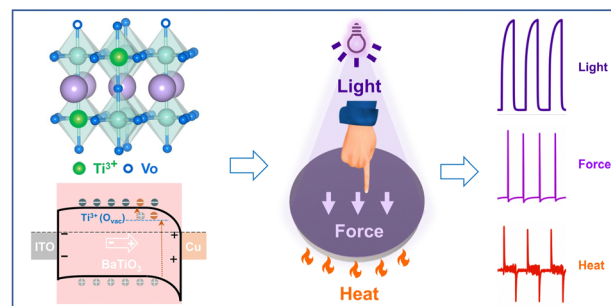
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Single crystal growth and phase transition mechanism of KCsMoP₂O₉ with efficient second harmonic generation via the emerging additional periodic phase technology

Mengdi Fan, Guangda Wu, Lili Li,* Fapeng Yu,* Chun Wang, Xiufeng Cheng and Xian Zhao

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Ti³⁺ self-doping in BaTiO₃ ceramic for multi-sensor applications: reduced bandgap with maintained ferroelectric properties

Chen Xi Li, Xiang Li, Xin Yi Chen, Chen Chen, Lei Zhao* and Nan Ma*

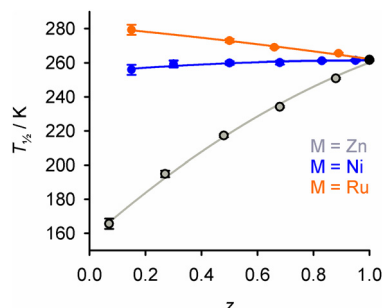


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The effect of inert dopant ions on spin-crossover materials is not simply controlled by chemical pressure

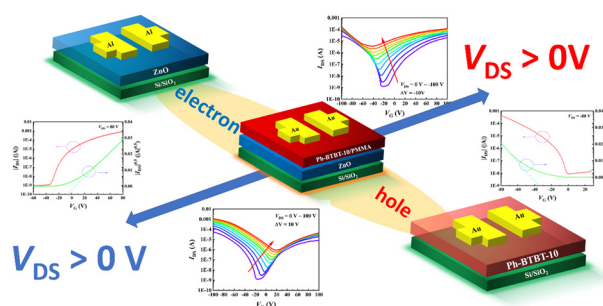
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High-performance ambipolar field-effect transistors with a Ph-BTBT-10/PMMA/ZnO structure

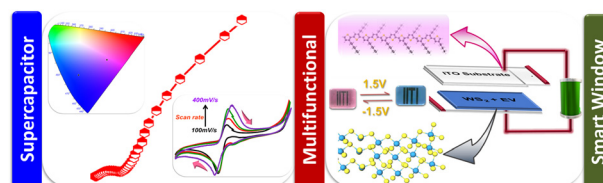
Xiangyu Ji, Jiayuan Zheng, Tianci Lin, Lingyi Liu, Huili Wei, Chang Chen, Juan Xiong,* Xianbao Wang, Jinhua Li* and Feng Yan*



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Bifunctional solid state electrochromic device using WO3/WS2 nanoflakes for charge storage and dual-band color modulation

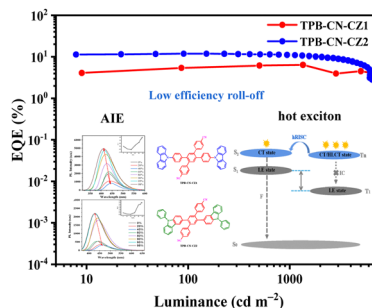
Suchita Kandpal, Love Bansal, Anjali Ghanghass, Tanushree Ghosh, Chanchal Rani, Bhumika Sahu, Deb Kumar Rath, Ravi Bhatia, I. Sameera* and Rajesh Kumar*



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Design, synthesis and application of tetraphenylbenzene-based blue organic electroluminescent materials with aggregation-induced emission and hot exciton properties

Xiaorui Dong, Yinpeng Cao, Xiuqing Dong,* Jinnan Huo* and Heping Shi*



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Xiangyu Xu, Yuxuan Fu, Li Zhang, Chao Li, Han Gao,
Yan Kuai, Zhijia Hu, Zhigang Cao* and Siqi Li*

Sung-Hun Ha and Jong-Man Kim*

Increasing [AMP] at [Seeds] constant

Increasing [Seeds] at [AMP] constant

Silica Coating

TMB

ox-TMB

Peroxidase like Activity

Carlos Fernández-Lodeiro, Javier Fernández-Lodeiro,*
Adrián Fernández-Lodeiro, Silvia Nuti, Carlos Lodeiro,
Alec LaGrow, Ignacio Pérez-Juste, Jorge Pérez-Juste*
and Isabel Pastoriza-Santos*

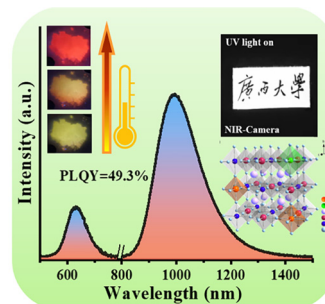
Hong Li, Li Li,* Lingsong Mei, Wei Zhao, Xianju Zhou,
Yongjie Wang, Yongbin Hua* and Peng Du*

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Near-infrared emission, energy transfer, and mechanisms of Mn^{2+} and Cr^{3+} Co-doped lead-free $\text{Cs}_2\text{AgInCl}_6$ double perovskites

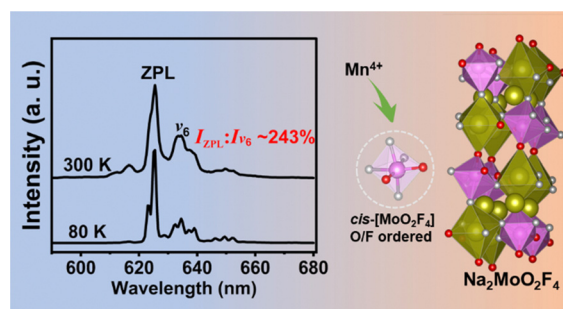
Daiwen Chen, Cu Wu, Huayuan Li, Liya Zhou, Peican Chen, Qi Pang,* Xinguo Zhang and Jin Zhong Zhang



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A $\text{Na}_2\text{MoO}_2\text{F}_4\text{:Mn}^{4+}$ phosphor with red luminescence peaking at 625 nm and a ZPL/ v_6 intensity ratio of 243%

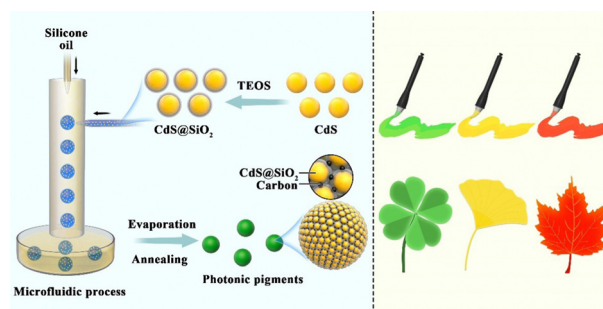
Qiao Qu, Konglan Chen, Yayun Zhou,* Jinsheng Li and Haipeng Ji*



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Beyond cadmium yellow: CdS photonic crystal pigments with vivid structural colors

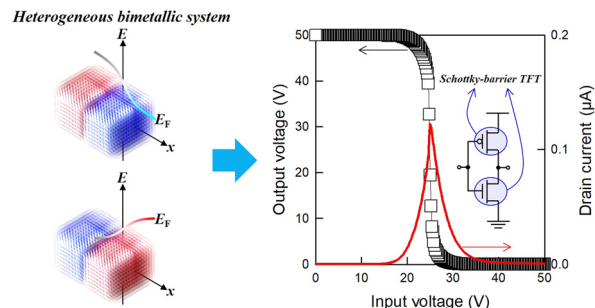
Wuke Wei, Chengcai Wu, Qian Yao Fang, Zhongwen Zhao and Xin Su*



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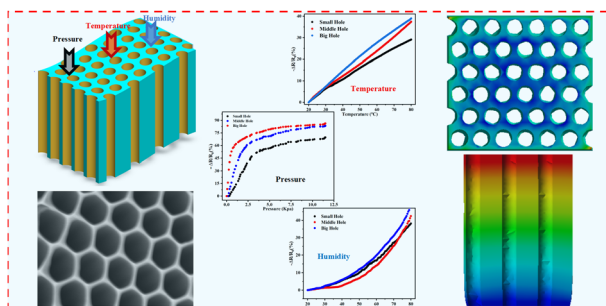
Guiding charge injection in Schottky-barrier transistors through the spatial Fermi-level gradients of heterogeneous bimetallic systems

Min-Joong Kim, Woo-Seok Kim, Chang-Hyun Kim, Jin-Hyuk Kwon* and Min-Hoi Kim*



PAPERS

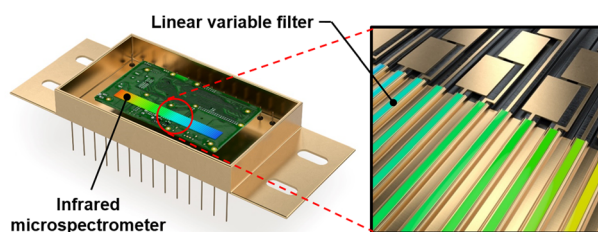
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An ultrasensitive flexible pressure, temperature, and humidity sensor based on structurally adjustable nano-through-hole array films

Shuang Xiao, Yin He,* Yawen Lu, Xin Niu, Qianqian Li, Junxian Wu, Dan Luo, Fujun Tian, Gang Wan and Hao Liu*

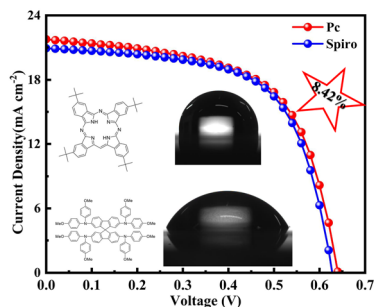
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Chip-scale short-wavelength infrared InGaAs microspectrometer based on a linear variable optical filter

Jiyeon Jeon, Suho Park, Yeongho Kim, Phuc Dinh Nguyen, Byong Sun Chun* and Sang Jun Lee*

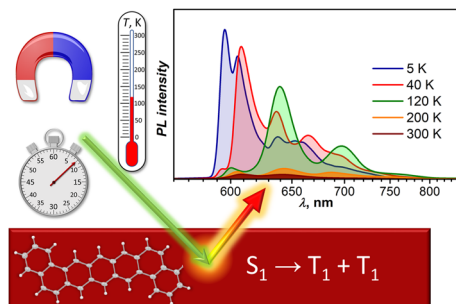
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High-efficiency and stable Sb₂(S,Se)₃ thin film solar cells with phthalocyanine as a hole transport layer

Huafei Guo,* Shan Huang, Xiaomeng Ni, Hongcheng Zhu, Jian Su, Changhao Ma, Sai Jiang, Han Zhang, Ding Gu, Shuai Zhang, Jianhua Qiu,* Ningyi Yuan and Jianing Ding*

12714

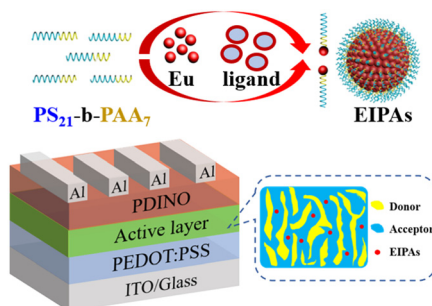


Photoluminescence spectroscopy of dibenzopentacene single-crystals: multiple emissive states across temperature, time, and magnetic field in a pursuit of exothermic singlet fission

Marco Rosenkranz, Lukas Graf, Bernd Büchner, Martin Knupfer and Alexey A. Popov*

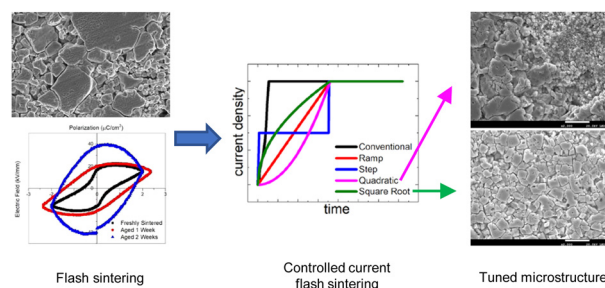


Zaixin Long, Shuxin Li, Wenfei Shen, Tonghui Li,
Yao Wang, Shuhan Guo, Matt J. Kipper,
Christopher Davis Snow, Laurence A. Belfiore and
Jianqiao Tang*



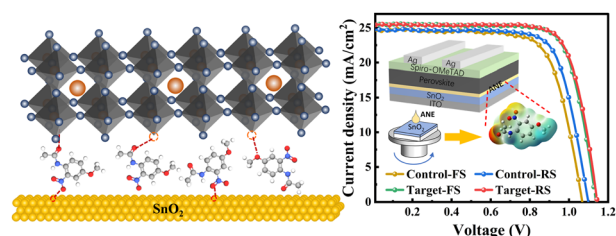
Particle size effect on the microstructure and the aging process of flash-sintered barium titanate from micro and nanopowders

Samuel López-Blanco,* Xavier Vendrell, Lourdes Mestres,
Diego A. Ochoa and Jose E. García



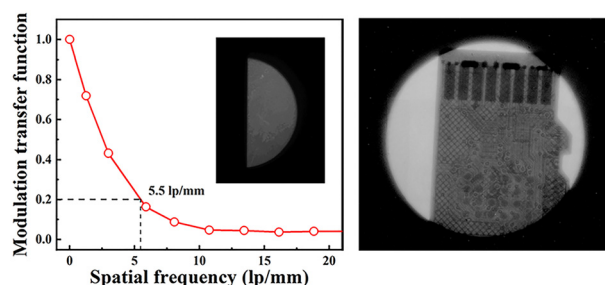
Interfacial modification *via* aniline molecules with multiple active sites for performance enhancement of n-i-p perovskite solar cells

Zhiquan An, Siying Chen, Tao Lu, Pengjun Zhao,
Xiaodong Yang, Yang Li* and Juan Hou*

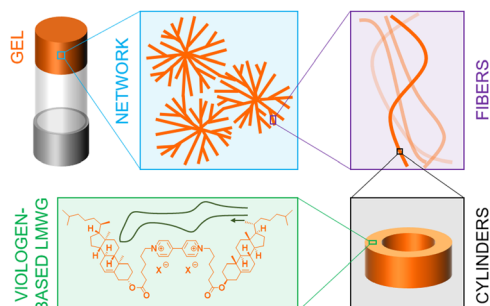


In situ preparation of ultrastable and flexible BA_2PbBr_4 nanocrystal films for X-ray imaging

Yang Li,* Bo Liu, Liang Chen, Shiyi He, Jinliang Liu,
Xiang Wang, Naizhe Zhao, Leidang Zhou, Wenyu Shu
and Xiaoping Ouyang*



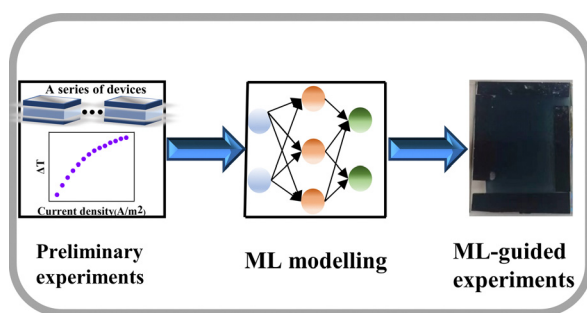
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Chiral and conductive viologen-based supramolecular gels exhibiting tunable charge-transfer properties

Vivien Andrieux, Thomas Gibaud,* Julien Bauland, Thibaut Divoux, Sébastien Manneville, Stéphan Guy, Amina Bensalah-Ledoux, Laure Guy, Floris Chevallier, Denis Frath* and Christophe Bucher*

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Machine learning-guided investigation for a high-performance electrochromic device based on ammonium metatungstate-iron(II) chloride-heavy water electrochromic liquid

Sifan Kong, Muyun Li, Yongqi Xiang, Yitong Wu, Zhen Fan,* Huan Yang,* Qingyue Cai, Menglong Zhang, Yong Zhang and Honglong Ning*

