Journal of Materials Chemistry C

Materials for optical, magnetic and electronic devices

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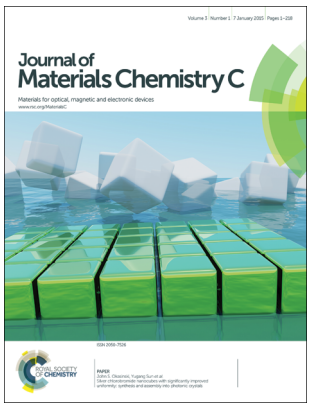
ISSN 2050-7526 CODEN JMCCCX 3(1) 1–218 (2015)



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See John S. Okasinski, Yugang Sun *et al.*, pp. 58–65.
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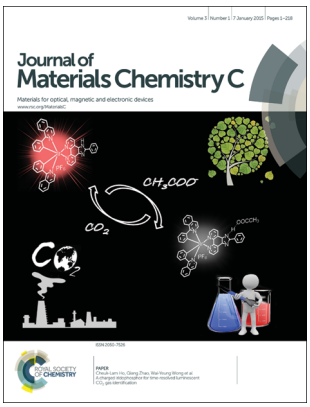

Inside cover
See Cheuk-Lam Ho, Qiang Zhao, Wai-Yeung Wong *et al.*, pp. 66–72.
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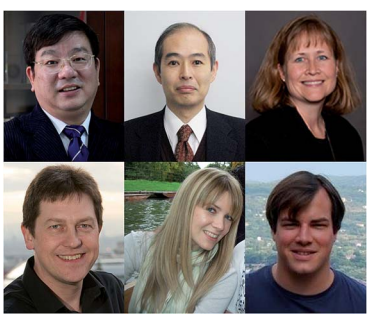
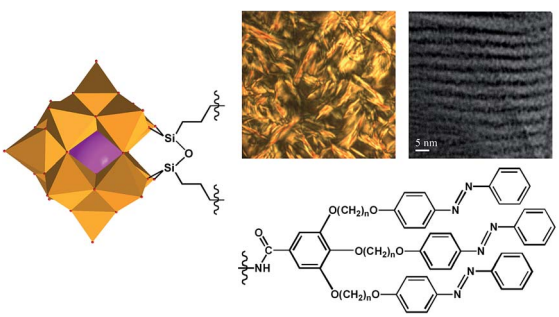
EDITORIAL



COMMUNICATIONS



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Journal of Materials Chemistry C

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COMMUNICATIONS

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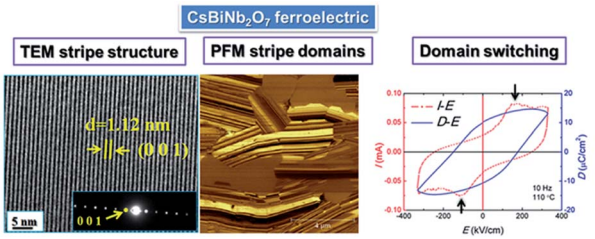
Ferroelectricity in Dion–Jacobson $ABiNb_2O_7$ (A = Rb, Cs) compounds

Chen Chen, Huanpo Ning, Serban Lepadatu, Markys Cain, Haixue Yan and Mike J. Reece*

Ferroelectricity and piezoelectricity in $CsBiNb_2O_7$ are demonstrated for the first time.



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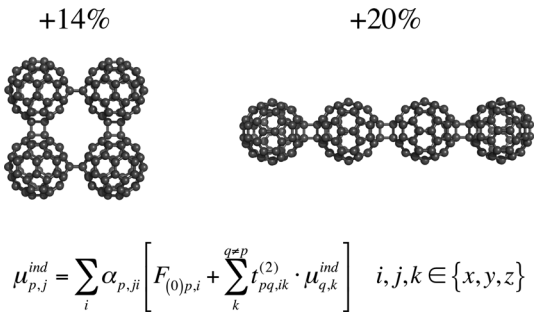
Rapid determination of polarizability exaltation in fullerene-based nanostructures

M. Swart and P. Th. van Duijnen

Exaltation of polarizability of C_{60} fullerene nanostructures obtained in seconds with Thole's model.



$$\mu_{p,j}^{ind} = \sum_i \alpha_{p,ji} \left[F_{(0)p,i} + \sum_k^{q \neq p} t_{pq,ik}^{(2)} \cdot \mu_{q,k}^{ind} \right] \quad i,j,k \in \{x,y,z\}$$

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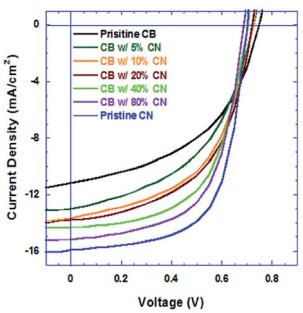
Efficient polymer solar cells fabricated from solvent processing additive solution

Chao Yi, Xiaowen Hu, Huckleberry C. Liu, Rundong Hu, Chin-Hao Hsu, Jie Zheng and Xiong Gong*

In this study, high concentration or pure high boiling temperature solvent, chloronaphthalene (CN) was used as solvent for fabrications of efficient PSCs. The effects of high concentrations/purity of CN as solvent on device performances were reported.



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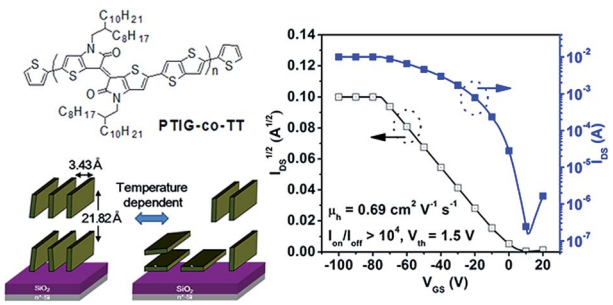
Thienoisoindigo-based copolymer with fused thieno [3,2-*b*]thiophene as a donor in thin film transistor applications with high performance

Chi-Min Chen, Sunil Sharma, Yi-Lun Li, Jey-Jau Lee and Show-An Chen*

A thienoisoindigo-based copolymer with thieno[3,2-*b*]-thiophene as a donor shows a temperature-dependent orientation of its chains, and a hole mobility up to 0.69 $cm^2\ V^{-1}\ s^{-1}$ has been achieved.



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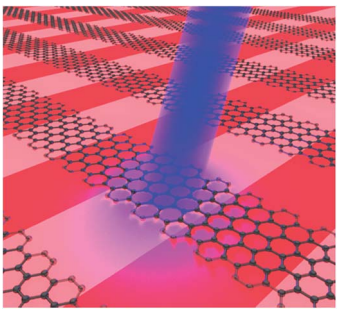

High-performance deformable photoswitches with p-doped graphene as the top window electrode

Rongjin Li, Zhaoyang Liu, Khaled Parvez, Xinliang Feng* and Klaus Müllen*

Deformable polymer photoswitches with p-doped single layer graphene as the top window electrode exhibit an on/off ratio as high as 8.5×10^5.

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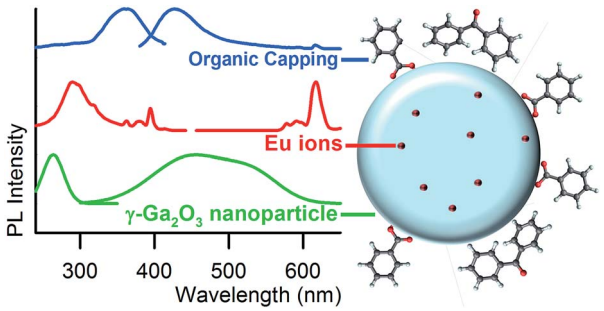

Non-aqueous sol–gel synthesis of hybrid rare-earth-doped γ-Ga_2O_3 nanoparticles with multiple organic–inorganic-ionic light-emission features

Roberto Lorenzi,* Alberto Paleari, Nikita V. Golubev, Elena S. Ignat'eva, Vladimir N. Sigaev, Markus Niederberger and Alessandro Lauria*

Pure and Eu-doped γ-Ga_2O_3 nanopowders with an organic capping layer were obtained by a benzyl alcohol route. Photoluminescence experiments allowed assigning the strong blue light emission to an aromatic ketone derivative.

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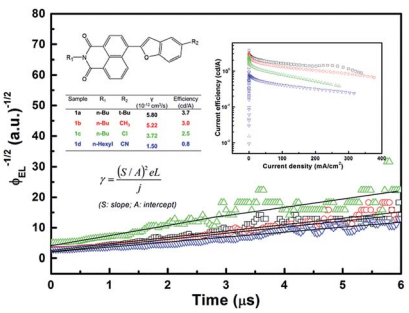

Effects of side groups on the kinetics of charge carrier recombination in dye molecule-doped multilayer organic light-emitting diodes

Shengwei Shi,* Feng Gao, Zhengyi Sun, Yiqiang Zhan, Mats Fahlman and Dongge Ma

Effects of side groups on the kinetics of charge carrier recombination are investigated in dye molecule-doped multilayer organic light-emitting diodes by transient electroluminescence.

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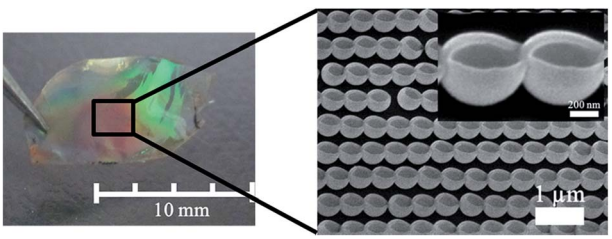

Aligned gold nanobowl arrays: their fabrication, anisotropic optical response and optical grating applications

Xinyang Li, Yanchun Wu, Lifeng Hang, Dandan Men, Weiping Cai and Yue Li*

Aligned Au nanobowl arrays on a flexible film with specific optical properties were obtained by combining template-assisted self-assembly and colloidal lithography.

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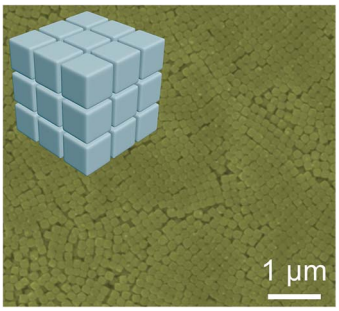

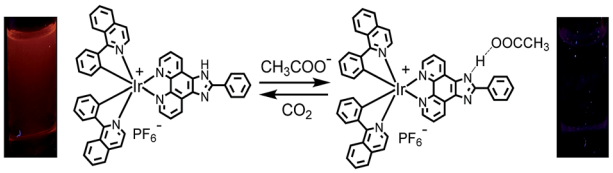

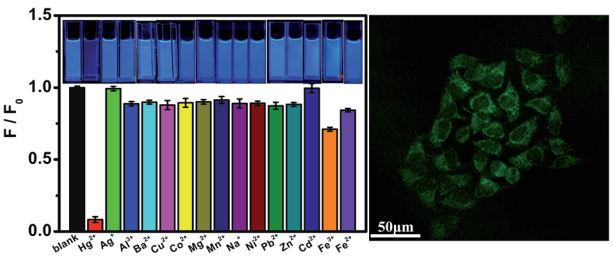

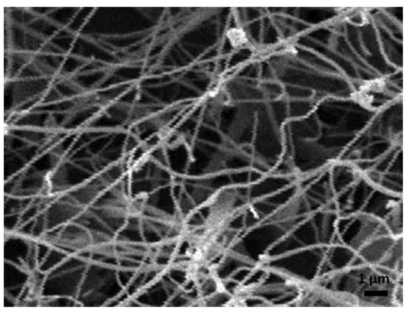

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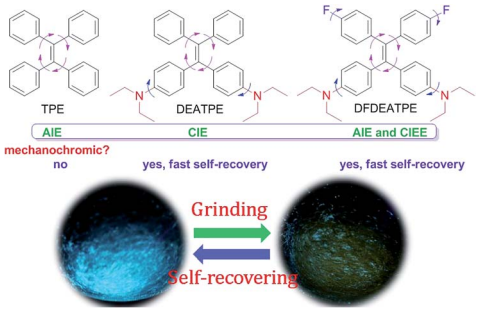

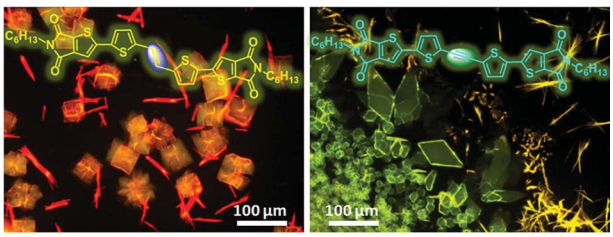

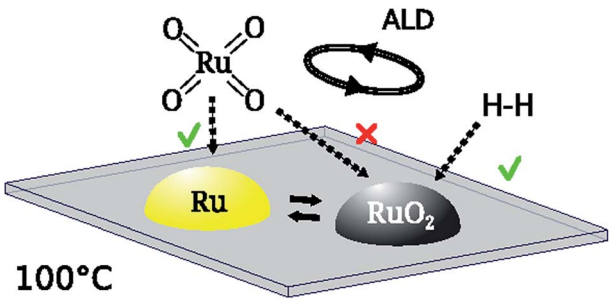

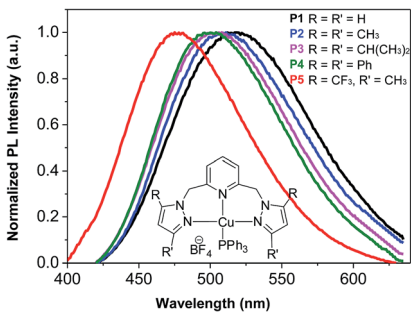

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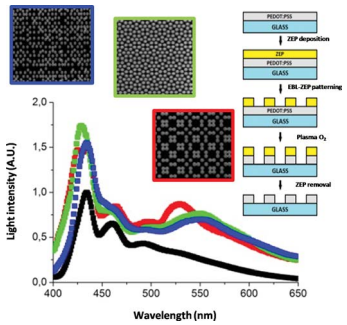

Nanostructured PEDOT:PSS film with two-dimensional photonic quasi crystals for efficient white OLED devices

Massimo Rippa, Rossella Capasso, Lucia Petti,* Giuseppe Nenna, Anna De Girolamo Del Mauro, Maria Grazia Maglione and Carla Minarini

Polymeric nanostructured highly conductive films with Photonic Quasi Crystal topologies are presented with possibilities to open the path towards highly efficient white OLEDs.

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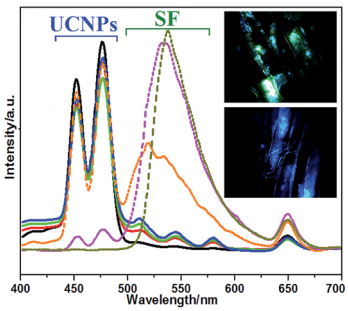

Multicolor upconversion $NaLuF_4$ fluorescent nanoprobe for plant cell imaging and detection of sodium fluorescein

Zenghui Chen, Xiaofeng Wu,* Shigang Hu, Pan Hu, Huanyuan Yan, Zhijun Tang and Yunxin Liu*

Detection limit of sodium fluorescein in plant cells can reach 0.14 μg cm^{-3} based on LRET from UCNPs to SF.

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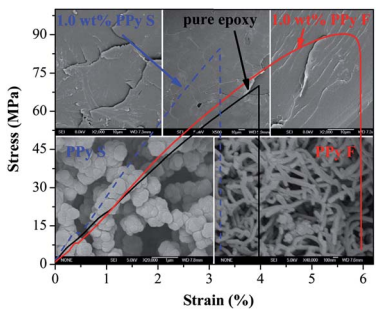

Polypyrrole doped epoxy resin nanocomposites with enhanced mechanical properties and reduced flammability

Xi Zhang, Xingru Yan, Jiang Guo, Zhen Liu, Dawei Jiang, Qingliang He, Huige Wei, Hongbo Gu, Henry A. Colorado, Xinyu Zhang, Suying Wei* and Zhanhu Guo*

As well as limiting the crack propagation, polypyrrole nanofibers further initiated shear bands in epoxy to give a higher tensile strength than polypyrrole nanospheres.

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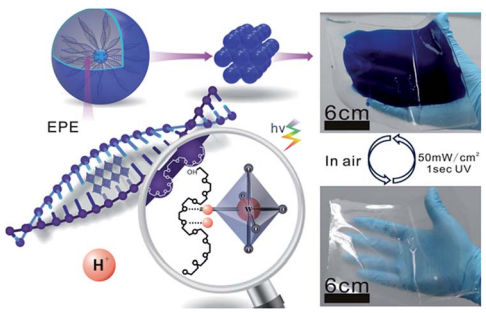

Enhanced photochromic efficiency of transparent and flexible nanocomposite films based on PEO–PPO–PEO and tungstate hybridization

C. Wang, B. P. Zhou, X. P. Zeng, Y. Y. Hong, Y. B. Gao and W. J. Wen*

Enhanced photochromism of hybrid films synthesized by a simple one-pot self-assembly method.

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