

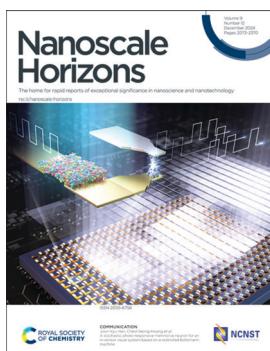
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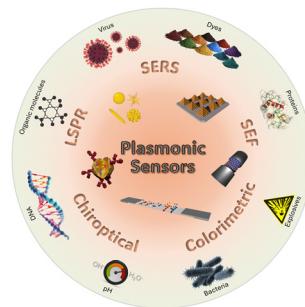


REVIEWS

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Plasmonic nanoparticle sensors: current progress, challenges, and future prospects

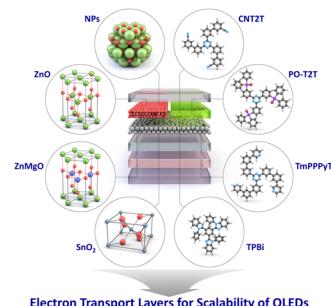
K. Kant, R. Beeram, Y. Cao, P. S. S. dos Santos, L. González-Cabaleiro, D. García-Lojo, H. Guo, Y. Joung, S. Kothadiya, M. Lafuente, Y. X. Leong, Y. Liu, Y. Liu, S. S. B. Moram, S. Mahasivam, S. Maniappan, D. Quesada-González, D. Raj, P. Weerathunge, X. Xia, Q. Yu, S. Abalde-Cela, R. A. Alvarez-Puebla, R. Bardhan, V. Bansal, J. Choo, L. C. C. Coelho, J. M. M. M. de Almeida, S. Gómez-Graña, M. Grzelczak, P. Herves, J. Kumar, T. Lohmueller, A. Merkoçi, J. L. Montaño-Priede, X. Y. Ling, R. Mallada, J. Pérez-Juste, M. P. Pina, S. Singamaneni, V. R. Soma, M. Sun, L. Tian, J. Wang, L. Polavarapu* and I. P. Santos*



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Recent progresses and challenges in colloidal quantum dot light-emitting diodes: a focus on electron transport layers with metal oxide nanoparticles and organic semiconductors

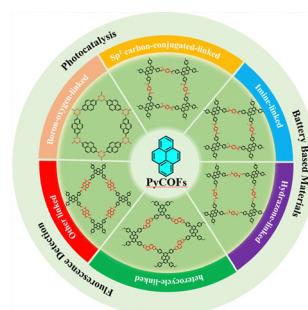
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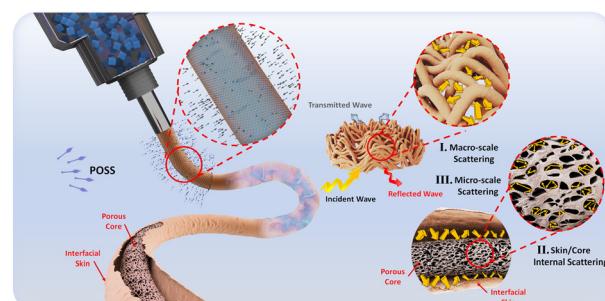


FOCUS

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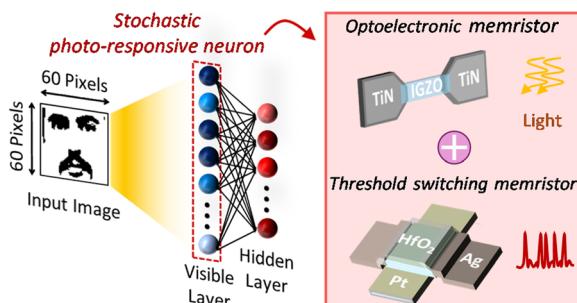
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Sara Rostami, Ahmadreza Ghaffarkhah, Seyyed Alireza Hashemi, Stefan Wuttke, Orlando J. Rojas and Mohammad Arjmand*



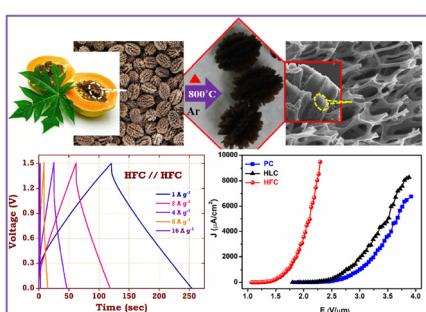
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**A stochastic photo-responsive memristive neuron for an in-sensor visual system based on a restricted Boltzmann machine**

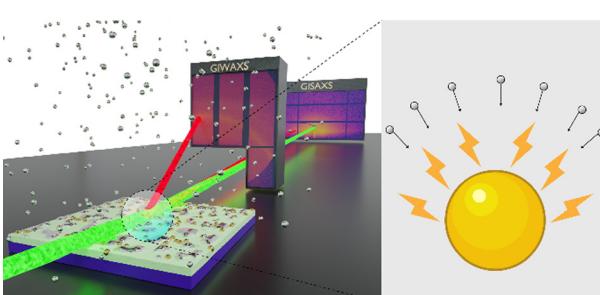
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**Surface modification of a biomass-derived self-supported carbon nano network as an emerging platform for advanced field emitter devices and supercapacitor applications**

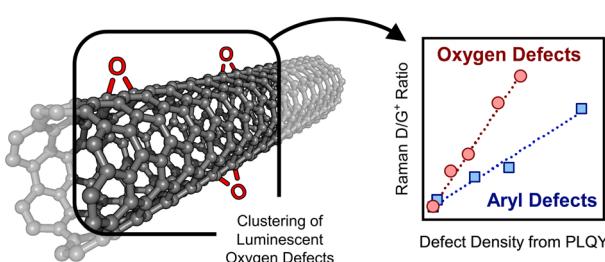
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**How to recognize clustering of luminescent defects in single-wall carbon nanotubes**

Finn L. Sebastian, Simon Settele, Han Li, Benjamin S. Flavel and Jana Zaumseil*

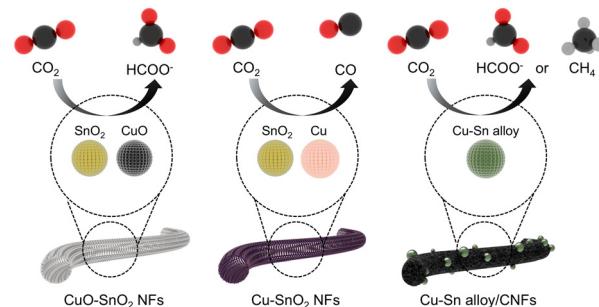


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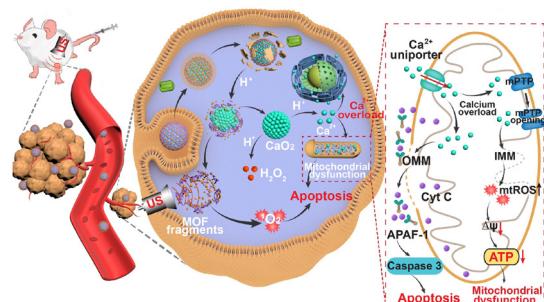
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Biodegradable persistent ROS-generating nanosonosensitizers for enhanced synergistic cancer therapy by inducing cascaded oxidative stress

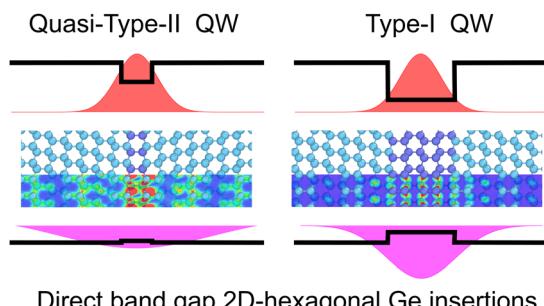
Yue Chen, Tong Ding, Zhengzheng Qian, Zerui Ma, Liming Zhou, Zhiling Li, Runkai Lv, Yinghui Xu, Yingjie Xu, Linhui Hao, Chen Zhu,* Xikuang Yao,* Wenying Yu* and Wenpei Fan*



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Polytypic quantum wells in Si and Ge: impact of 2D hexagonal inclusions on electronic band structure

Anna Marzegalli, Francesco Montalenti and Emilio Scalise*

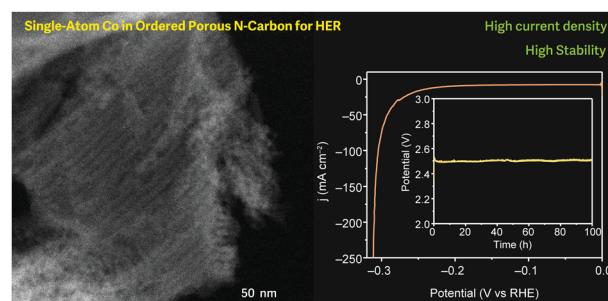


Direct band gap 2D-hexagonal Ge insertions

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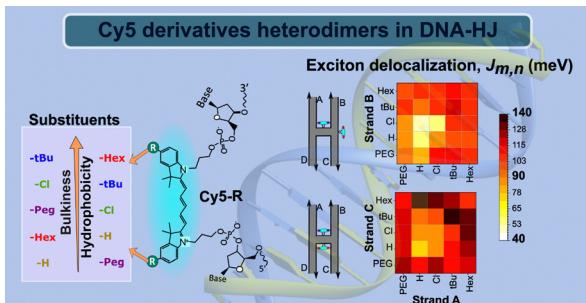
Improved high-current-density hydrogen evolution reaction kinetics on single-atom Co embedded in an order pore-structured nitrogen assembly carbon support

Jiaqi Yu, Yu Yan, Yuemin Lin, Hengzhou Liu, Yuting Li, Shaohua Xie, Simin Sun, Fudong Liu, Zhiguo Zhang, Wenzhen Li, Jin-Su Oh, Lin Zhou, Long Qi,* Bin Wang* and Wenyu Huang*



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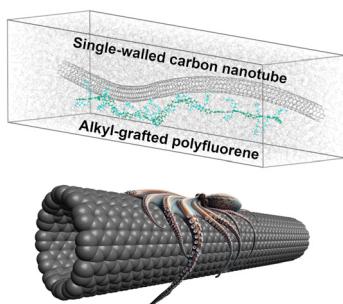
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Towards tunable exciton delocalization in DNA Holliday junction-templated indodicarbocyanine 5 (Cy5) dye derivative heterodimers

Gissela Pascual, Sebastián A. Díaz,* Simon K. Roy, Adam Meares, Matthew Chiriboga, Kimihiko Susumu, Divita Mathur, Paul D. Cunningham, Igor L. Medintz, Bernard Yurke, William B. Knowlton, Joseph S. Melinger* and Jeunghoon Lee*

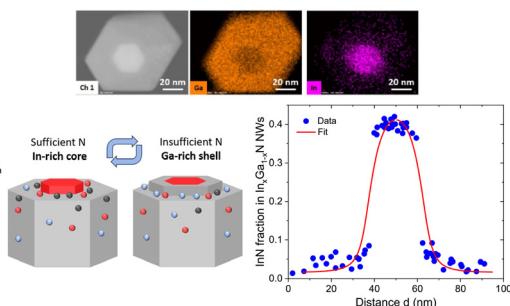
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Explicating conjugated polymer extraction used for the differentiation of single-walled carbon nanotubes

Dominik Just,* Tomasz Wasiak, Andrzej Dzienia, Karolina Z. Milowska, Anna Mielańczyk and Dawid Janas*

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Instantaneous growth of single monolayers as the origin of spontaneous core–shell $\text{In}_x\text{Ga}_{1-x}\text{N}$ nanowires with bright red photoluminescence

Vladimir G. Dubrovskii,* George E. Cirlin, Demid A. Kirilenko, Konstantin P. Kotlyar, Ivan S. Makhov, Rodion R. Reznik and Vladislav O. Gridchin

