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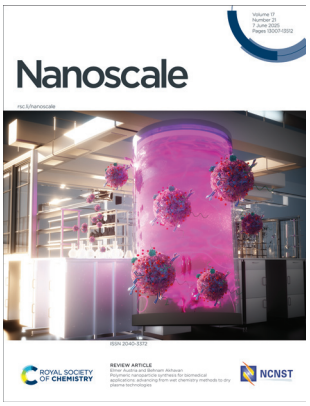
ISSN 2040-3372 CODEN NANOHL 17(21) 13007–13512 (2025)



Cover
See Elmer Austria and Behnam Akhavan, pp. 13020–13056.

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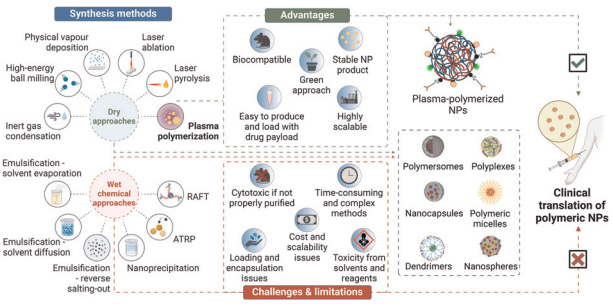

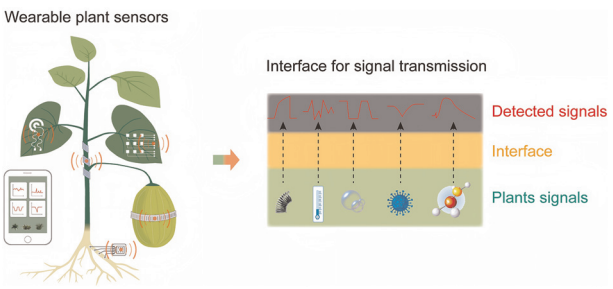

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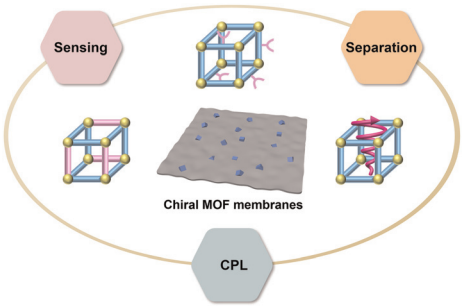

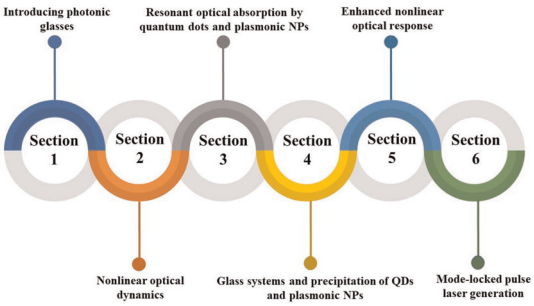

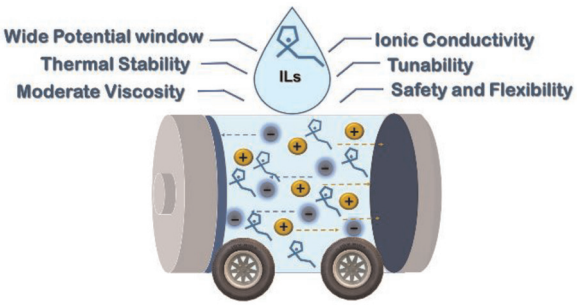

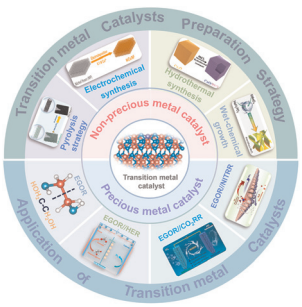

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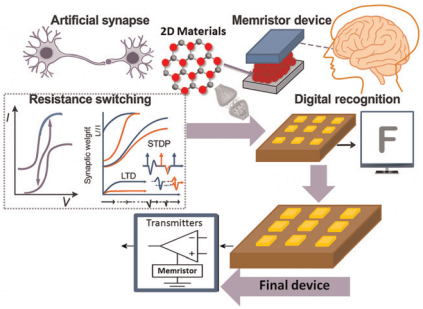

2D $MoTe_2$ memristors for energy-efficient artificial synapses and neuromorphic applications

Rajwali Khan,* Naveed Ur Rehman, Sujith Kalluri, Sundaravadivel Elumalai, Appukuttan Saritha, Muhammad Fakhar-e-alam, Muhammad Ikram, Sherzod Abdullaev, Nasir Rahman and Sambasivam Sangaraju*

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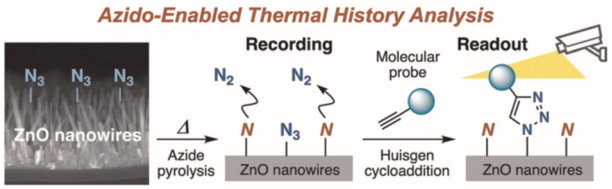

Azido-enabled thermal history analysis on a metal–oxide surface

Satoki Yamaguchi, Tomohiro Iwai,* Hiromichi V. Miyagishi, Hiroshi Masai, Takuro Hosomi, Takeshi Yanagida, Ken Uchida and Jun Terao*

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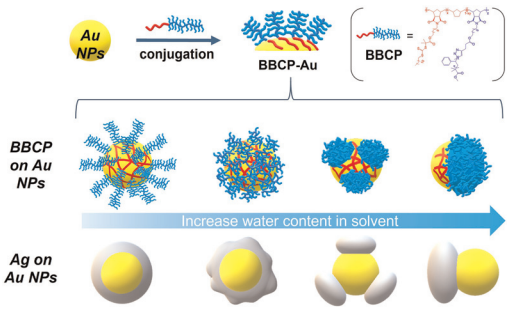

Bottlebrush polymer patches template heterometal growth on a gold nanoparticle surface

Minjun Kim, Jiyun Nam, Jiseok Kim, Hyunsik Hwang, Myungeun Seo* and Hyunjoon Song*

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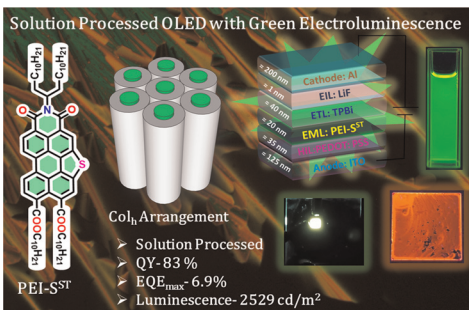

Unsymmetrical *S*-annulated perylene diester imide, stabilizing room temperature columnar phase as a dopant for greenish-yellow OLEDs with an outstanding EQE of 6.9%

Paresh Kumar Behera, Sushanta Lenka, Feng-Rong Chen, Mrinmoy Roy, Lu Chun-Chang, Chang-Hua Liu, Jwo-Huei Jou* and Ammathnadu Sudhakar Achalkumar*

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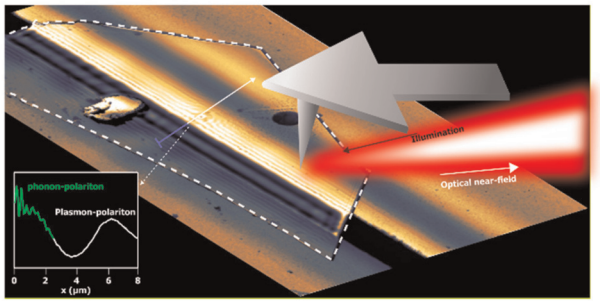
Nanophotonics of mid-infrared plasmon-polaritons at interfaces between metals and two-dimensional crystals

Flávio H. Feres,* Ingrid D. Barcelos, Dario A. Bahamon, João E. Levandoski, Andrea Mancini, Thiago M. dos Santos, Rafael A. Mayer, Davi H. S. Camargo, Carlos C. B. Bufon, Adrian Cernescu, Stefan A. Maier, Raul de O. Freitas and Francisco C. B. Maia*



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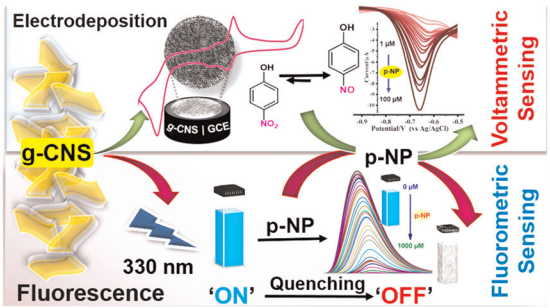
Metal-free graphitic carbon nitride nanosheet for dual mode fluorescence and electrochemical detection of *para*-nitrophenol

Ankush Kumar Singh, Aayoosh Singh, Mithilesh Patel, Vinod P. Singh and Rosy*



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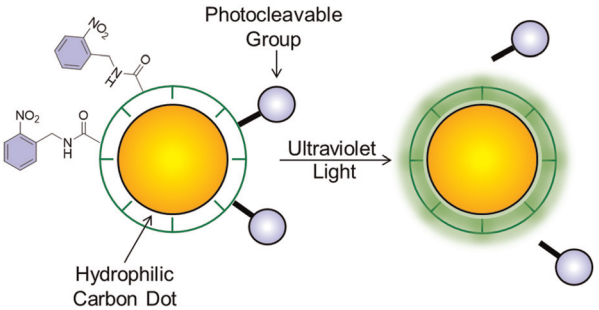
Photoinduced luminescence activation of hydrophilic 'caged' carbons dots

Aviya S. Akari, Maria R. Narciso, Emmanuel O. Fagbohun, Pedro D. Ortiz, Roberto J. Botelho and Stefania Impellizzeri*



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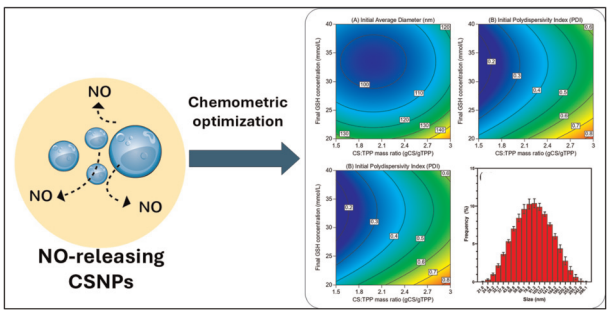
Multivariate chemometric design of nitric oxide-releasing chitosan nanoparticles for skin-related biomedical applications

Renan S. Nunes,* Victor D. P. Cinel, Joana C. Pieretti, Kelli C. F. Mariano, Roberta A. dos Reis, Morgana Halfeld and Amedea B. Seabra*



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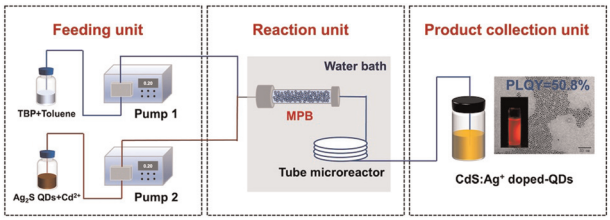

A MPB-intensified tube microreactor system for continuous synthesis of Ag^+ doped CdS quantum dots

Chuwei Zhu, Yuxi Li, Tailei Hou, Xiaole Gu, Xinyuan Li,* Le Sang* and Jiatao Zhang*

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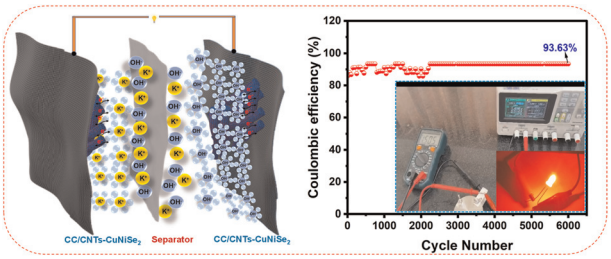

In situ synthesis of bimetallic chalcogenides with highly conductive carbon nanotubes for efficient symmetric hybrid supercapacitors

Soumyajit Jana, Sampath Karingula, Anjana Sajeevan, Phani Kumar V. V. N. and Yugender Goud Kotagiri*

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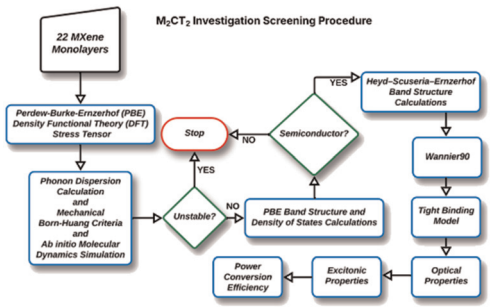

Enhanced solar harvesting efficiency in nanostructured MXene monolayers based on scandium and yttrium

Bill D. Aparicio-Huacarpuma, Marcelo L. Pereira, Jr,* Mauricio J. Piotrowski, Celso R. C. Rêgo, Diego Guedes-Sobrinho, Luiz A. Ribeiro, Jr and Alexandre C. Dias

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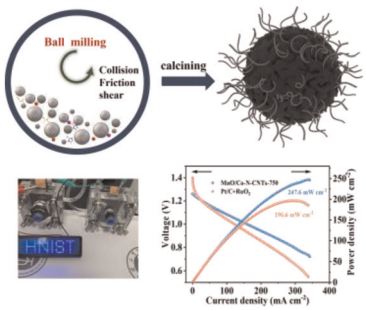

Interwoven MnO/Co-derived N-doped carbon nanotube composites as highly efficient and durable bifunctional oxygen catalysts for zinc–air batteries

Yun Yang, Qing Long, Wei Wang,* Junlin Huang,* Yufei Zhao, Hao Liu and Hong Gao*

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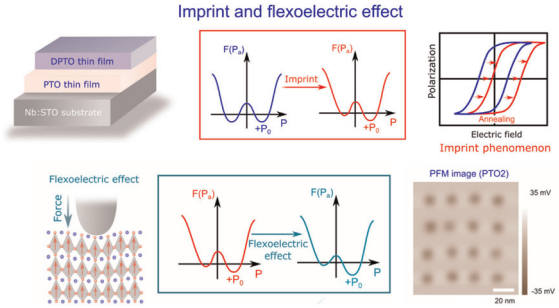
Local ferroelectric domain switching phenomenon in $PbTiO_3$ thin films affected by the imprint effect and external force

Eunmi Lee and Jong Yeog Son*



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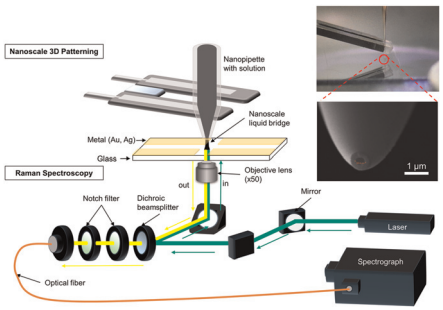
Atomic force microscope-guided nanoscale 3D patterning for carbon nanofibers with *in situ* Raman spectroscopy

Yeonju Bae, Hojin Jang, Taesun Yun, Chanuk Yang, Jonggeun Hwang, Minji Park, Sanghan Lee, Jangyup Son,* Kyoung-Duck Park,* Jongwoo Kim,* Wonho Jhe* and Sangmin An*



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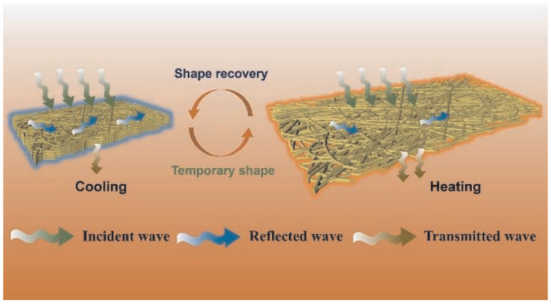
Shape memory composite membrane with widely programmable electromagnetic shielding effectiveness

Zhiyong Zeng, Jv Li, Chuanru Zheng, Hongmei Chen, Gang Liu, Jian Huang, Kun Qian, Fenghua Zhang and Wenbing Li*



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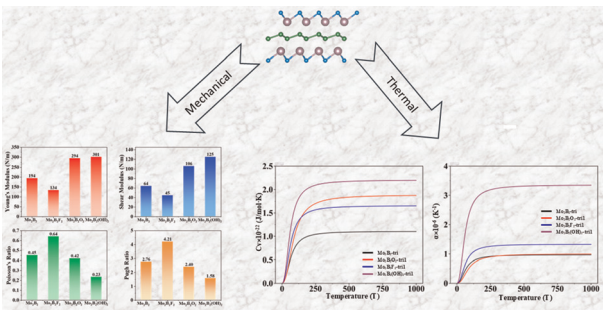
Superior mechanical and thermal properties of oxygen terminated trigonal Mo_2B_2 MBenes

Di Zhao, Mengqing Hu, Ming Zhou, Mingli Li, Oscar Allen, Irfan Ali Soomro, Samuel Akinlolu Ogunkunle, Lei Zhang, Liang Wang, Zhenzhen Wu, Porun Liu, Yuan Mei and Yun Wang*



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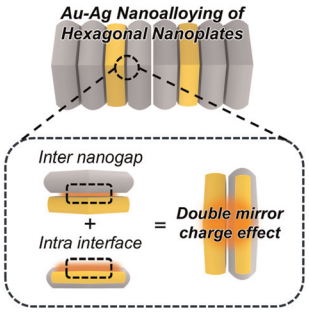

Au–Ag controllable composition nanoalloying of hexagonal nanoplates: heterogeneous interfacial nanogaps enhance near-field focusing

Sungbeen Park, Insub Jung, Soohyun Lee, Qiang Zhao, Sungwoo Lee, Hyunji Kim and Sungho Park*

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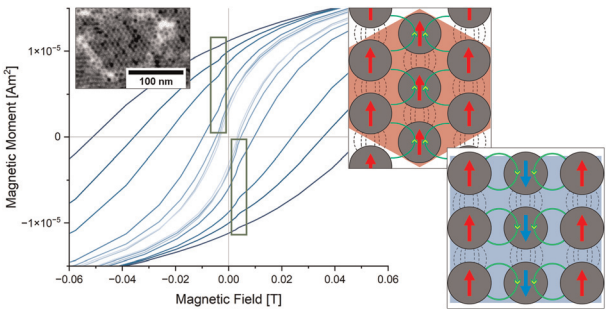

The role of superlattice phases and interparticle distance in the magnetic behaviour of SPION thin films

Marion Görke, Sherif Okeil, Guohui Yang, Hermann Nirschl, Thilo Viereck and Georg Garnweitner*

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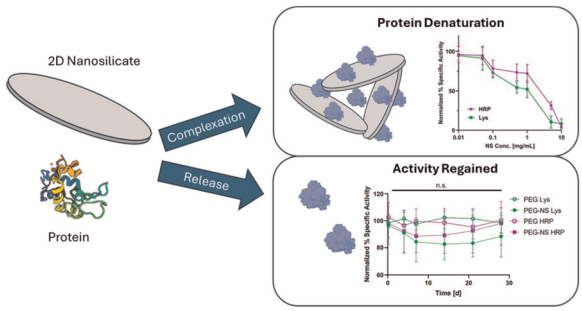

Protein structure and bioactivity upon adsorption and desorption from nanosilicate sustained release delivery devices

Samuel Stealey, Ether Dharmesh, Akhilesh K. Gaharwar, Jai S. Rudra and Silviya P. Zustiak*

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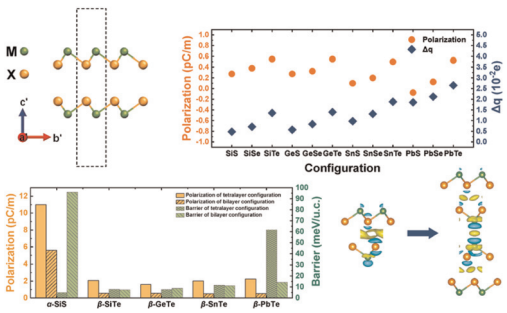

Sliding ferroelectricity in bilayer phosphorus analogue compounds: mechanisms and applications

Dong-Dong Wang, Xin-Yi Gao, Yan-Dong Guo,* Yu-Ting Guo, Zhi-Peng Huan, Li-Yan Lin, Yue Jiang,* Zeng-Yun Gu, Hong-Li Zeng* and Xiao-Hong Yan

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Rhodium–silver superatomic nanoclusters stabilized by diselenophosphate ligands

Tzu-Hao Chiu, Michael N. Pillay, Samia Kahlal, Jean-Yves Saillard* and C. W. Liu*