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See Giuliana Grasso, Loretta L. del Mercato *et al.*, pp. 4311–4336.
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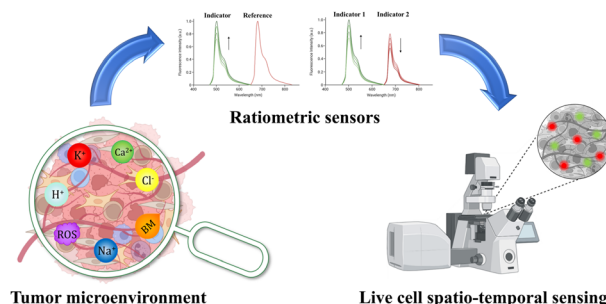
Inside cover
See Daria Miliaieva *et al.*, pp. 4402–4414. Image reproduced by permission of Daria Miliaieva, Bohuslav Rezek, Vojtech Nádaždy from *Nanoscale Adv.*, 2023, 5, 4402.

REVIEWS

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Fluorescent nano- and microparticles for sensing cellular microenvironment: past, present and future applications

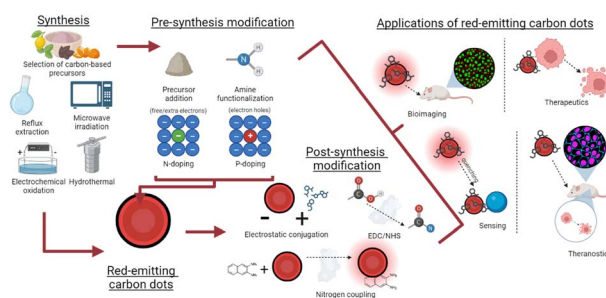
Giuliana Grasso,* Francesco Colella, Stefania Forciniti, Valentina Onesto, Helena Luele, Anna Chiara Siciliano, Federica Carnevali, Anil Chandra, Giuseppe Gigli and Loretta L. del Mercato*



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Red emitting carbon dots: surface modifications and bioapplications

Dawson Benner, Pankaj Yadav and Dhiraj Bhatia*



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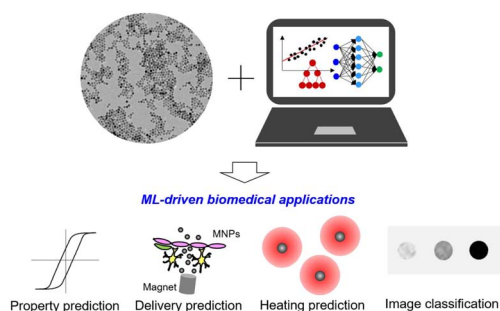


REVIEWS

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Machine learning assisted-nanomedicine using magnetic nanoparticles for central nervous system diseases

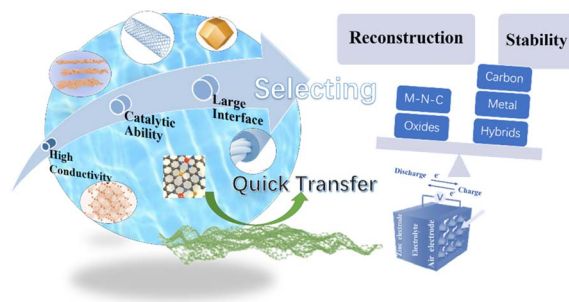
Asahi Tomitaka,* Arti Vashist, Nagesh Kolishetti and Madhavan Nair*



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Recent advances of bifunctional catalysts for zinc air batteries with stability considerations: from selecting materials to reconstruction

Wanqi Tang, Jiarong Mai, Lili Liu,* Nengfei Yu,* Lijun Fu, Yuhui Chen, Yankai Liu, Yuping Wu* and Teunis van Ree

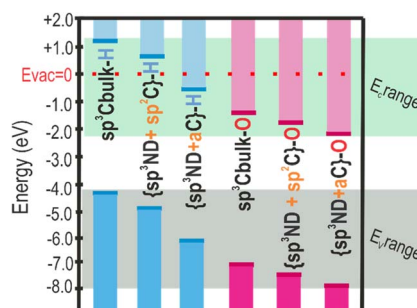


PAPERS

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Absolute energy levels in nanodiamonds of different origins and surface chemistries

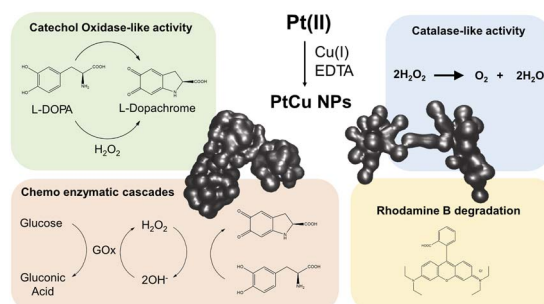
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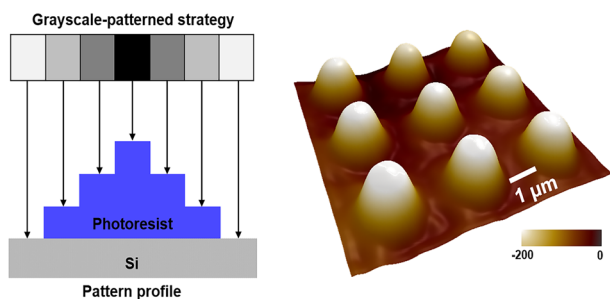
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Copper(I) as a reducing agent for the synthesis of bimetallic PtCu catalytic nanoparticles

Adrián Fernández-Lodeiro,* Javier Fernández Lodeiro, Noelia Losada-García, Silvia Nuti, José Luis Capelo-Martínez, Jose M. Palomo* and Carlos Lodeiro*



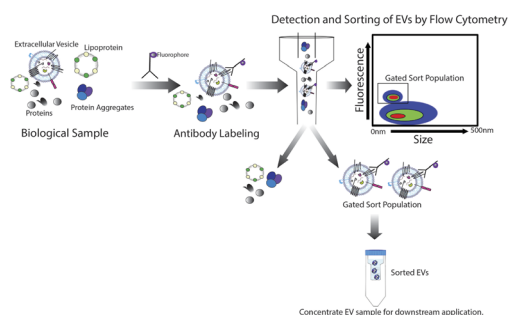
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Spatial modulation of scalable nanostructures by combining maskless plasmonic lithography and grayscale-patterned strategy

Dandan Han, Tianchun Ye* and Yayi Wei*

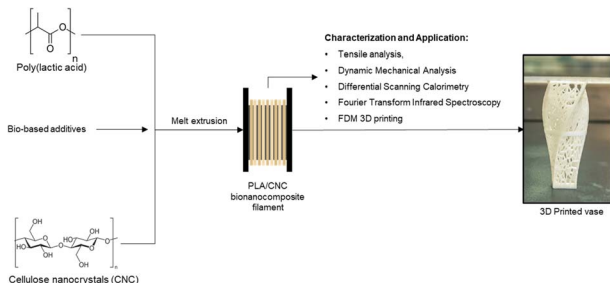
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Separation and isolation of CD9-positive extracellular vesicles from plasma using flow cytometry

Karan Khanna, Nikki Salmond, Sina Halvaei, Andrew Johnson and Karla C. Williams*

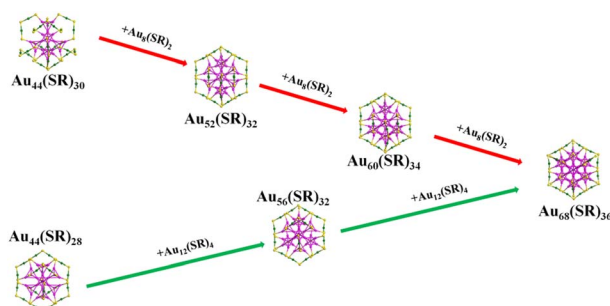
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Victor Chike Agbakoba,* Percy Hlangothi, Jerome Andrew and Maya Jacob John

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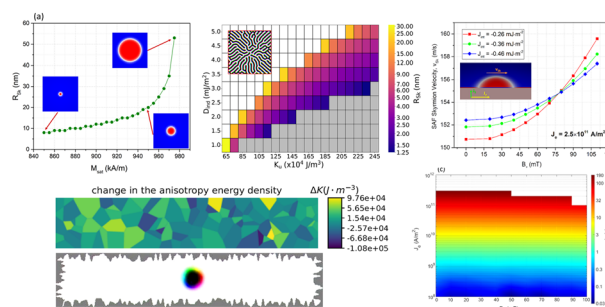
Wenhua Han, Gang Wang, Pengye Liu, Wenliang Li* and Wen Wu Xu*



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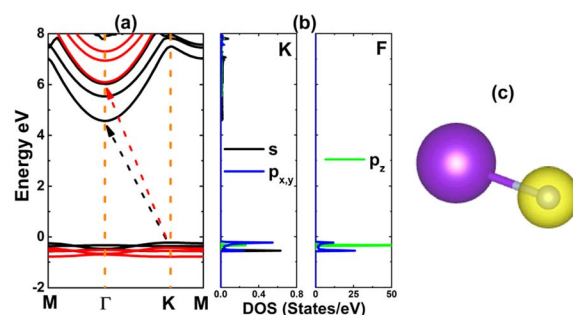
Rawana Yagan, Arash Mousavi Cheghabouri and Mehmet C. Onbasli*



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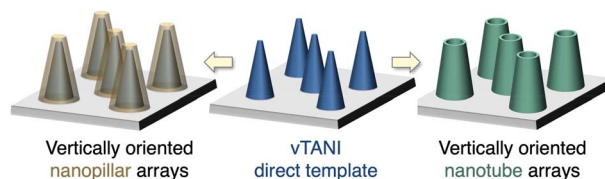
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A new and versatile template towards vertically oriented nanopillars and nanotubes

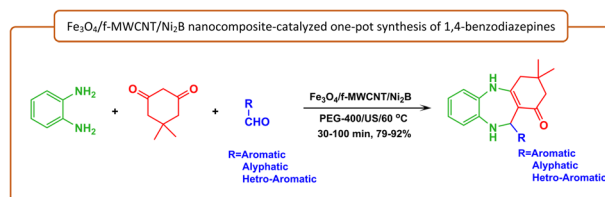
Bohao Xu, Di Wu, Ian M. Hill, Merissa Halim, Yves Rubin and Yue Wang*



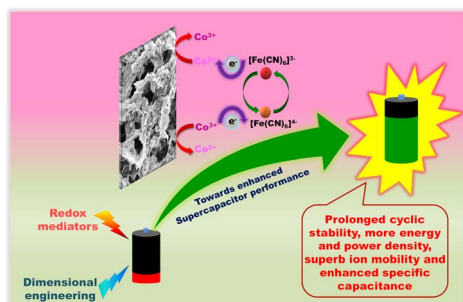
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Immobilized nickel boride nanoparticles on magnetic functionalized multi-walled carbon nanotubes: a new nanocomposite for the efficient one-pot synthesis of 1,4-benzodiazepines

Farkhondeh Mohammad Aminzadeh and Behzad Zeynizadeh*



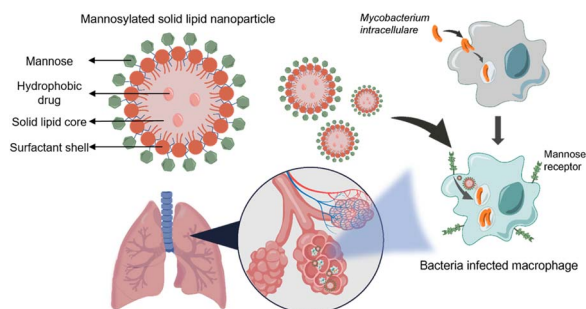
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Redox mediator-enhanced charge storage in dimensionally tailored nanostructures towards flexible hybrid solid-state supercapacitors

Ritik Mohanty, Kaushik Parida* and Kulamani Parida*

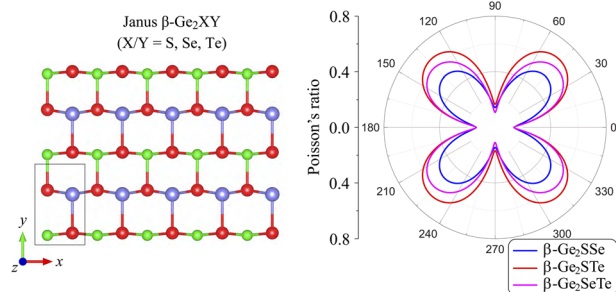
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Jayoung Chae, Seung Hyun Kang, Jiwon Kim, Yonghyun Choi,* Shin Hyuk Kang* and Jonghoon Choi*

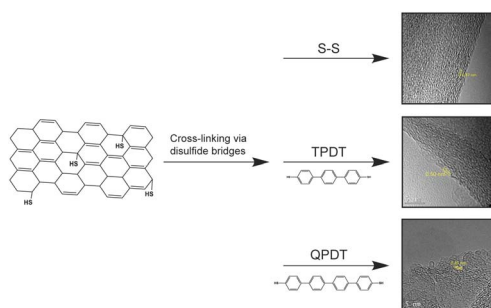
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Novel two-dimensional Janus β -Ge₂XY (X/Y = S, Se, Te) structures: first-principles examinations

Nguyen Dinh Hien, D. V. Lu* and Le C. Nhan

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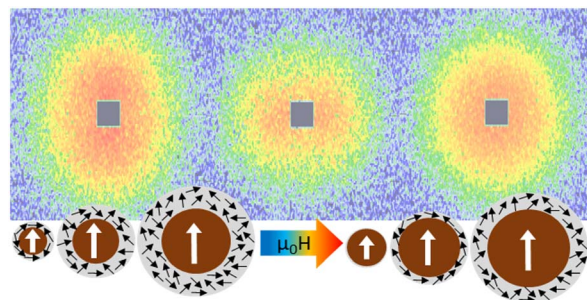
Nikita Sugak,* Hien Pham, Abhaya Datye, Shomeek Mukhopadhyay, Haiyan Tan, Min Li and Lisa D. Pfeifferle



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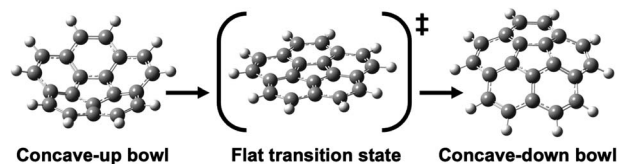
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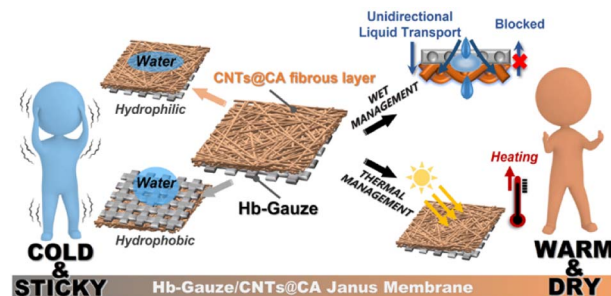
Panyada Sripaturad, Amir Karton,* Kyle Stevens, Ngamta Thamwattana,* Duangkamon Baowan and Barry J. Cox



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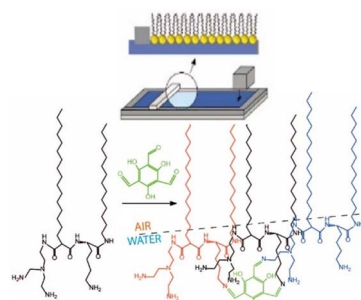
Boyang Tian, Miaomiao Hu, Yiwen Yang and Jing Wu*



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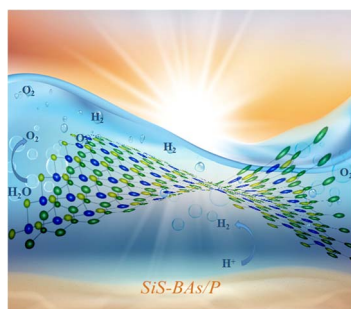
Cross-linking reactions in Langmuir monolayers of specially designed aminolipids – a toolbox for the customized production of amphiphilic nanosheets

Cristina Stefaniu, Christian Wölk,* Victoria M. Latza, Andrei Chumakov, Gerald Brezesinski and Emanuel Schneck*



PAPERS

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**First-principles study of BX–SiS (X = As, P) van der Waals heterostructures for enhanced photocatalytic performance**Sheraz Ahmad, H. U. Din,^{*} S. S. Ullah Sabir and B. Amin

CORRECTION

4609

Correction: Flavin-adenine-dinucleotide gold complex nanoparticles: chemical modeling design, physico-chemical assessment and perspectives in nanomedicineCelia Arib, Nadia Bouchemal, Maria Barile, Didier Paleni, Nadia Djaker, Nathalie Dupont and Jolanda Spadavecchia^{*}