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ISSN 2055–6756 CODEN NHAOAW 11(1) 1–316 (2026)

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See Volker Mailänder, Katharina Landfester *et al.*, pp. 142–156. Image reproduced by permission of Max Planck Institute for Polymer Research from *Nanoscale Horiz.*, 2026, **11**, 142.

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COMMENTARY

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When hard work pays off

Svyatoslav Kondrat* and Alexei A. Kornyshev*

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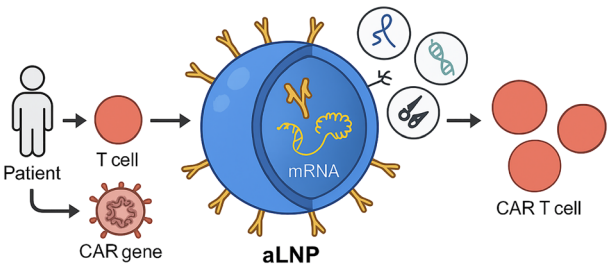
Lipid nanoparticles for engineering next generation CAR T cell immunotherapy

Melgious Jin Yan Ang, Ann E. Metzloff, Ajay S. Thatte and Michael J. Mitchell*



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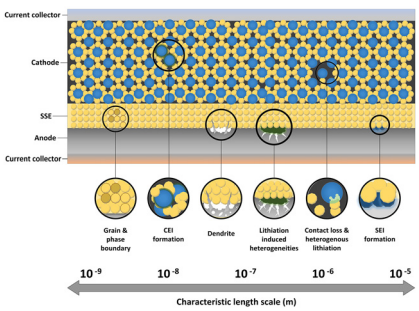
Mohamad Khoshkalam,* Fardin Ghaffari-Tabrizi and Dennis Valbjørn Christensen*



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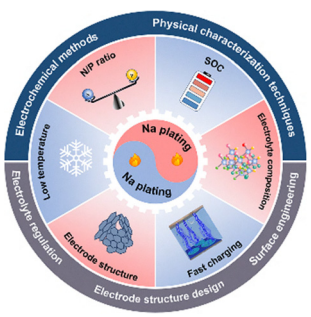
Sodium plating on hard carbon anodes in sodium-ion batteries: mechanisms, detection methods, and mitigation strategies

Feng Liu, Zihe Chen, Yuanjian Li, Lin Fu,* Jiangwei Ju,* Jun Ma* and Yongming Sun*



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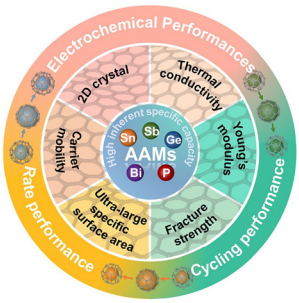

A concise review on the role of graphene in enhancing the electrochemical performances of alloy-type anodes in alkali metal ion batteries

Qian Zhao and Shouwu Guo*

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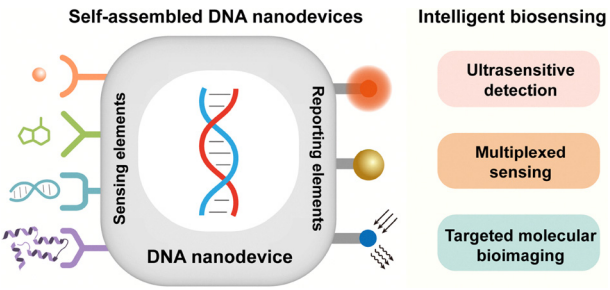

Self-assembled DNA nanodevices for intelligent biosensing

Yongjian Chen, Run Tian, Yi Zhang, Baoquan Ding* and Qiao Jiang*

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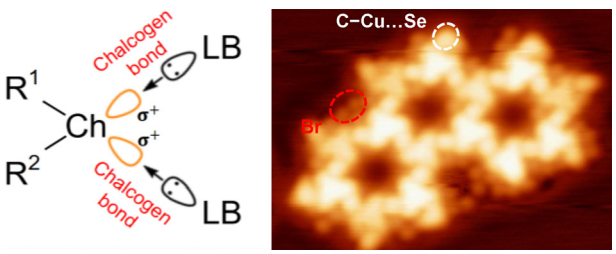

Surface nanostructures regulated by chalcogen bonding interactions

Xinyi Zhang, Qiang Sun, Liangliang Cai* and Andrew T. S. Wee*

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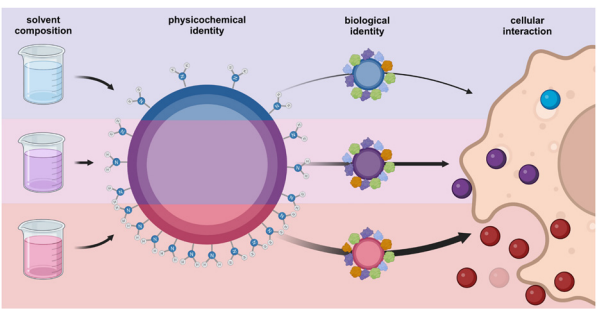

Continuous phase hydrophobicity exerts substantial influence on the surface functional group prevalence in protein nanocapsules synthesized in inverse miniemulsion

Carina Jung, Vanja Munk, Xueqing Zhang, Volker Mailänder* and Katharina Landfester*

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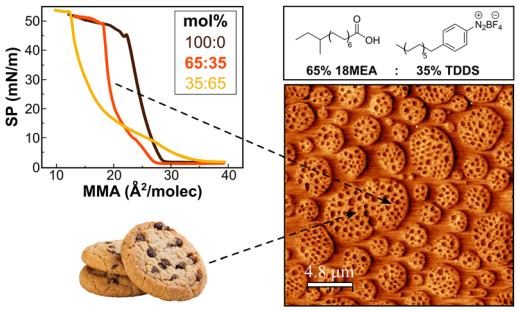
Self-assembly of microscale architectures with nanoscale inclusions

Alicia Naranjo, Marine Batista, Emilio M. Pérez* and Mark W. Rutland*



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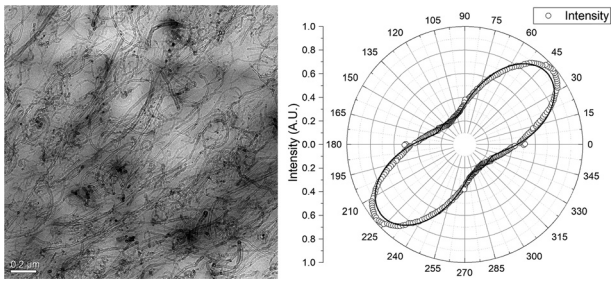
The effects of aspect ratio and orientation on the mechanical properties of nanocomposites reinforced with carbon nanotubes

Robert J Young,* Mufeng Liu, Wei Yang* and Junhong Pu*



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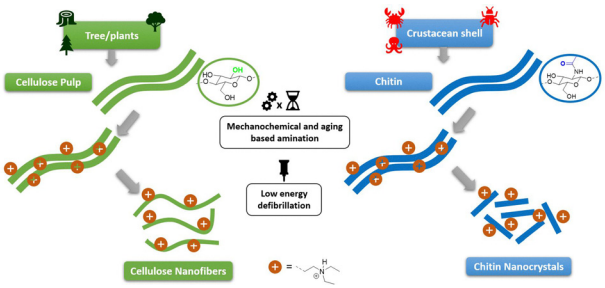
Low-energy synthesis of individualized pH-responsive cationic cellulose nanofibers and chitin nanocrystals by mechanochemistry and aging

Galen Yang, Yuka Tomita, Austin J. Richard, Shuji Fujisawa, Edmond Lam, Tsuguyuki Saito and Audrey Moores*



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Ultrafast charge transfer and coherent phonons in electroactive organic cation-templated low-dimensional perovskite analogues

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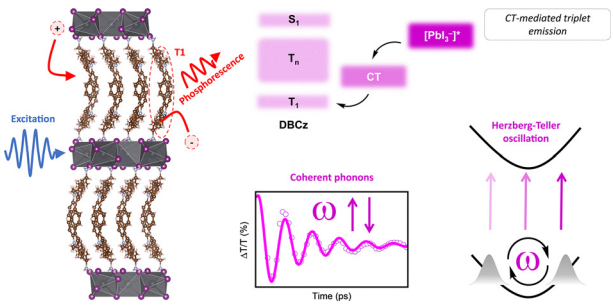

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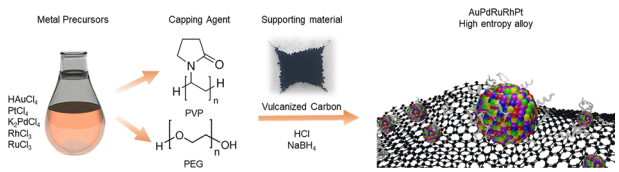

Capping agent optimization of high entropy alloy nanoparticles enhances electrocatalytic water splitting

Sangmin Jeong, Silas W. Bollen, Porvajja Nagarajan and Michael B. Ross*

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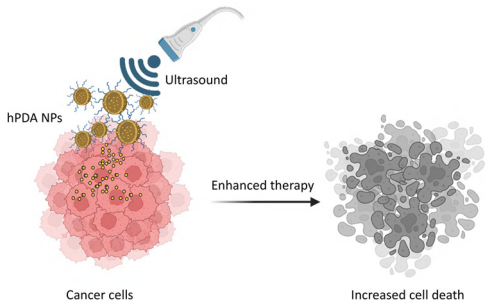

Hollow-core polydopamine nanocarriers for ultrasound-enhanced drug delivery

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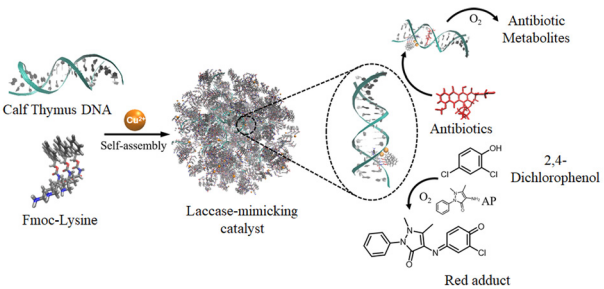

Supramolecular DNA/amino acid-based oxidase-mimetic nanocatalysts exhibiting drug degradation capability

Mengjie Yu, Xianxue Zhang, Shichao Xu and Zhen-Gang Wang*

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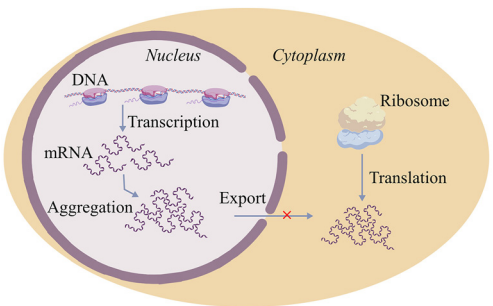

Gene silencing regulated by aggregates of Corn aptamer at 3′ UTR of mRNA

Zhuoer Jin, Yuhan Yang, Chunfa Chen, Zhe Zhang, Qiao Ren, Zhihong Cui, Cheng Zhi Huang and Hua Zuo*

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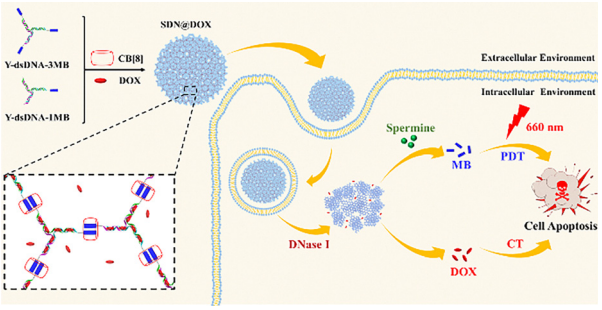
Spermine-responsive supramolecular DNA nanogels loaded with dual drugs for potential combined cancer therapy

Zongze Duan, Xiang Yu, Pengwei Jiang, Shuhao Wang, Junling Chen, Zhiyong Zhao* and Simin Liu*



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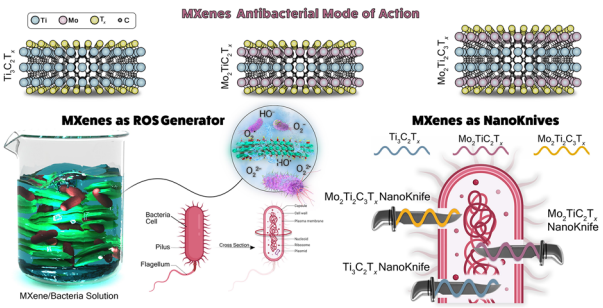
Antibacterial properties and underlying mechanisms of $Mo_2TiC_2T_x$ and $Mo_2Ti_2C_3T_x$ MXenes targeting *Escherichia coli* (Gram-negative bacterium)

Mohsen Pilevar, Mostafa Dadashi Firouzjaei,* Anupma Thakur, B. S. Nithin Chandran, Sara Wahib, Delanie Williams, Hesam Jafarian, Carolina Bryant, Annabelle Bedford, Adriana Riveros, Qiaoli Liang, Khaled A. Mahmoud, Mark Elliott* and Babak Anasori*



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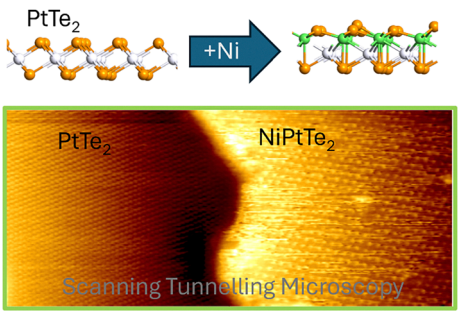
Synthesis of 2D-$NiPtTe_2$ by topotactical surface reaction of $PtTe_2$ with Ni

Nirosha Ravinath Rajapakse, Mahdi Ghorbani-Asl, Kinga Lasek, Arkady V. Krasheninnikov and Matthias Batzill*



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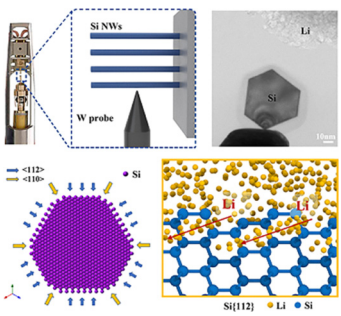
Revealing anisotropic lithiation control in silicon nanowires *via* a novel *in situ* TEM-based cross-sectional characterization method

Sijing Chen, Hai Li, Kailin Luo, Qiuyang Tan, Litao Sun* and Li Zhong*



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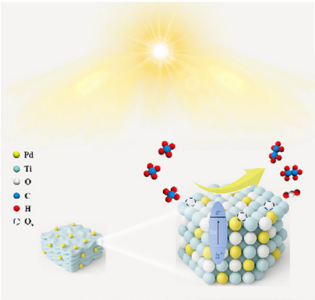

Efficient methane to ethane conversion *via* C–H bond activation catalyzed by a MOF-derived porous PdO/TiO_2 nanocomposite

Hai-Tao Wan, Chang-Long Tan,* Ming-Yu Qi, Yin-Feng Wang, Zi-Rong Tang* and Yi-Jun Xu*

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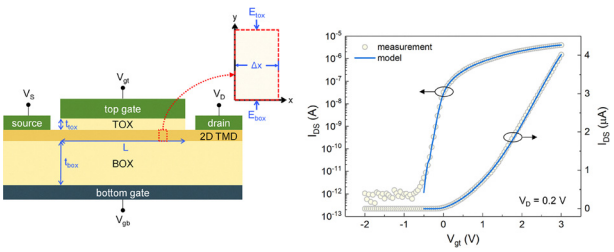

Physics-based compact model for 2D TMD FETs with full-range validation from single device to circuit

Dokyoung Lee, Jeongyun Jang, Jimin Han, Sae Rim Kim, Jiwon Baik, Hayoung Roh and Sungho Kim*

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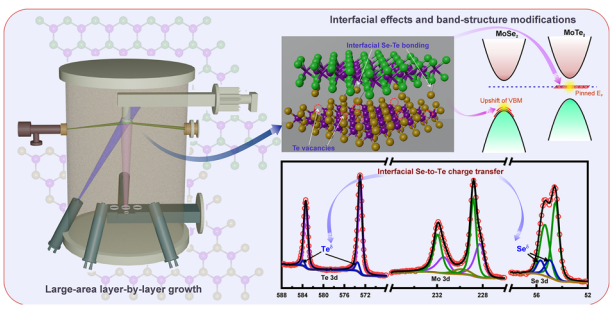

Interfacial charge transfer-mediated Fermi level pinning in MBE-grown 2D 2H-$MoSe_2$/2H-$MoTe_2$ heterostructures

Kamlesh Bhatt, Santanu Kandar, Lipika, Ashok Kapoor and Rajendra Singh*

CORRECTION

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Correction: Au_3Cu tetrapod nanocrystals: highly efficient and metabolizable multimodality imaging-guided NIR-II photothermal agents

Zhiyi Wang, Yanmin Ju, Shiyan Tong, Hongchen Zhang, Jian Lin, Baodui Wang* and Yanglong Hou*

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