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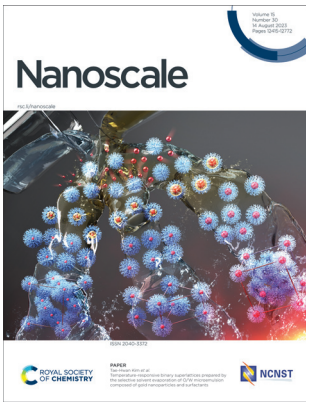

Cover
See Tae-Hwan Kim *et al.*, pp. 12481–12491.

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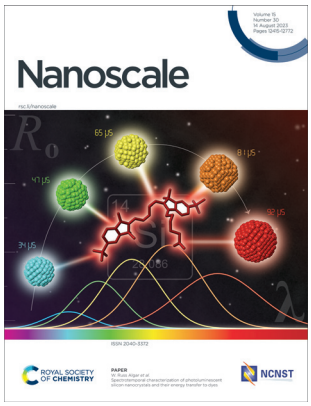

Inside cover
See W. Russ Algar *et al.*, pp. 12492–12505.

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PROFILE

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***Nanoscale* profiles: contributors to the Emerging Investigators 2023 issue**

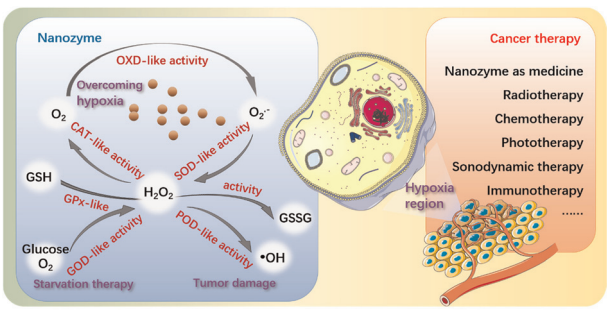
Nanoscale
2023 Emerging Investigators

MINIREVIEW

12455

Nanozyme: a rising star for cancer therapy

Qingqing Wang,* Jing Liu, Liangcan He, Shaoqin Liu* and Piaoping Yang*



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COMMUNICATIONS

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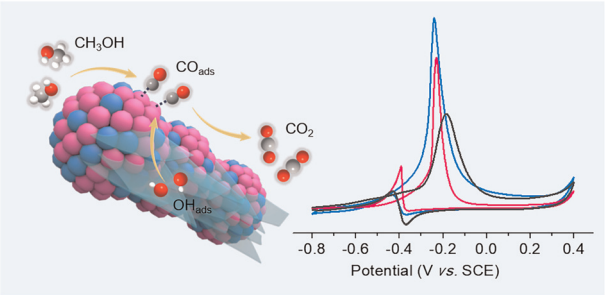
Hierarchical PdNi alloy nanochains coupled with $Ni(OH)_2$ nanosheets to enhance CO-poisoning resistance for the methanol oxidation reaction

Anzhou Yang, Keying Su, Yujia Liang, Shan Yang, Wu Lei, Yawen Tang* and Xiaoyu Qiu*



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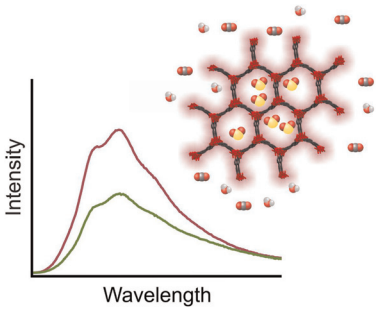
Detection of SO_2 using a chemically stable Ni(II)-MOF

Valeria B. López-Cervantes, Dae Won Kim, Juan L. Obeso, Eva Martínez-Ahumada, Yoarhy A. Amador-Sánchez, Elí Sánchez-González, Carolina Leyva, Chang Seop Hong,* Ilich A. Ibarra* and Diego Solis-Ibarra*



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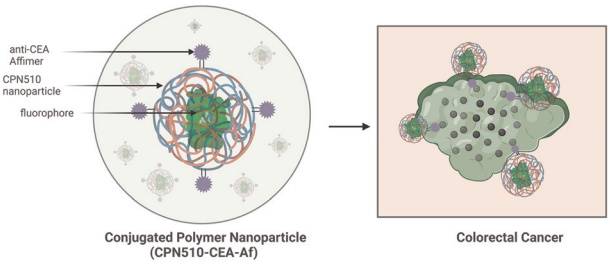
Fluorescent imaging using novel conjugated polymeric nanoparticles-affimer probes in complex *in vitro* models of colorectal cancer

Precious Jolugbo, Thomas Willott, Wei-Hsiang Lin, Thomas Maisey, Dermott O'Callaghan, Mark A. Green, David G. Jayne and M. Ibrahim Khot*



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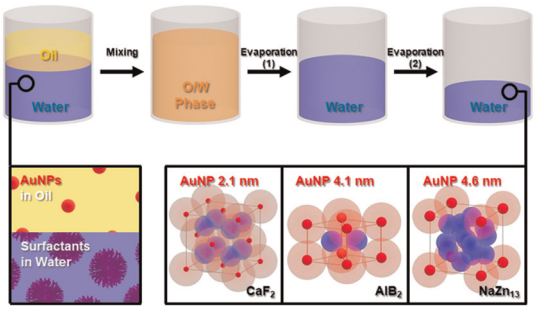
Temperature-responsive binary superlattices prepared by the selective solvent evaporation of O/W microemulsion composed of gold nanoparticles and surfactants

Young-Jin Yoon, Jae-Min Ha, Hyuk-Jin Seo, Jong Dae Jang, Changwoo Do and Tae-Hwan Kim*



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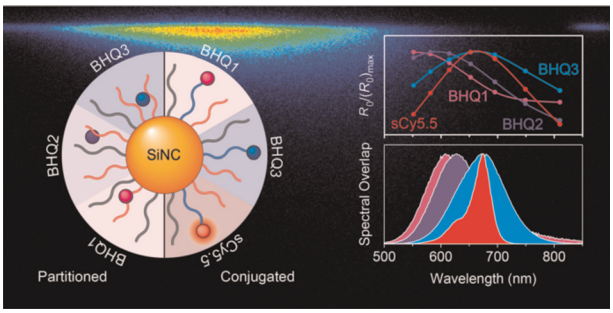

Spectrotemporal characterization of photoluminescent silicon nanocrystals and their energy transfer to dyes

Hsin-Yun Tsai, Christopher Jay T. Robidillo, Gunwant K. Matharu, Kevin O'Connor, I. Teng Cheong, Chuyi Ni, Jonathan G. C. Veinot and W. Russ Algar*

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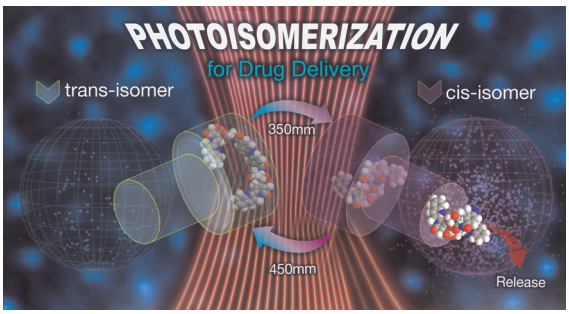

Light-activated controlled release of camptothecin by engineering porous materials: the *ship in a bottle* concept in drug delivery

Eva Rivero-Buceta, Mirela E. Encheva, Bradley Cech, Eduardo Fernandez, Germán Sastre, Christopher C. Landry* and Pablo Botella*

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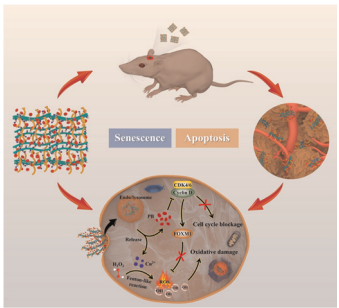

Targeting CDK4/6 in glioblastoma *via in situ* injection of a cellulose-based hydrogel

Xia Zhang, Like Ning, Hongshuai Wu, Suisui Yang, Ziyi Hu, Wenhong Wang, Yuandong Cao, Hongliang Xin, * Chaoqun You* and Fan Lin*

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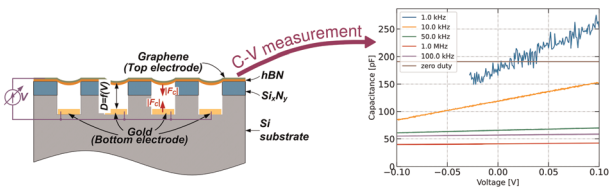

A graphene/h-BN MEMS varactor for sub-THz and THz applications

Piotr A. Dróżdż,* Maciej Haras,* Aleksandra Przewłoka,* Aleksandra Krajewska, Maciej Filipiak, Mateusz Słowikowski, Bartłomiej Stonio, Karolina Czerniak-Łosiewicz, Zygmunt Mierczyk, Thomas Skotnicki and Dmitri Lioubchenko

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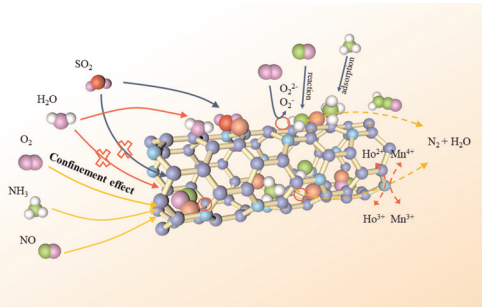
Unveiling a remarkable enhancement role by designing a confined structure Ho-TNTs@Mn catalyst for low-temperature NH_3-SCR reaction

Tian Zhao, Xiaosheng Huang,* Rongji Cui, Guodong Zhang and Zhicheng Tang*



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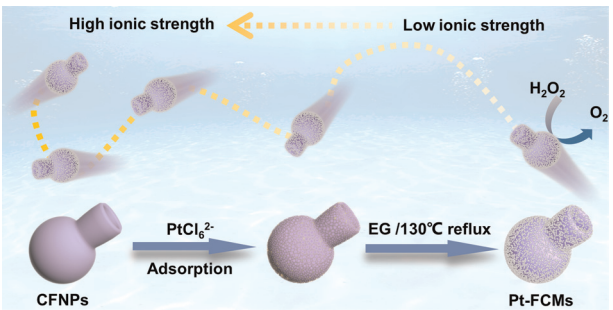
Ultrasmall Pt NPs-modified flasklike colloidal motors with high mobility and enhanced ion tolerance

Shurui Yuan, Ling Yang, Xiankun Lin* and Qiang He*



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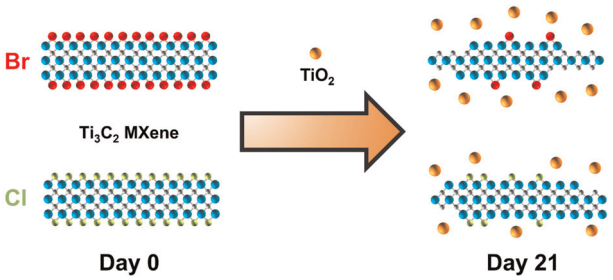
Effect of terminal groups on the degradation stability of $Ti_3C_2T_z$ MXenes

Swarnima Athavale, Stefano A. Micci-Barreca, Kailash Arole, Vrushali Kotasthane, Jodie L. Lutkenhaus, Miladin Radovic and Micah J. Green*



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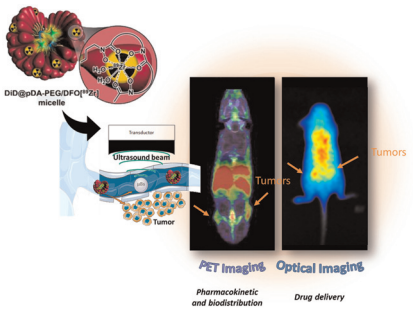
Sonoporation-assisted micelle delivery in subcutaneous glioma-bearing mice evaluated by PET/fluorescent bi-modal imaging

Estelle Porret, Stéphane Hoang, Caroline Denis, Eric Doris, Martin Hrubý, Anthony Novell, Edmond Gravel* and Charles Truillet*



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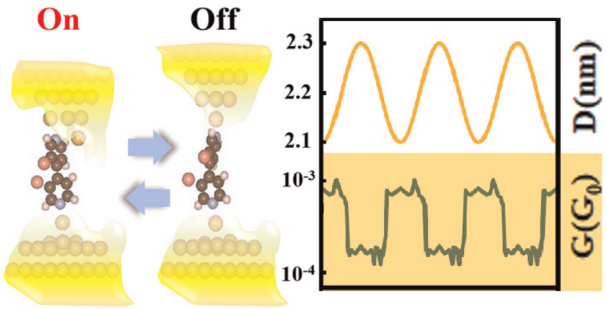

Decoding the mechanical conductance switching behaviors of dipyridyl molecular junctions

Feng Sun, Lin Liu, Chang-Feng Zheng, Yu-Chen Li, Yan Yan, Xiao-Xiao Fu, Chuan-Kui Wang, Ran Liu,* Bingqian Xu* and Zong-Liang Li*

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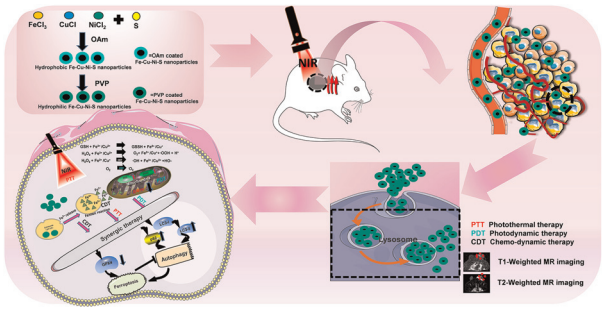

An ultrasmall PVP–Fe–Cu–Ni–S nano-agent for synergistic cancer therapy through triggering ferroptosis and autophagy

Rongjun Zhang, Shuxiang Xu, Miaomiao Yuan,* Lihao Guo, Luoyijun Xie, Yingying Liao, Yang Xu* and Xuemei Fu*

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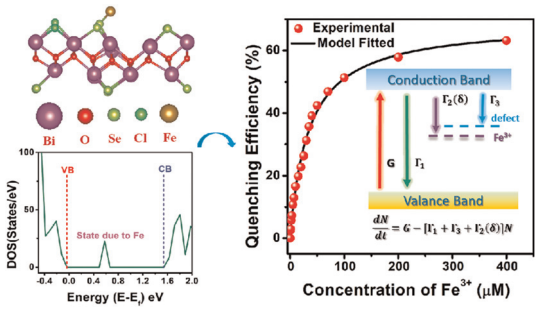

Two-dimensional bismuth oxyselenide quantum dots as nanosensors for selective metal ion detection over a wide dynamic range: sensing mechanism and selectivity

Sumana Paul, Sanju Nandi, Mandira Das, Abhilasha Bora, Md Tarik Hossain, Subhradip Ghosh and P. K. Giri*

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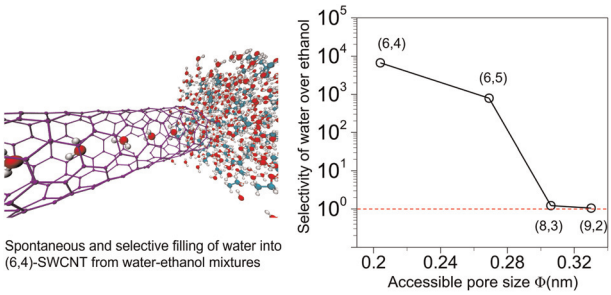

Spontaneous sieving of water from ethanol using angstrom-sized nanopores

Archith Rayabharam, Haoran Qu, YuHuang Wang* and N. R. Aluru*

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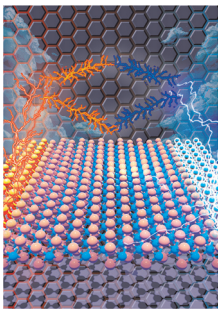
Defect engineering for thermal transport properties of nanocrystalline molybdenum diselenide

Soroush Sabbaghi, Vahid Bazargan and Ehsan Hosseinian*



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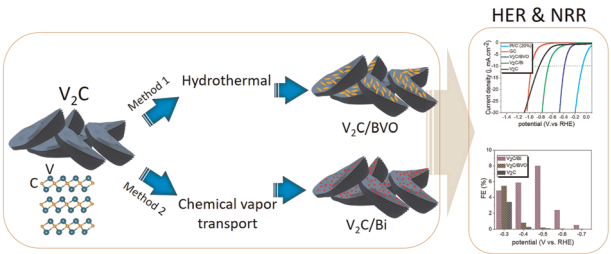
Atomic-layered V_2C MXene containing bismuth elements: 2D/0D and 2D/2D nanoarchitectonics for hydrogen evolution and nitrogen reduction reaction

Sana Akir,* Jalal Azadmanjiri, Nikolas Antonatos, Lukáš Děkanovský, Pradip Kumar Roy, Vlastimil Mazánek, Roussin Lontio Fomekong, Jakub Regner and Zdeněk Sofer*



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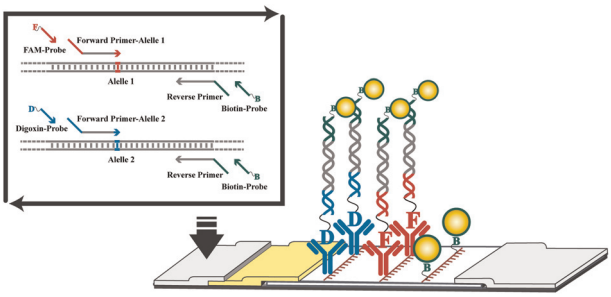
Universal probe-based SNP genotyping with visual readout: a robust and versatile method

Zhongzhong Wang, Zhang Zhang, Wang Luo, Luojia Wang, Xiaole Han, Rong Zhao, Xin Liu, Jianhong Zhang, Wen Yu, Junjie Li, Yujun Yang,* Chen Zuo* and Guoming Xie*



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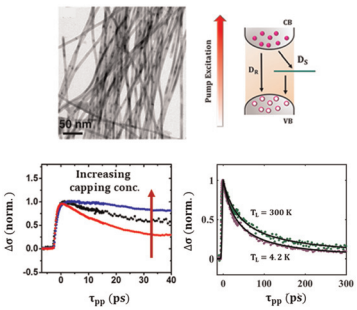
Ultrafast time-resolved carrier dynamics in tellurium nanowires using optical pump terahertz probe spectroscopy

K. P. Mithun, Shalini Tripathi, Ahin Roy, N. Ravishankar and A. K. Sood*



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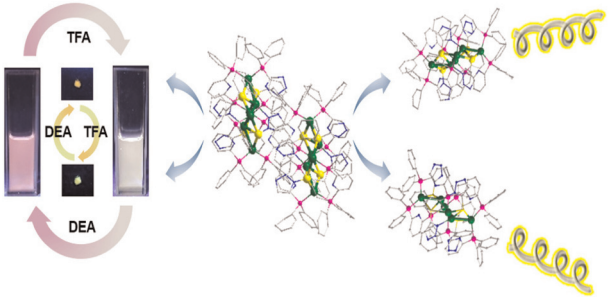
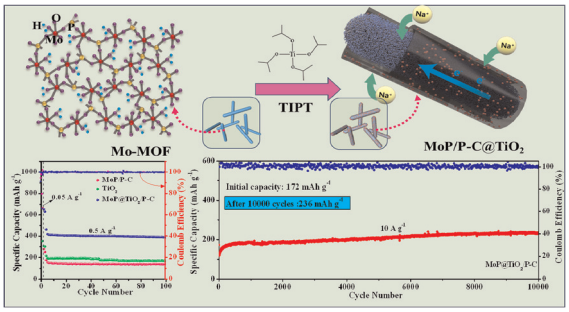


Atomically precise chiral silver clusters based on non-chiral ligands for acid/base stimulated luminescence response

Shuaibo Wang, Weimiao He, Yujia Cui, Zhan Zhou,* Lufang Ma and Shuang-Quan Zang*

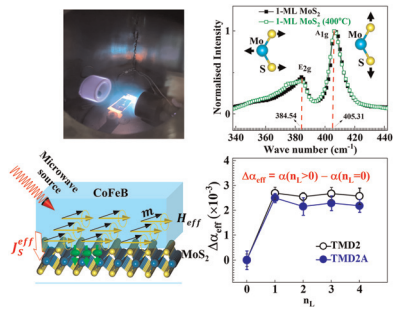
12686



TiO_2-coated MoP/phosphorus doped carbon nanorods for ultralong-life sodium ion batteries with high capacity

Chunmei Tan, Yiran Li, Wei He, Zhanzhan Wang, Xiaoyu Liu, Yanjuan Li* and Xiao Yan*

12694



High temperature stability in few atomic layer MoS_2 based thin film heterostructures: structural, static and dynamic magnetization properties

Nanhe Kumar Gupta, Amar Kumar, Lalit Pandey, Soumyarup Hait, Vineet Barwal, Amir Khan, Vireshwar Mishra, Nikita Sharma, Nakul Kumar and Sujeet Chaudhary*

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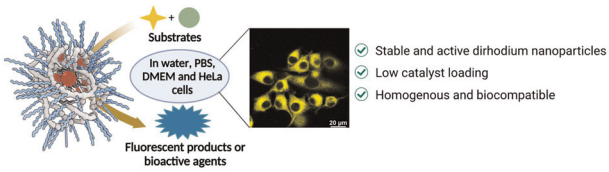

Amphiphilic polymeric nanoparticles enable homogenous rhodium-catalysed NH insertion reactions in living cells

Anjana Sathyan, Tessa Loman, Linlin Deng and Anja R. A. Palmans*

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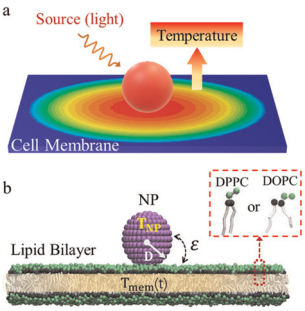
Thermal-controlled cellular uptake of "hot" nanoparticles

Haibo Chen, Xuewei Dong, Luping Ou, Chiyun Ma, Bing Yuan* and Kai Yang*



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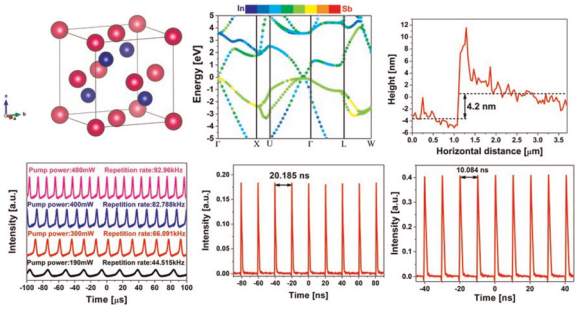
InSb-based saturable absorbers for ultrafast photonic applications

Lihui Pang,* Rongfeng Wang, Qiyi Zhao, Meng Zhao, Le Jiang, Xiaogang Zhang, Rongqian Wu, Yi Lv and Wenjun Liu*



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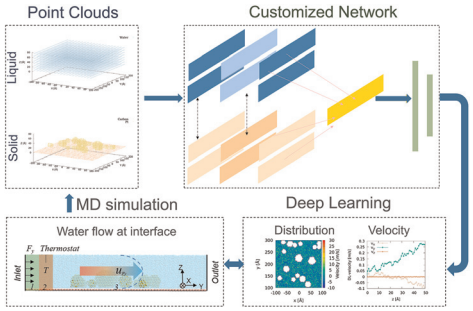
Prediction of water transport properties on an anisotropic wetting surface *via* deep learning

Yuting Guo, Haiyi Sun, Meng An, Takuya Mabuchi, Yinbo Zhao and Gaoyang Li*



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Anti-amyloidogenic amphipathic arginine-dehydrophenylalanine spheres capped selenium nanoparticles as potent therapeutic moieties for Alzheimer's disease

Avneet Kour, Virendra Tiwari, Nidhi Aggarwal, Himanshu Sekhar Panda, Ashwani Kumar, Siddharth Tiwari, Virander Singh Chauhan, Shubha Shukla* and Jiban Jyoti Panda*