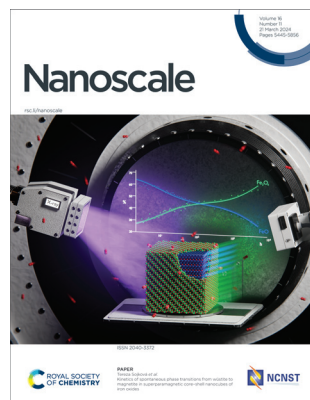


IN THIS ISSUE

ISSN 2040-3372 CODEN NANOHL 16(11) 5445–5856 (2024)



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See Tereza Sojková *et al.*,
pp. 5551–5560.

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REVIEWS

5458

Employing nano-enabled artificial intelligence (AI)-based smart technologies for prediction, screening, and detection of cancer

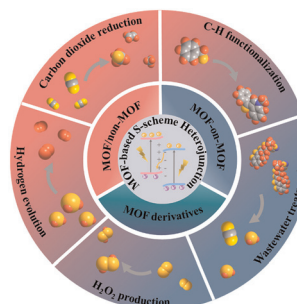
Vibhas Chugh, Adreeja Basu, Ajeet Kaushik, Manshu, Shekhar Bhansali and Aviru Kumar Basu*



5487

Metal–organic framework-based S-scheme heterojunction photocatalysts

Ling Yuan, Peiyang Du, Luli Yin, Jiamin Yao, Jing Wang* and Chao Liu*



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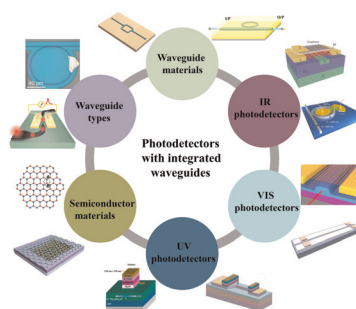
**Fundamental questions
Elemental answers**

REVIEWS

5504

Photodetectors integrating waveguides and semiconductor materials

Xin-Xue Wang, Guang Zeng, Qiu-Jun Yu, Lei Shen, Cai-Yu Shi and Hong-Liang Lu*

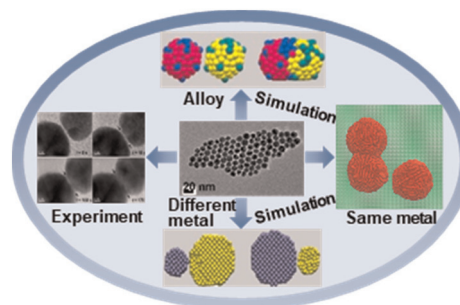


MINIREVIEWS

5521

Computational understanding of the coalescence of metallic nanoparticles: a mini review

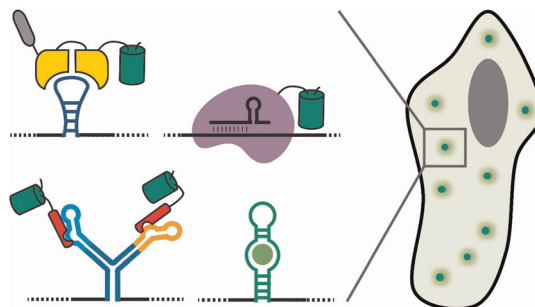
Liang Jiang, Yongxin Guo, Zhihui Liu and Shuai Chen*



5537

Recent advances in methods for live-cell RNA imaging

Tien G. Pham and Jiahui Wu*

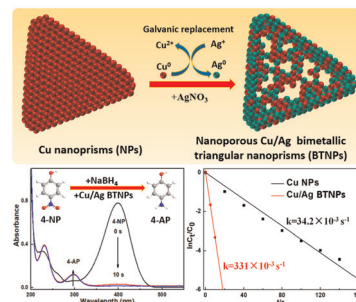


COMMUNICATION

5546

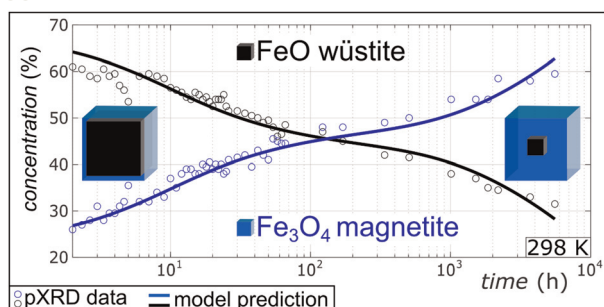
Fast synthesis of nanoporous Cu/Ag bimetallic triangular nanoprisms via galvanic replacement for efficient 4-nitrophenol reduction

Qiang Liu, Xuelian Lyu, Qiusui Chen, Yanmin Qin, Xing Wang, Chen Li, Zheng Fang* and Haifeng Bao*



PAPERS

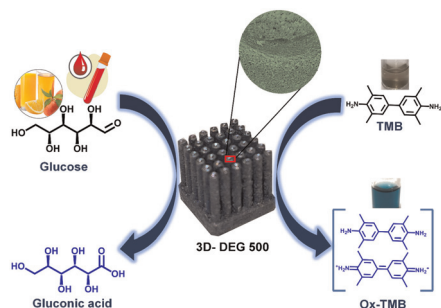
5551



Kinetics of spontaneous phase transitions from wüstite to magnetite in superparamagnetic core-shell nanocubes of iron oxides

Tereza Sojková,* Roman Gröger, Jakub Poloprudský, Ivo Kuběna, Oldřich Schneeweiss, Martin Sojka, Zuzana Šiška, Jakub Pongrácz and Naděžda Pizúrová

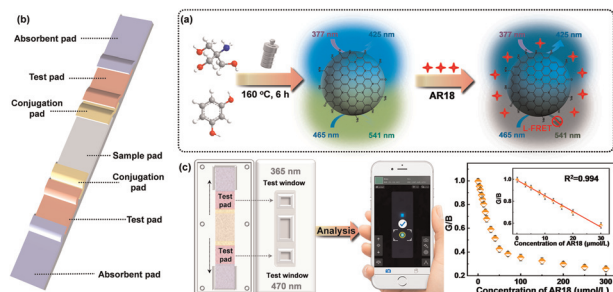
5561



Immobilizing nanozymes on 3D-printed metal substrates for enhanced peroxidase-like activity and trace-level glucose detection

Paramita Koley, Ranjithkumar Jakku, Tayebah Hosseinnajad, Selvakannan Periasamy and Suresh K. Bhargava*

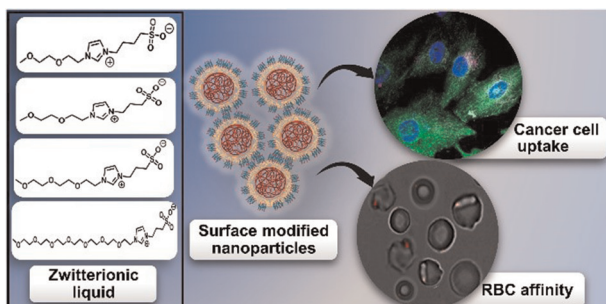
5574



A sensitive lateral flow test strip sensor for visual detection of acid red 18 in food using bicentric-emission carbon dots

Houwen Hu, Zewei Chen, Tingting Li, Linfan Wang, Haoming Xing, Guoqiang Guo, Gang Wang* and Da Chen*

5584



Imidazolium-based zwitterionic liquid-modified PEG-PLGA nanoparticles as a potential intravenous drug delivery carrier

Gaya S. Dasanayake, Christine M. Hamadani, Gagandeep Singh, Sandeep Kumar Misra, Priyavrat Vashisth, Joshua S. Sharp, Laxmi Adhikari, Gary A. Baker and Eden E. L. Tanner*

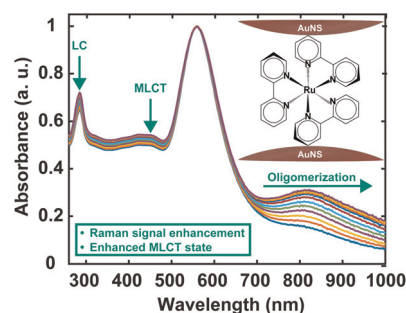


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5601

Plasmon resonance dynamics and enhancement effects in tris(2,2'-bipyridine)ruthenium(II) gold nanosphere oligomers

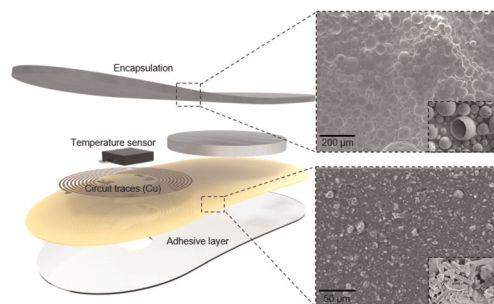
Umar Yunusa, Natalie Warren, David Schauer, Prasenjit Srivastava and Emily Sprague-Klein*



5613

Optimal bilayer composites for temperature-tracking wireless electronics

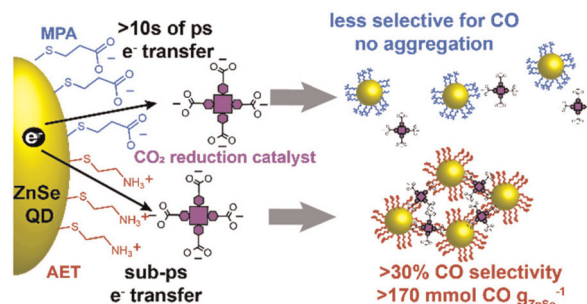
Doyoung Kim, Wooseok Kim, Jihwan Kim, Hee Kyu Lee, Janghoon Joo, Bogeun Kim, Mark G. Allen, Dengyang Lu, Vishal Venkatesh, Yanghang Huang, Ki Jun Yu, Young-Jin Park, Mu Kyung Kim, Seungyong Han and Sang Min Won*



5624

The role of surface functionalization in quantum dot-based photocatalytic CO₂ reduction: balancing efficiency and stability

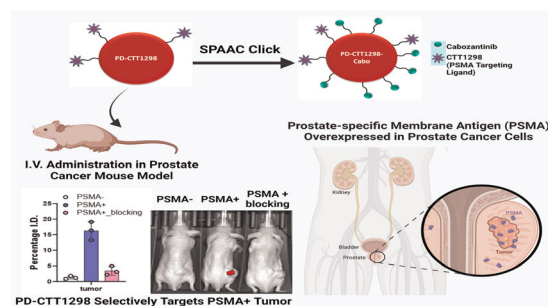
Frida Hernandez, Maggie Yang, Nejc Nagelj, Autumn Y. Lee, Hasun Noh, Kyle P. Hur, Xinyu Fu, Caleb J. Savoie, Adam M. Schwartzberg and Jacob H. Olshansky*



5634

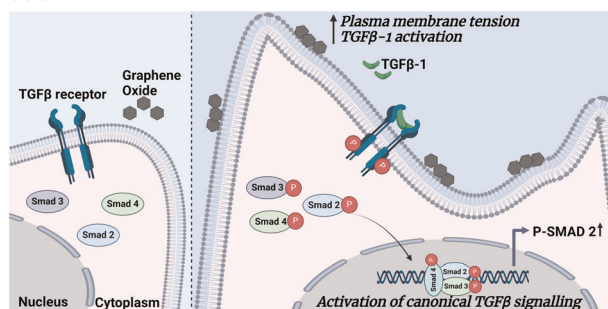
PSMA-targeted dendrimer as an efficient anticancer drug delivery vehicle for prostate cancer

Anubhav Dhull, Jing Wei, Anunay James Pulukuri, Anu Rani, Rishi Sharma, Nooshin Mesbahi, Hosog Yoon, Emily A. Savoy, Sylvia Xaivong Vi, Kenneth John Goody, Clifford E. Berkman, Boyang Jason Wu and Anjali Sharma*



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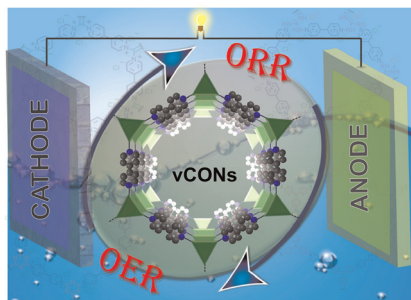
5653



Graphene oxide activates canonical TGF β signalling in a human chondrocyte cell line *via* increased plasma membrane tension

Leona Ogene, Steven Woods, Joseph Hetmanski, Neus Lozano, Angeliki Karakasidi, Patrick T. Caswell, Kostas Kostarelos, Marco A. N. Domingos, Sandra Vranic and Susan J. Kimber*

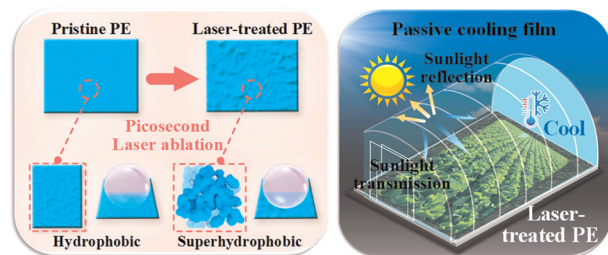
5665



Reticular synthesis of two-dimensional ionic covalent organic networks as metal-free bifunctional electrocatalysts for oxygen reduction and evolution reactions

Pampa Jhariat, Arjun Warriar, Ananta Sasmal, Subhadip Das, Shafeeq Sarfudeen, Priyanka Kumari, Arpan Kumar Nayak and Tamas Panda*

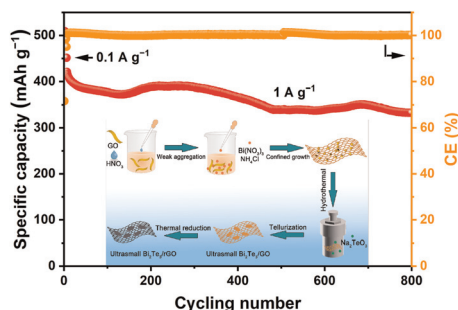
5674



A porous micro/nano-structured polyethylene film prepared using a picosecond laser for agricultural passive cooling

Qingwei Wang, Dongkai Chu,* Qilin Wang, Xiangyue Xu, Kai Yin,* Shuoshuo Qu, Peng Yao* and Chuanzhen Huang

5685



Nanoconfinement of ultra-small Bi₂Te₃ nanocrystals on reduced graphene oxide: a pathway to high-performance sodium-ion battery anodes

Zhuoying Cheng, Zhuo Li, Yuao Wang, Yiyang Mao, Jun Yan,* Dianxue Cao and Kai Zhu*

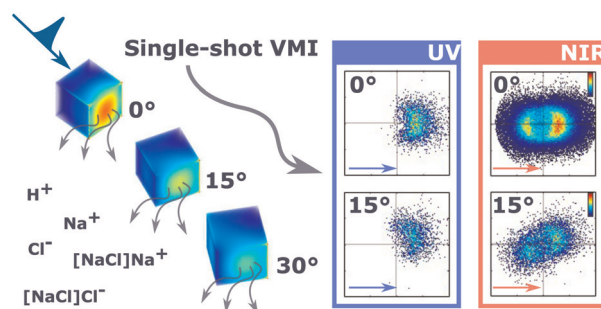


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5695

Ion imaging of spatially inhomogeneous nanoplasmas in NaCl particles

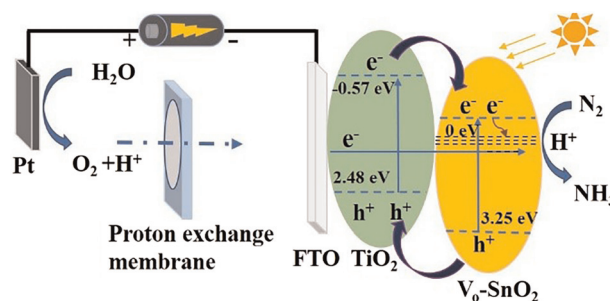
Loren Ban,* Hanchao Tang, Jonas Heitland, Christopher W. West, Bruce L. Yoder, Ioannis Thanopulos and Ruth Signorell*



5706

Photoelectrochemical-driven nitrogen reduction to ammonia by a V_0 - $\text{SnO}_2/\text{TiO}_2$ composite electrode

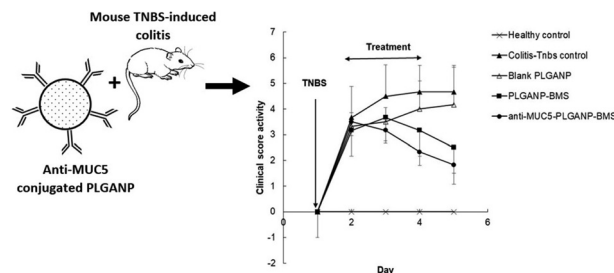
Junbo Ma, Jiangjian Fu, Lan Sun,* Jun Cheng* and Jian-Feng Li*



5715

Active nanoparticle targeting of MUC5AC ameliorates therapeutic outcome in experimental colitis

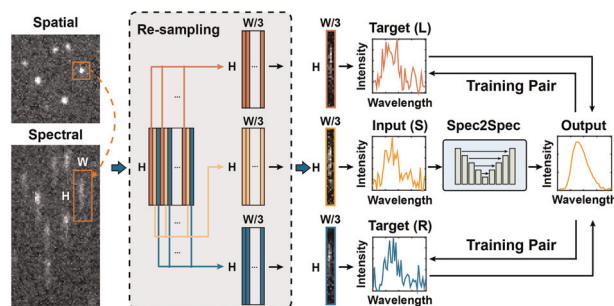
Bernadette Riemann, Thomas Antoine, Arnaud Béduneau, Yann Pellequer, Alf Lamprecht and Brice Moulari*



5729

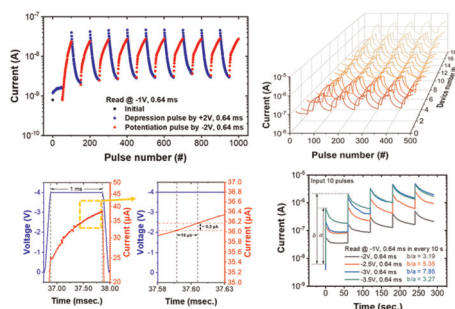
Deep-learning-assisted spectroscopic single-molecule localization microscopy based on spectrum-to-spectrum denoising

Dandan Xu, Yuanjie Gu, Jun Lu, Lei Xu, Wei Wang and Biqin Dong*



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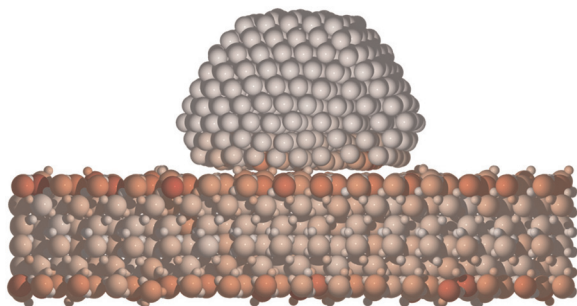
5737



Enhanced linear and symmetric synaptic weight update characteristics in a Pt/p-LiCoO_x/p-NiO/Pt memristor through interface energy barrier modulation by Li ion redistribution

Boyoung Jeong, Peter Hayoung Chung, Jimin Han, Taeyun Noh and Tae-Sik Yoon*

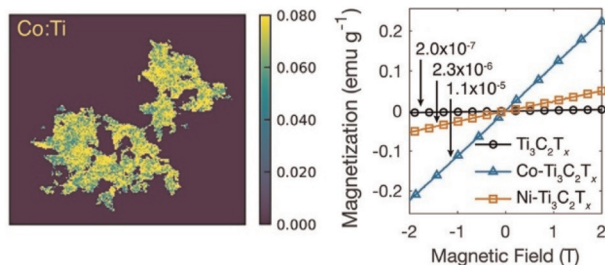
5750



Beam induced heating in electron microscopy modeled with machine learning interatomic potentials

Cuauhtemoc Nuñez Valencia, William Bang Lomholdt, Matthew Helmi Leth Larsen, Thomas W. Hansen and Jakob Schiøtz*

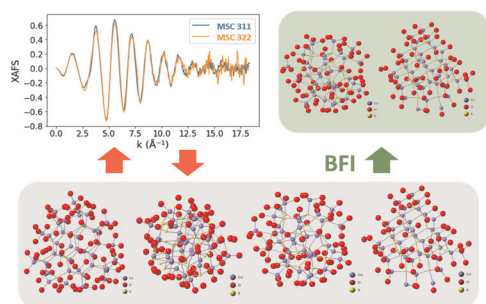
5760



Enhanced magnetic susceptibility in Ti₃C₂T_x MXene with Co and Ni incorporation

Yizhou Yang, Mark Anayee, Ajith Pattammattel, Mikhail Shekhirev, Ruocun (John) Wang, Xiaojing Huang, Yong S. Chu, Yury Gogotsi and Steven J. May*

5768



Quantifying intuition: Bayesian approach to figures of merit in EXAFS analysis of magic size clusters

Lucy Haddad,* Diego Gianolio, David J. Dunstan, Ying Liu, Conor Rankine and Andrei Sapelkin

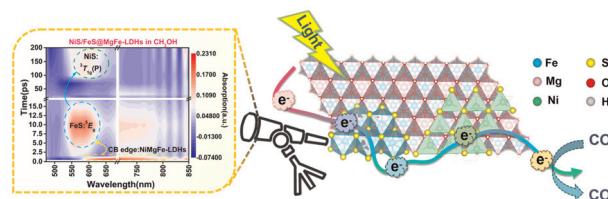


PAPERS

5776

In situ topotactic formation of an inorganic intergrowth bulk NiS/FeS@MgFe-LDH heterojunction to simulate CODH for the photocatalytic reduction of CO₂

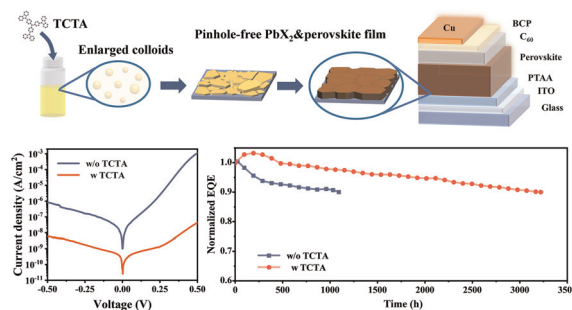
Yuexian Li, Wenli Su, Xiaoyan Wang, Jun Lu,*
Wenkai Zhang* and Shuo Wei*



5786

Synergistic nucleation regulation using 4,4',4''-tris(carbazol-9-yl)-triphenylamine and moisture for stably air-processed high-performance perovskite photodetectors

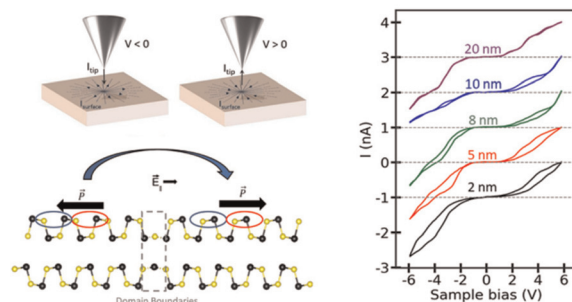
Guo He, Dezhi Yang,* Sizhe Tao, Liqing Yang,
Dechao Guo, Jingbo Zheng, Ji Li, Jiangshan Chen and
Dongge Ma*



5794

Evidence of thickness-dependent surface-induced ferroelectricity in few-layer germanium sulfide obtained *via* scanning tunneling spectroscopy

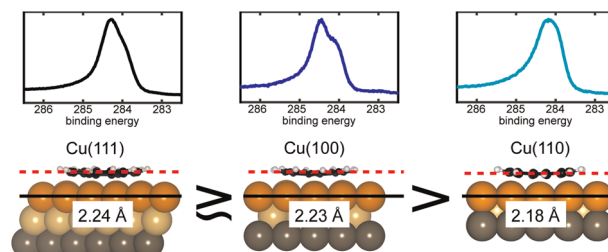
Rafael R. Barreto, Thiago C. Ribeiro, Gustavo
H. R. Soares, Everton Pereira, Douglas R. Miquita,
Gustavo A. M. Safar, Mario S. C. Mazzoni,
Angelo Malachias and Rogerio Magalhaes-Paniago*



5802

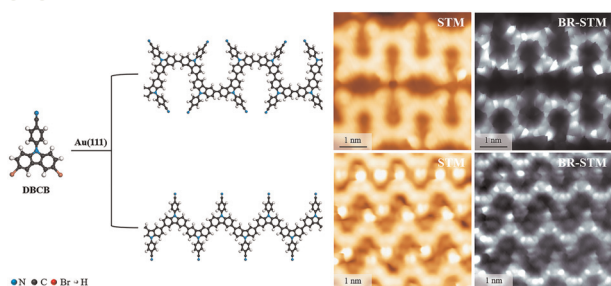
Probing the role of surface termination in the adsorption of azupyrene on copper

Benedikt P. Klein, Matthew A. Stoodley,
Dylan B. Morgan, Luke A. Rochford, Leon B. S. Williams,
Paul T. P. Ryan, Lars Sattler, Sebastian M. Weber,
Gerhard Hilt, Thomas J. Liddy, Tien-Lin Lee,
Reinhard J. Maurer* and David A. Duncan*



PAPERS

5813



On-surface synthesis of two types of cyano-substituted polyfluorene derivatives *via* Ullmann coupling on Au(111)

Boyu Fu, Jianchen Lu,* Jianqun Geng, Yong Zhang, Shijie Sun, Wei Xiong, Yi Zhang, Gefei Niu, Lei Gao* and Jinming Cai*

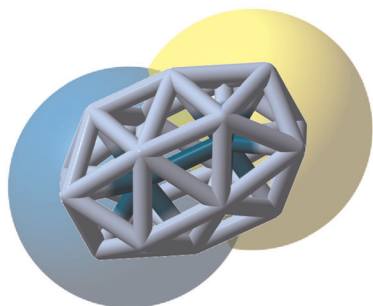
5820



Hybrid quantum-classical polarizability model for single molecule biosensing

Ekaterina Zossimova,* Johannes Fiedler, Frank Vollmer and Michael Walter

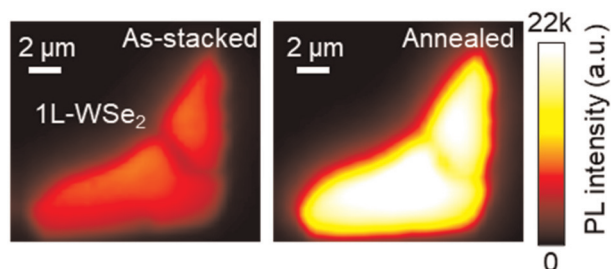
5829



Ligand-free supermolecules: $[\text{Pd}_2@\text{Ge}_{18}]^{4-}$ and $[\text{Pd}_2@\text{Sn}_{18}]^{4-}$ as multiple-bonded Zintl-ion clusters based on $\text{Pd}@\text{Ge}_9$ and $\text{Pd}@\text{Sn}_9$ assembled units

Peter L. Rodríguez-Kessler and Alvaro Muñoz-Castro*

5836



Optical grade transformation of monolayer transition metal dichalcogenides *via* encapsulation annealing

Huije Ryu, Seong Chul Hong, Kangwon Kim, Yeonjoon Jung, Yangjin Lee, Kihyun Lee, Youngbum Kim, Hyunjun Kim, Kenji Watanabe, Takashi Taniguchi, Jeongyong Kim, Kwanpyo Kim, Hyeonsik Cheong and Gwan-Hyoung Lee*



5845

A frogspawn inspired twin $\text{Mo}_2\text{C}/\text{Ni}$ composite with a conductive fibrous network as a robust bifunctional catalyst for advanced anion exchange membrane electrolyzers

Zhongmin Wan, Linqing Wang, Yuheng Zhou, Siyuan Xu, Jing Zhang, Xi Chen, Shi Li, Changjie Ou* and Xiangzhong Kong*

