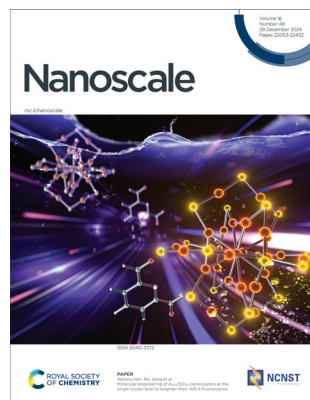


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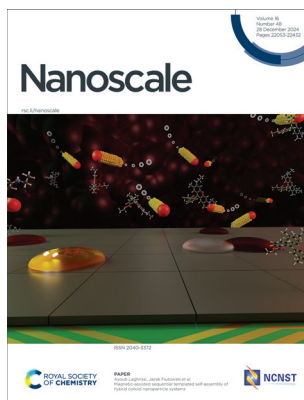
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Cover

See Wenxiu Han,
Pei Jiang *et al.*,
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Inside cover

See Ayoub Laghrissi,
Jacek Fiutowski *et al.*,
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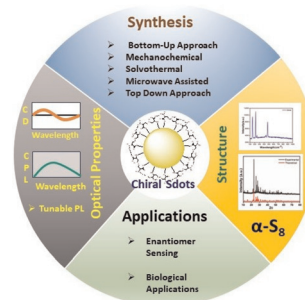
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REVIEWS

22065

Emerging chiral sulfur-based nanomaterials for chiroptical applications

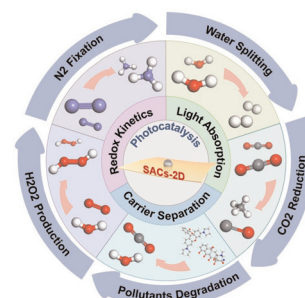
Hammad Hasan, Md Ifzal Azhar,
Santosh Kumar Behera* and Md Palashuddin Sk*



22077

Single atoms meeting 2D materials: an excellent configuration for photocatalysis

Yameng He, Yi Zhang,* Gazi Hao,* Wei Jiang and
Jun Di*



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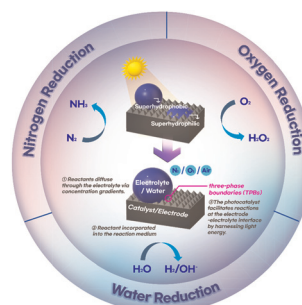
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REVIEWS

22099

Advanced strategies for controlling three-phase boundaries in photocatalysis

Lagnamayee Mohapatra, Lekha Paramanik, Subhashree Sabnam and Seung Hwa Yoo*

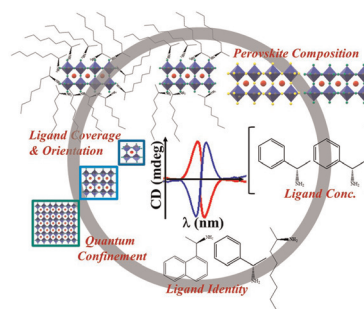


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22120

Factors influencing the chiral imprinting in perovskite nanoparticles

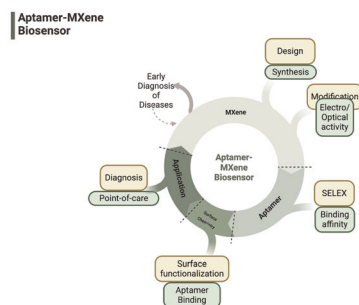
Nazifa Tabassum, Brian P. Bloom, Gouranga H. Debnath* and David H. Waldeck*



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MXene-based aptasensors: a perspective on recent advances

Navid Rabiee* and Mohammad Rabiee*

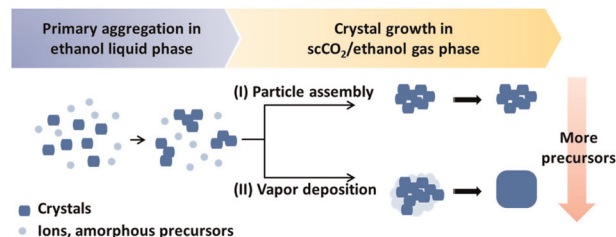


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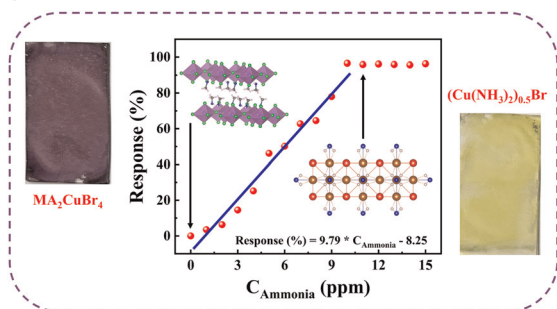
HKUST-1 MOF nanoparticles: a non-classical crystallization route in supercritical CO₂

Ji Feng, Almond Lau and Igor V. Novoselov*



COMMUNICATIONS

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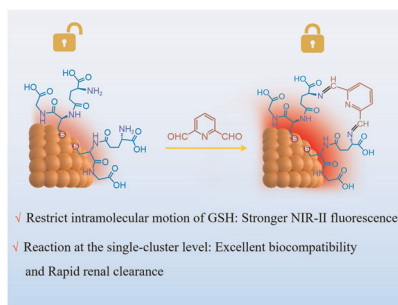


Unraveling the ammonia sensing behavior and degradation pathways of a novel lead-free MA₂CuBr₄ based ammonia sensor

Abinash Tiwari, Mir Arjumand and Aswani Yella*

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Molecular engineering of Au₂₅(SG)₁₈ nanoclusters at the single cluster level to brighten their NIR-II fluorescence

Hailiang Zhang, Jing Wang, Wenxiu Han* and Pei Jiang*

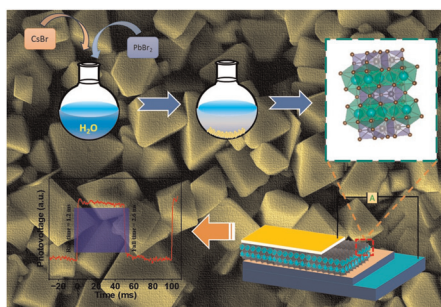
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Magnetic-assisted sequential templated self-assembly of hybrid colloid nanoparticle systems

Ayoub Laghrissi*, Mindaugas Juodėnas, Tomas Tamulevičius, Casper Kunstmann, Horst-Günter Rubahn and Jacek Fiutowski*

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Shape-controlled, water-assisted synthesis of 2D luminescent CsPb₂Br₅ perovskite microcrystals for highly responsive UV detectors

Dipayan Ray, Ankush Saini, Ankit Kumar, Sumit Kumar, Monojit Bag* and Prasenjit Kar*

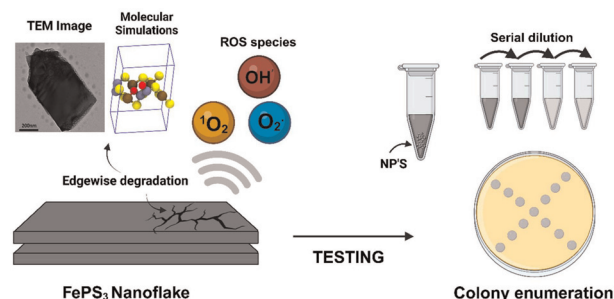


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2-D transition metal trichalcophosphogenide FePS_3 against multi-drug resistant microbial infections

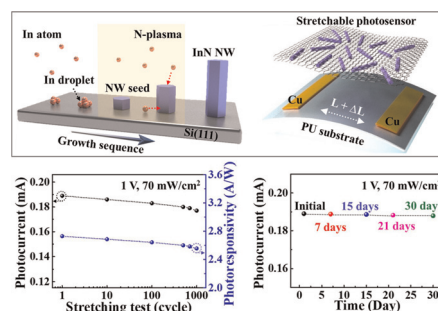
Shreehari Kodakkat, Pierre H. A. Valliant, Serena Ch'ng, Z. L. Shaw, Miyah Naim Awad, Billy J. Murdoch, Andrew J. Christofferson, Saffron J. Bryant,* Sumeet Walia* and Aaron Elbourne*



22201

Stretchable photosensors with InN nanowires operating at a wavelength of $1.3\ \mu\text{m}$

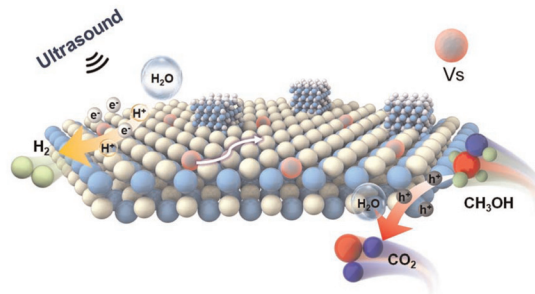
Jaehyeok Shin, Siyun Noh, Seunghwan Jhee, Sumin Kang, Yumin Lee and Jin Soo Kim*



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Facile synthesis of defective ZnS – ZnO composite nanosheets for efficient piezocatalytic H_2 production

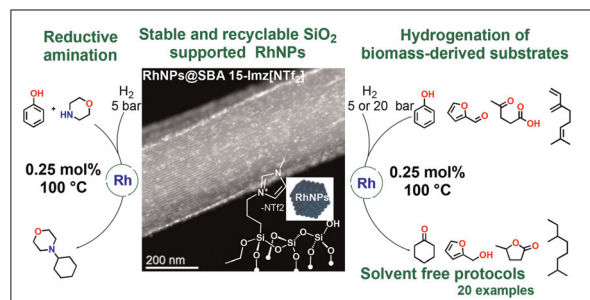
Xiaoxiao Lu, Xiaojing Zhao, Xiangyu Chen, Miaojiong Xu, Miaoling Huang, Wen-Jie Chen, Yubin Liu* and Xiaoyang Pan*



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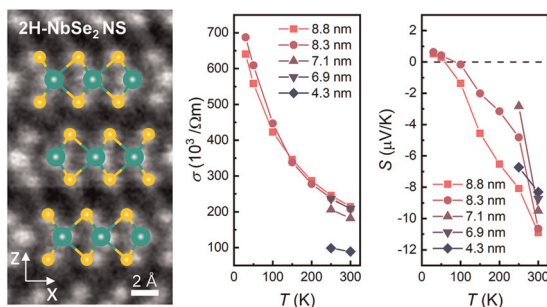
Biomass-derived substrate hydrogenation over rhodium nanoparticles supported on functionalized mesoporous silica

Israel T. Pulido-Díaz, Draco Martínez, Karla P. Salas-Martín, Benjamin Portales-Martínez, Dominique Agustin, Antonio Reina and Itzel Guerrero-Ríos*



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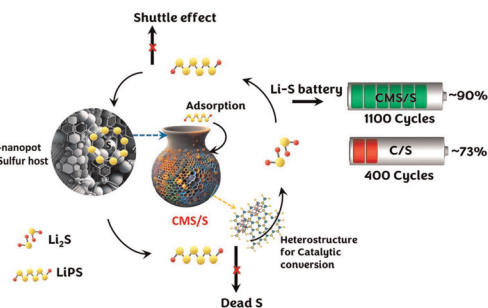
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Electrical transport phenomena in two-dimensional metallic 2H-NbSe₂: an experimental and theoretical study

Jeongmin Kim, Seonhye Youn, Damin Lee, Chan Woong Kim, Hongjae Moon, Seok-Hwan Chung, Hoyoung Kim, Dong Hwan Kim, Sumin Kim, Jong Wook Roh, Joonho Bang* and Wooyoung Lee*

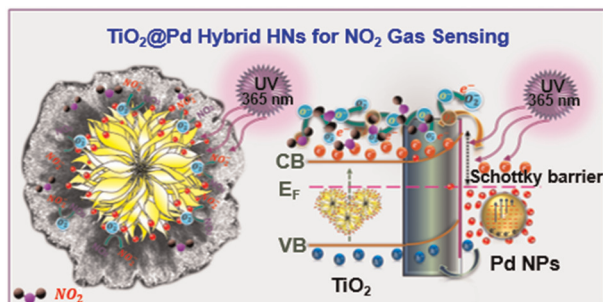
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Bifunctional electrocatalytic hybrid heterostructures for polysulfide anchoring/conversion for a stable lithium–sulfur battery

Sakthivel Kaliyaperumal, Karthik Kiran Sarigamala,* Padmini Moorthy, Balaji Ramachandran, Narendhar Chandrasekar and Tim Albrecht

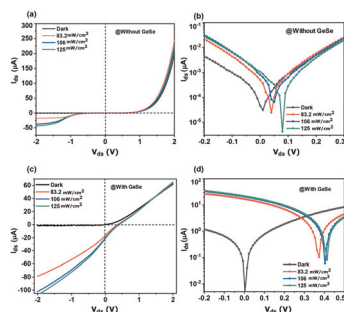
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Facile engineering of TiO₂@Pd based hybrid heterogeneous nanostructures for enhanced NO₂ gas sensing at room temperature under UV activation

Thi Minh Thu Pham, Kedhareswara Sairam Pasupuleti, Tae Hyeon Jeong, Seung Min Lee, Thi Hong Men Nguyen, Moon-Deock Kim and Young Heon Kim*

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GeSe-embedded metal–oxide double heterojunctions for facilitating self-biased and efficient NIR photodetection

Muhammad Hussain, Sohail Abbas, Usama Waleed Qazi, Muhammad Riaz, Asif Ali, Fazal Wahab, Anis Fatima, Sajjad Hussain, Zdeněk Sofer and Jongwan Jung*

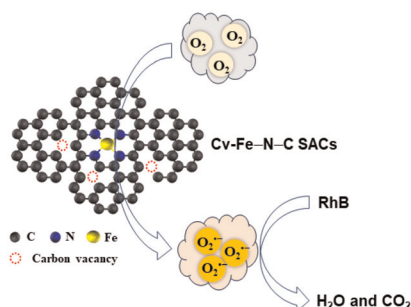


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Efficient degradation of organic pollutants without any external assistance over a wide pH range using carbon vacancy-modified Fe–N–C catalysts

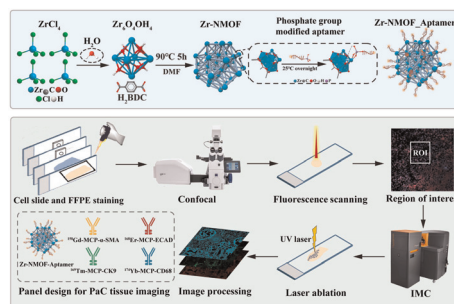
Feng Li, Kairen Zhao, Yan Jin and Baoxin Li*



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Zr-NMOF tagged with heterobifunctionalized aptamers for highly sensitive, multiplexed and rapid imaging mass cytometry

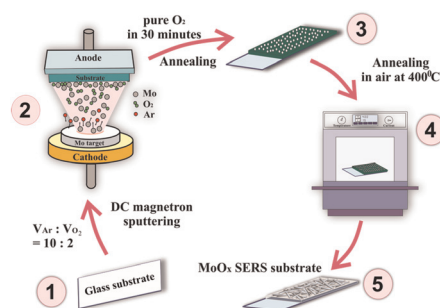
Kaiwen Bao, Xiaoxiang Chen,* Rui Chen, Yingying Gao, Jingqi Dang, Jie He, Ziqing Yuan, Yiyang Li, Adeleh Divsalar, Edwin Cheung, Guangxia Shen* and Xianting Ding*



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Nanorod structure tuning and defect engineering of MoO_x for high-performance SERS substrates

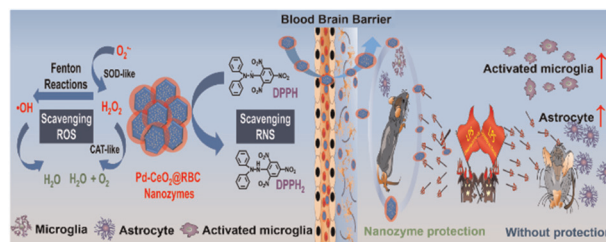
Trong Vo Huu, Hong Le Thi Thu, Long Nguyen Hoang, Khanh Huynh Thuy Doan, Khanh Nguyen Duy, Tuan Dao Anh, Huyen Le Thi Minh, Ke Nguyen Huu and Hung Le Vu Tuan*



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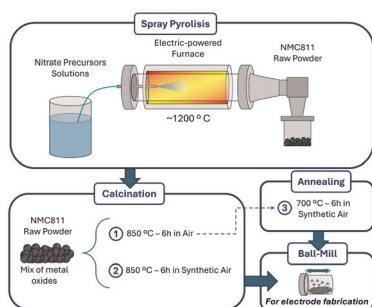
Cerium oxide-modified Pd nanosheets encapsulated by red blood cell membranes for high-efficiency RONS scavenging in depression treatment

Xinyan Hu, Xianhua Zhang, Gongxin Zhang, Dongxu Cao, Zichen Ye and Xiaolan Chen*



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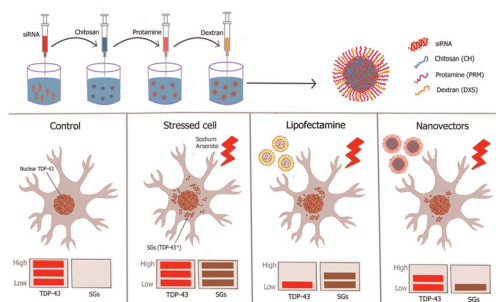
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Revealing the impact of CO₂ exposure during calcination on the physicochemical and electrochemical properties of LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂

Marc Nel-lo Pascual,* Elías Martínez Moreno, Leif Olaf Jøsang, Maximiliano Merlo and Jordi Jacas Biendicho*

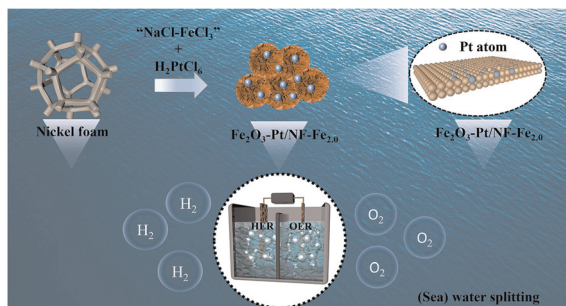
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Optimizing TDP-43 silencing with siRNA-loaded polymeric nanovectors in neuronal cells for therapeutic applications: balancing knockdown and function

Annamaria Russo, Gabriele Maiorano, Barbara Cortese, Stefania D'Amone, Alessandra Invidia, Angelo Quattrini, Alessandro Romano,* Giuseppe Gigli and Ilaria E. Palamà*

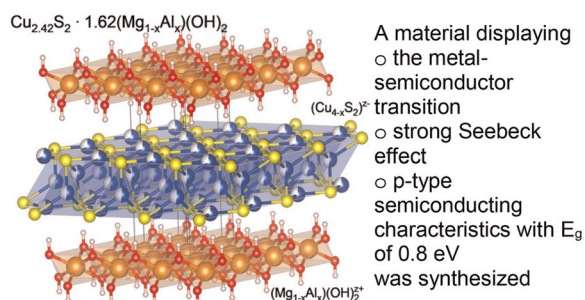
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Constructing self-standing Fe₂O₃-Pt/NF nanoflowers with synergistic active sites for efficient electrocatalytic overall (sea) water splitting

Weiping Xiao,* Yue Zhang, Changwang Ke, Qin Zhao, Fengyan Han, Junpo Guo* and Xiaofei Yang*

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A new material built with alternating Cu sulfide and (Al,Mg) hydroxide molecular sheets: hydrothermal synthesis and selected characteristics

Maxim N. Likhatski,* Roman V. Borisov, Denis V. Karpov, Yevgeny V. Tomashevich, Sergey A. Vorobyev, Anton A. Karacharov, Sergey M. Zharkov, Igor A. Tambasov, Nikita A. Zolotovskii, Sergei V. Nedelin, Alexander S. Krylov, Svetlana N. Krylova, Anatoly M. Zhizhaev, Olga Yu. Fetisova and Yuri L. Mikhlin

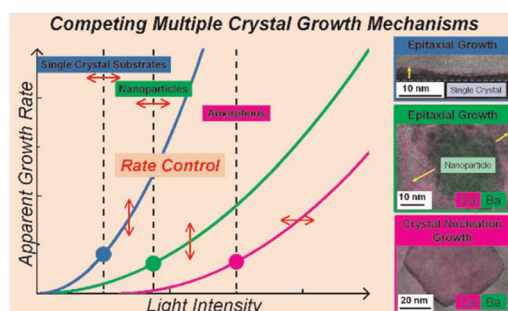


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Photo-assisted epitaxial growth from nanoparticles to enhance multi-materialization for advanced surface functionalization

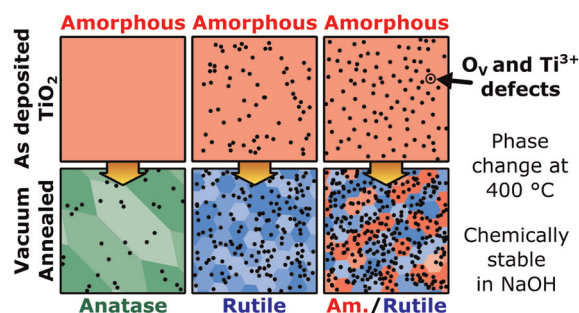
Masayuki Fukuda,* Yuuki Kitanaka and Tomohiko Nakajima



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Production of mixed phase Ti^{3+} -rich TiO_2 thin films by oxide defect engineered crystallization

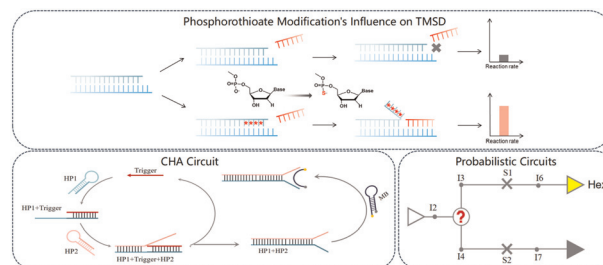
Lauri Palmolahti, Harri Ali-Löytty,* Markku Hannula, Tuomas Tinus, Kalle Lehtola, Antti Tukiainen, Jarno Reuna and Mika Valden*



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Improving dynamic control of toehold-mediated strand displacement reactions through phosphorothioate modifications

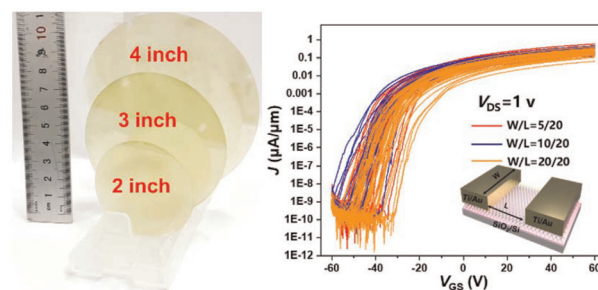
Ruyi Liang, Yiyang Shen, Tanqing Long, Peilin Yang, Chuanrui Xu, Tongbo Wu* and Mingxia Zhang*



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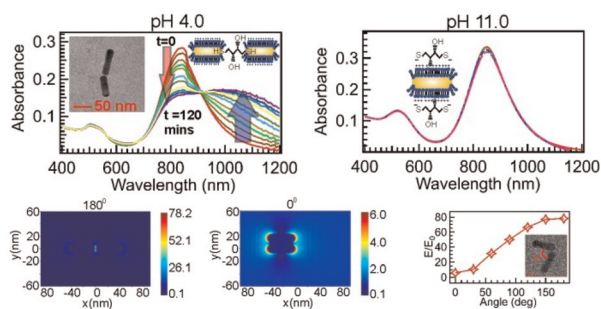
Promotion of a Mo-based ionic crystal precursor for MoS_2 wafer growth

Jinxu Liu, Chunchi Zhang, Yan Huang, Haijuan Wu, Chao Tan and Zegao Wang*



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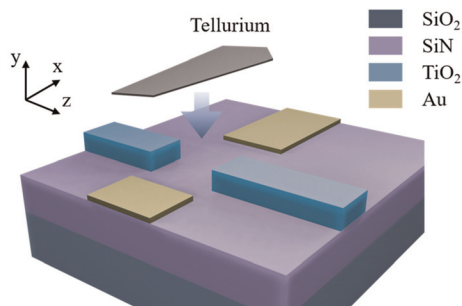
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pH controlled synthesis of end to end linked Au nanorod dimer in an aqueous solution for plasmon enhanced spectroscopic applications

Shubhangi Sharma, Théo Minchella, Susmita Pradhan, Davy Gérard, Quanbo Jiang and Satyajit Patra*

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A high-speed infrared tellurium photodetector on a silicon nitride platform

Shuqi Xiao, Junlei Qi, Yi Wang, Gaolei Hu, Yue Qin, Zhenzhou Cheng, Zunyue Zhang, Qiyan He* and Hon Ki Tsang*

