

Materials Advances

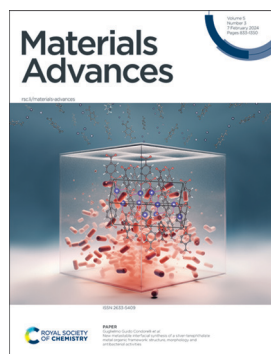
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ISSN 2633-5409 CODEN MAADC9 5(3) 833-1350 (2024)



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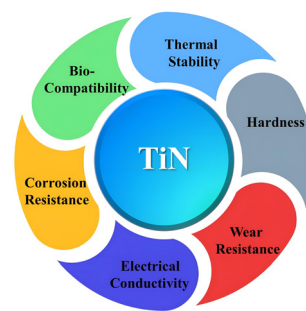
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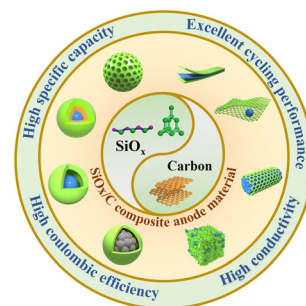
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Yuanteng Yang, Yanxia Liu, Xiaoli Jiang, Lin Zhao, Penglei Wang* and Yagang Zhang*



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Fundamental questions
Elemental answers

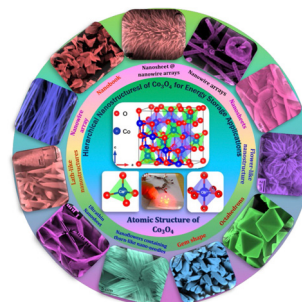


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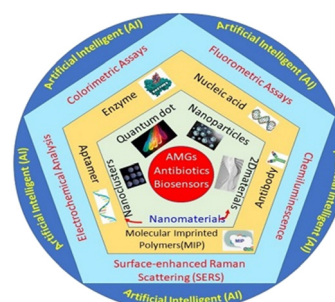
Radhika S. Desai, Vinayak S Jadhav, Pramod S. Patil* and Dhanaji S. Dalavi*



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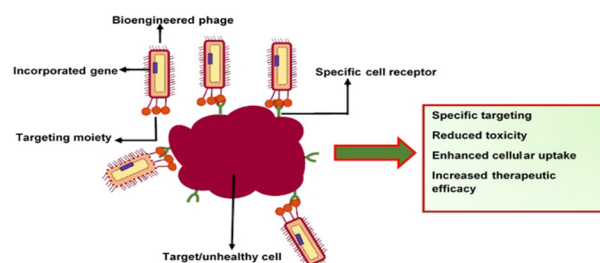
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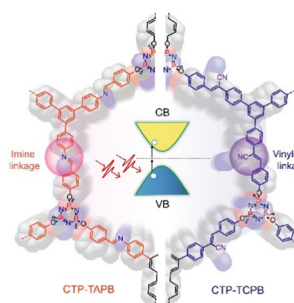


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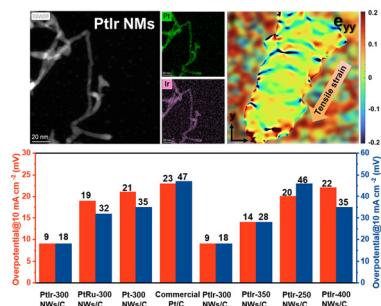
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Cyclotriphosphazene-based organic frameworks as third-order nonlinear optical materials

Suresh Bommakanti, Satyapriya Nath, Rudrashish Panda, Ritwick Das* and Bishnu P. Biswal*



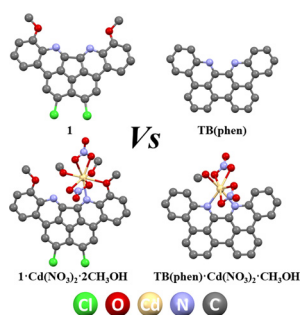
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Alloy/strain engineering of Pt-based nanowires with controllable electronic structures towards boosted water electrolysis catalysis

Jiakang Tian, Senmin Lin, Zhongmin Tang, Runhua Li, Xiaomei Cheng, Zhen Fang, Bin Wang, Jiaheng Peng,* Lang Xiao, Benwei Fu, Tao Deng* and Jianbo Wu*

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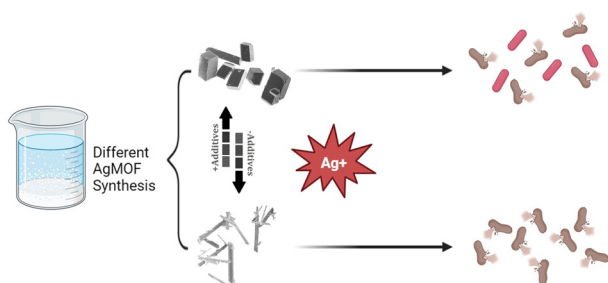


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Jinku Bai, Xiao Xu, Xin-Yue Wang, Xin Sun, Jiaqi Liang, Tongling Liang and Han-Yuan Gong*

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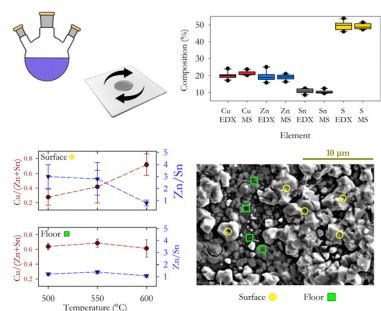
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Variability of Cu₂ZnSnS₄ nanoparticle hot injection synthesis and modifications by thin film annealing

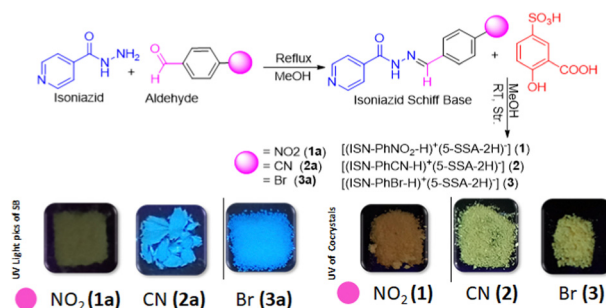
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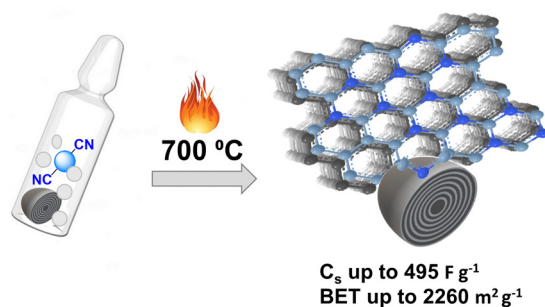
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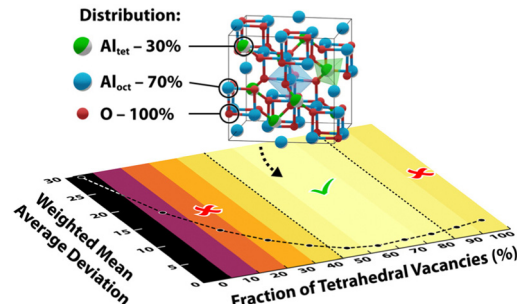
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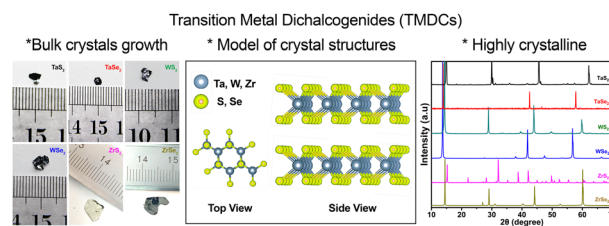
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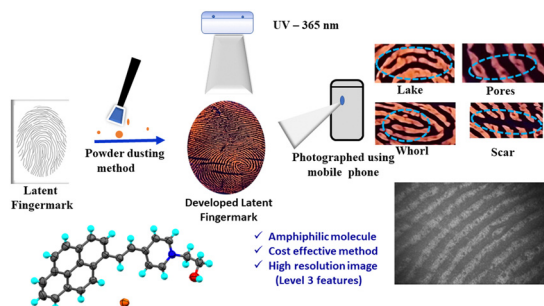
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Bridging the gap: an in-depth comparison of CVT-grown layered transition metal dichalcogenides for supercapacitor applications

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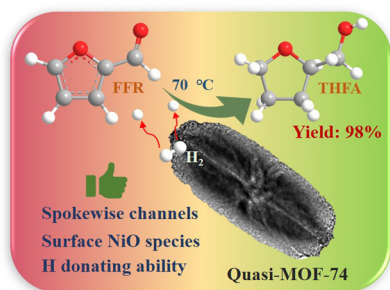
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Real-time visualization of latent fingerprints with level 3 details based on a solid state emissive organic fluorophore using the powder dusting method

Arivalagan Shabashini, Sathiaraj Richard, Manas K. Panda,* Sumit K. Panja* and Ganesh Chandra Nandi*

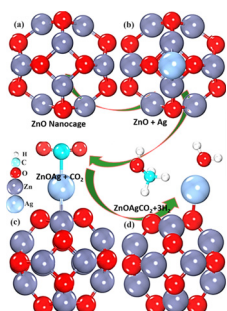
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Synthesis of Quasi-MOFs featuring special hub-and-spoke channels and surface NiO species for enhanced total hydrogenation of furfural

Qiuju Fu, Liting Yan, Lingzhi Yang,* Dandan Liu, Shuo Zhang, Huimin Jiang, Wenpeng Xie, Haiyan Wang* and Xuebo Zhao*

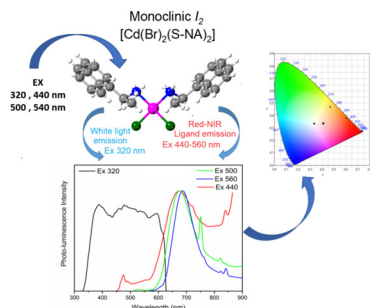
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Sheraz Ahmad, Akbar Hussain, Shabeer Ahmad Mian,* Gul Rahman, Shaukat Ali and Joonkyung Jang*

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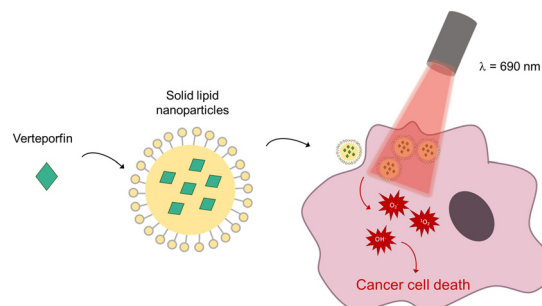
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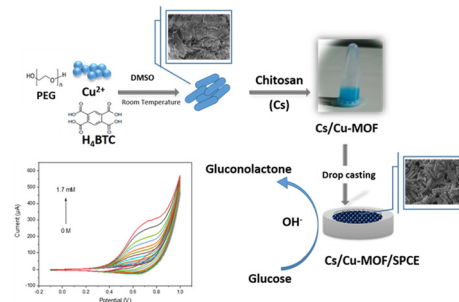
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Non-enzymatic amperometric glucose sensing by novel Cu-MOF synthesized at room temperature

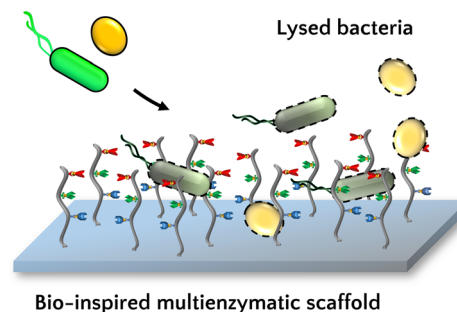
Sondes Guesmi, Kaveh Moulaei, Viviana Bressi, Hamza Kahri, Amani Khaskhoussi, Claudia Espro, Houcine Barhoumi and Giovanni Neri*



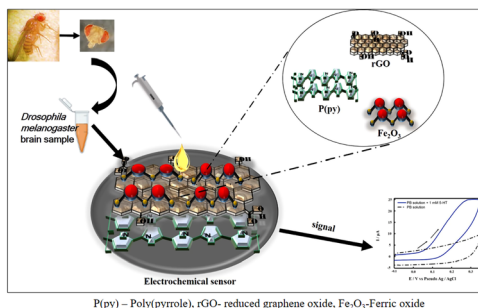
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Simultaneous enzyme grafting on bio-inspired scaffolds for antibacterial protection

Baptiste Arbez, Chloé Retourney, Fabienne Quilès, Gregory Francius, Henri-Pierre Fierobe and Sofiane El-Kirat-Chatel*



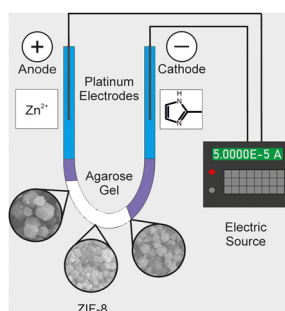
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An iron(III) oxide-anchored conductive polymer–graphene ternary nanocomposite decorated disposable paper electrode for non-enzymatic detection of serotonin

Sharmila Prashanth, Raifa Abdul Aziz, Shamprasad Varija Raghu, Yoon-Bo Shim, K. Sudhakara Prasad* and Airody Vasudeva Adhikari*

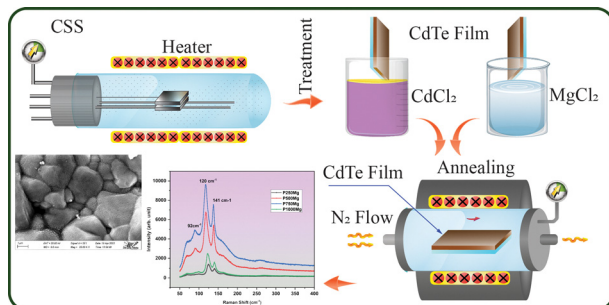
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Synthesis of zeolitic imidazolate framework-8 using an electric field in a gelled medium

Norbert Németh, Gábor Holló, Nadia Valletti, Szabolcs Farkas, Brigitta Dúzs, Ákos Kukovecz, Gábor Schusztter, István Szalai, Federico Rossi and István Lagzi*

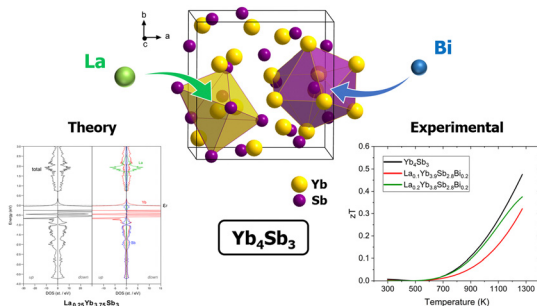
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Property enhancement of a close-spaced sublimated CdTe thin film by a post-growth activation step with CdCl₂ and MgCl₂

Afrina Sharmin, Syed Shafquat Mahmood, Munira Sultana, Md Aftab Ali Shaikh and Muhammad Shahriar Bashar*

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Advancing very high temperature thermoelectric performance of Yb₄Sb₃ through dual-substitutions: a combined experimental and theoretical study

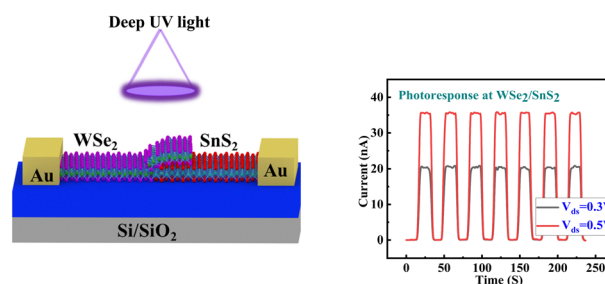
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Gate-controlled rectification and broadband photodetection in a P–N diode based on TMDC heterostructures

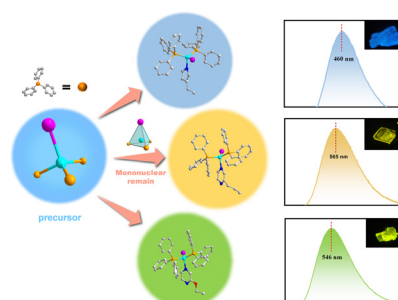
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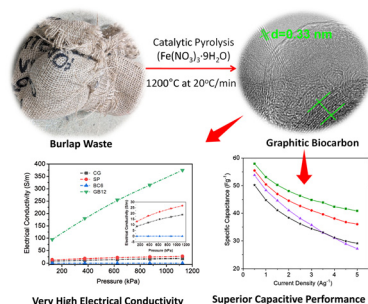
Yi Lv, Jing Yang, Haibo Li, Wei Liu* and Gangfeng Ouyang*



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Highly conductive biocarbon nanostructures from burlap waste as sustainable additives for supercapacitor electrodes

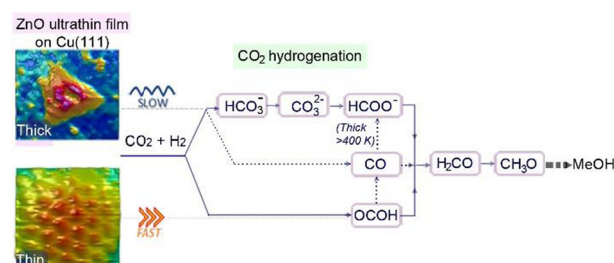
Haftom Weldekidan, Singaravelu Vivekanandhan, Neelima Tripathi, Amar Mohanty* and Manjusri Misra



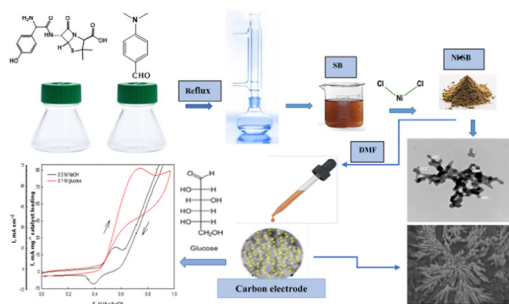
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Zinc oxide–copper model nanocatalysts for CO₂ hydrogenation: morphology and interface effects

Sonia Hadaoui, Hang Liu, Zhang Lei, Sébastien Lebègue, Rabah Benbalagh, Alexa Courty* and Ahmed Naitabdi*



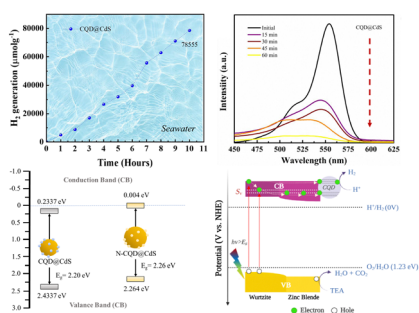
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A novel Ni–Schiff base complex for motivating glucose electrooxidation in alkaline solutions

M. A. Sultan,* Safaa S. Hassan, K. A. Omran and H. B. Hassan

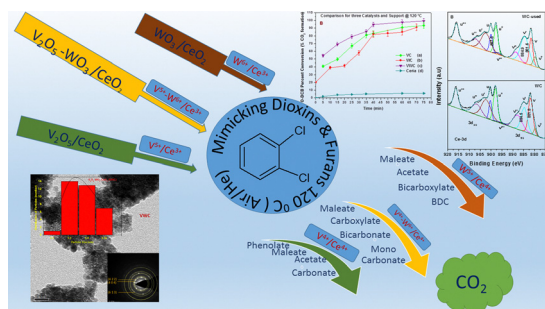
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Synergistic enhancement of seawater hydrogen generation *via* sulfur vacancy enriched and phases engineered CQD loaded CdS photocatalyst

Bishal Kumar Nahak and Fan Gang Tseng*

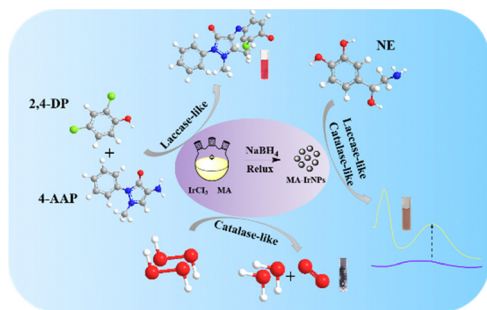
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Thermal catalytic mineralization of *ortho*-dichlorobenzene at low temperature: an *in situ* FT-IR and XPS mechanistic investigation

Adarsh Kumar, Deepak Tyagi, Salil Varma, Hushan Chand, V. Krishnan, K. Bhattacharyya* and A. K. Tyagi*

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Malic acid-coated iridium nanoparticle-induced cascade enzymatic reactions for norepinephrine detection

Xuan Chen, Lin Zhou, Zhanghong Guo and Qijun Song*



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Unlocking OER catalytic potential and chiral Fe_3O_4 film as a game-changer for electrochemical water oxidation pathway and by-product control

Wenyan Zhang,* Chaoqun Jiang, Hangmin Guan, Yuanyuan Wang, Yingfei Hu, Wei Wang, Wenjie Tian and Lingyun Hao

