

Materials Advances

An open access journal publishing across the breadth of materials science

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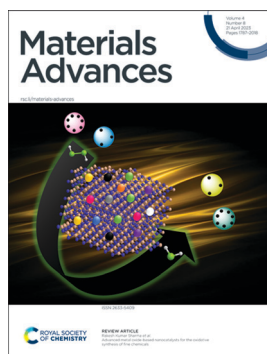
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Cover

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Inside cover

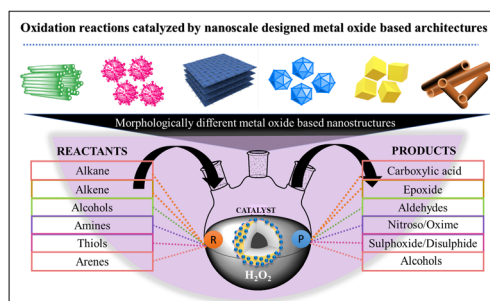
See Rakesh Kumar Sharma *et al.*, pp. 1795–1830. Image reproduced by permission of Rakesh Kumar Sharma from *Mater. Adv.*, 2023, 4, 1795.

REVIEWS

1795

Advanced metal oxide-based nanocatalysts for the oxidative synthesis of fine chemicals

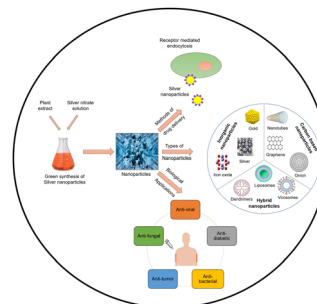
Rakesh Kumar Sharma,* Rakeshwar Bandichhor, Vishwesh Mishra, Shivani Sharma, Sneha Yadav, Shilpa Mehta, Bhavya Arora, Pooja Rana, Sriparna Dutta and Kanika Solanki



1831

Green synthesis of silver nanoparticles: methods, biological applications, delivery and toxicity

Vidyasagar, Ritu Raj Patel, Sudhir Kumar Singh and Meenakshi Singh*



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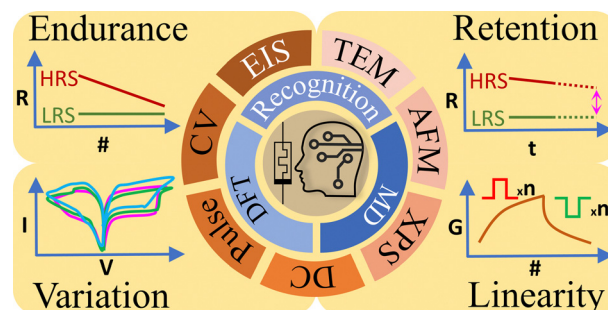


REVIEWS

1850

Enhancing memristor fundamentals through instrumental characterization and understanding reliability issues

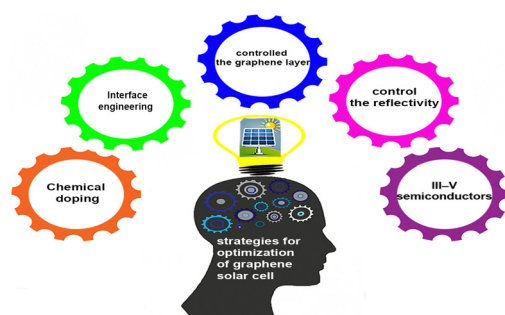
Fei Qin, Yuxuan Zhang, Han Wook Song and Sunghwan Lee*



1876

Rational and key strategies toward enhancing the performance of graphene/silicon solar cells

Parisa Fallahzad

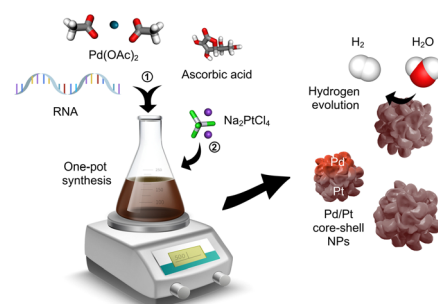


COMMUNICATION

1900

Green one-pot synthesis of bimetallic Pd–Pt nanospheres using biomolecules with enhanced catalytic activity for hydrogen evolution reactions

Fuat Topuz,* Bhushan Patil and Tamer Uyar*

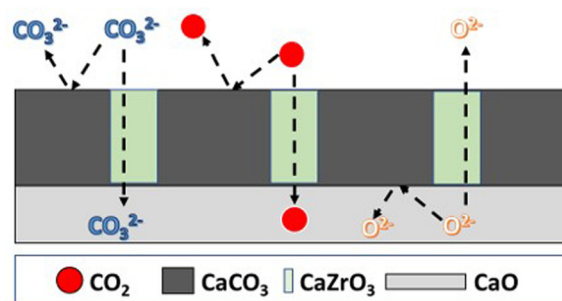


PAPERS

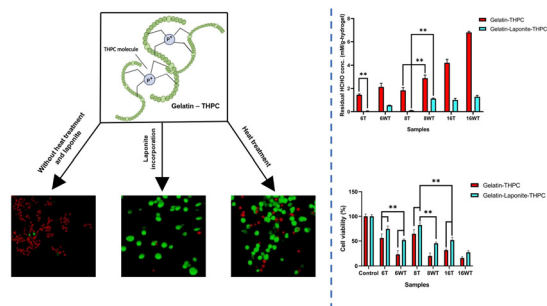
1905

Upcycling natural Limestone waste for thermochemical energy storage by utilising tailored CaZrO₃ nanoadditives

Rehan Anwar, Jan Navrátil, Rajani K. Vijayaraghavan, Patrick J. McNally, Michal Otyepka, Piotr Błoński and M. Veronica Sofianos*



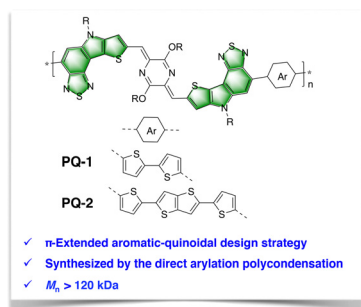
1916



Development of cytocompatible protein-based hydrogels crosslinked using tetrakis(hydroxymethyl)phosphonium chloride

Jatin Jawhir Pandit, Archita Shrivastava, Tanmay Bharadwaj and Devendra Verma*

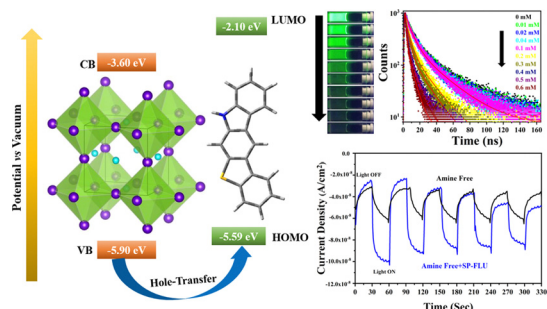
1927



6*H*-[1,2,5]Thiadiazolo[3,4-*e*]thieno[3,2-*b*]indole-flanked *para*-azaquinodimethane based aromatic-quinoidal polymer semiconductors with high molecular weights synthesized *via* direct arylation polycondensation

Yufa Xiao, Huajie Fu, Zefeng Li, Yingxuan Zheng, Ping Deng,* Yanlian Lei* and Yan Yu*

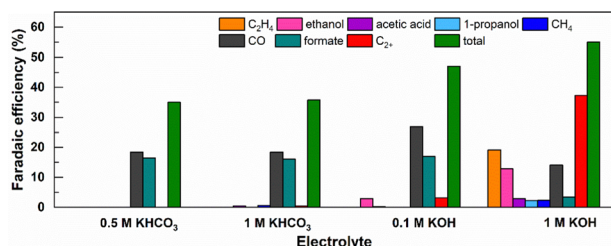
1935



Surface engineering of CsPbBr₃ perovskite nanocrystals: hole transfer dynamics and enhanced photocurrent response using a novel organic molecule

D. Venkateswarlu, T. Swetha, Syed Akhil, Manoj Palabathuni, Nimai Mishra and Surya Prakash Singh*

1941



Control of evolution of porous copper-based metal-organic materials for electroreduction of CO₂ to multi-carbon products

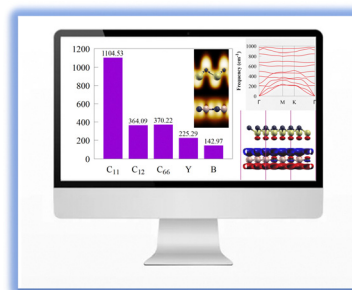
Lili Li, Lutong Shan, Alena M. Sheveleva, Meng He, Yujie Ma, Yiqi Zhou, Marek Nikiel, Laura Lopez-Odrozola, Louise S. Natrajan, Eric J. L. McInnes, Martin Schröder,* Sihai Yang* and Floriana Tuna*



1949

Rational design of 2D/2D CS/SiC van der Waals type-II heterojunctions: a visible-light-driven photocatalyst for hydrogen production

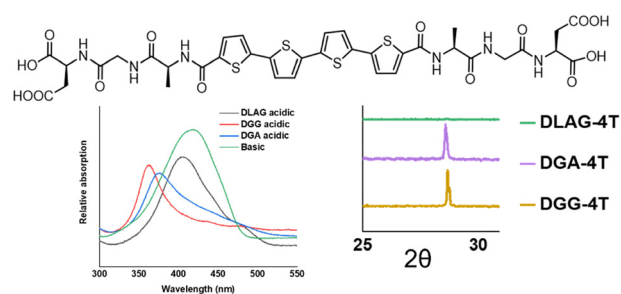
Francis Opoku,* Osei Akoto, Edward Ebow Kwaansa-Ansah, Noah Kyame Asare-Donkor and Anthony Apeke Adimado



1964

Relation among absorbance shifts, mineralization morphology, and electronic conductivity of π -peptide aggregates with different amino acid residues

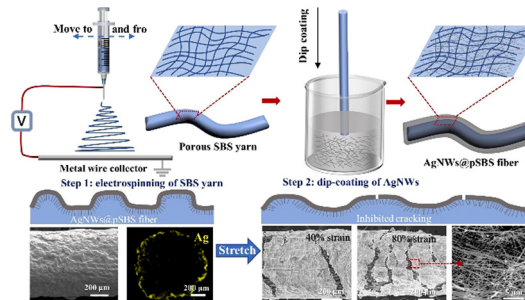
Taein Lee, Sayak Subhra Panda, Grant E. K. Hall, Yunjia Song, John D. Tovar and Howard E. Katz*



1978

An electrically stable and mechanically robust stretchable fiber conductor prepared by dip-coating silver nanowires on porous elastomer yarn

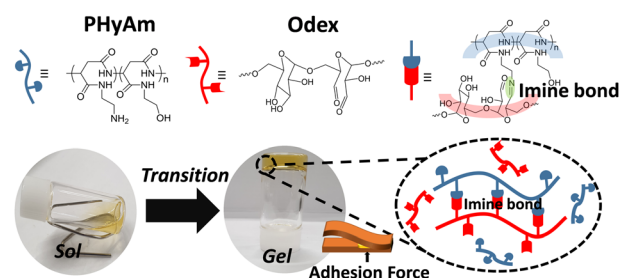
Xin He, Ningjing Zhou, Yushan Li, Puxian Xiong, Shuai Zhang* and Zhijun Ma*



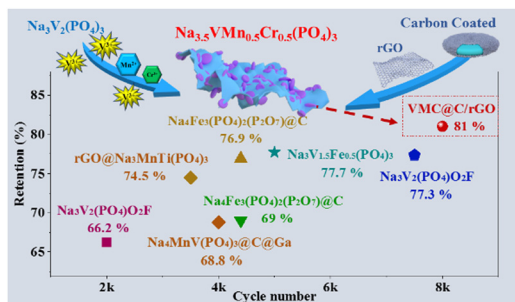
1989

Preparation of polyaspartamide-based adhesive hydrogels via Schiff base reaction with aldehyde-functionalized dextran

Hend A. Hegazy, Hwi Hyun Moon, Dong-Hyun Lee, Suk Ho Bhang, Youn-Chul Kim,* Changsik Song* and Ji-Heung Kim*



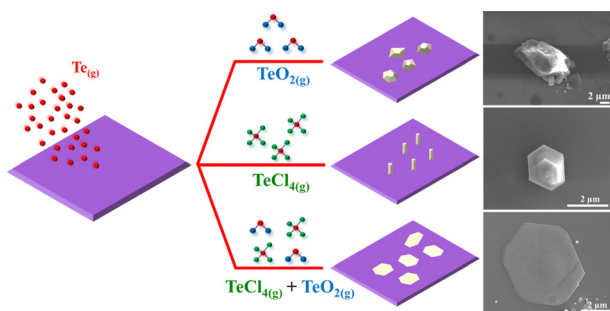
1998



Hierarchical cathode constructed by carbon coated $\text{Na}_{3.5}\text{VMn}_{0.5}\text{Cr}_{0.5}(\text{PO}_4)_3$ nanoparticles on rGO for high-capacity and long-cycle life sodium storage

Jinhao Wang, Longzhu Zhao and Fengqi Lu*

2008



Chloride-assisted synthesis of tellurene directly on SiO_2/Si substrates: growth mechanism, thermal properties, and device applications

Yi-Hsun Chan, Che-Yi Lin, Yu-Chang Chou, Alice Chinghsuan Chang, Yen-Fu Lin and Yu-Ze Chen*

