

Energy Advances

rsc.li/energy-advances

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

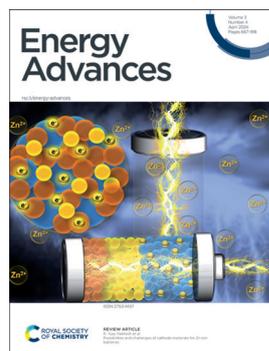
IN THIS ISSUE

ISSN 2753-1457 CODEN EANDBJ 3(4) 667-918 (2024)



Cover

See Yutaka Moritomo *et al.*, pp. 784–789. Image reproduced by permission of Yutaka Moritomo from *Energy Adv.*, 2024, 3, 784.



Inside cover

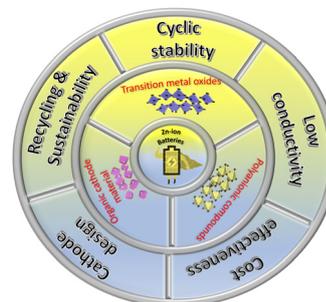
See R. Ajay Rakkesh *et al.*, pp. 676–688. Image reproduced by permission of Ajay Rakkesh Rajendran from *Energy Adv.*, 2024, 3, 676.

REVIEWS

676

Possibilities and challenges of cathode materials for Zn-ion batteries

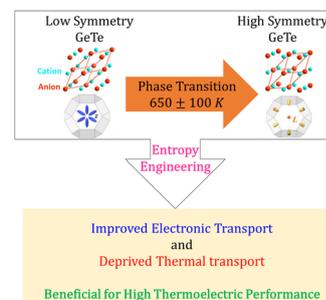
R. Ajay Rakkesh,* S. Shalini, S. Tharani, D. Durgalakshmi and S. Balakumar



689

A comprehensive review of entropy engineered GeTe: an antidote to phase transformation

Ranita Basu* and Ajay Singh



EES Catalysis

GOLD
OPEN
ACCESS

Exceptional research on energy and environmental catalysis

Open to everyone. Impactful for all

rsc.li/EESCatalysis

Fundamental questions
Elemental answers

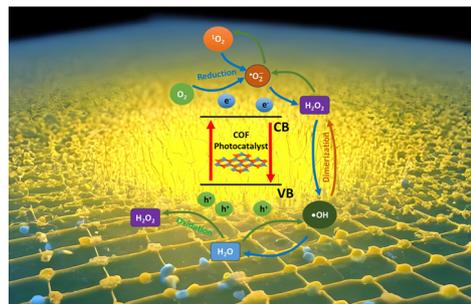


REVIEWS

712

Porous covalent organic frameworks in photocatalytic ROS-mediated processes

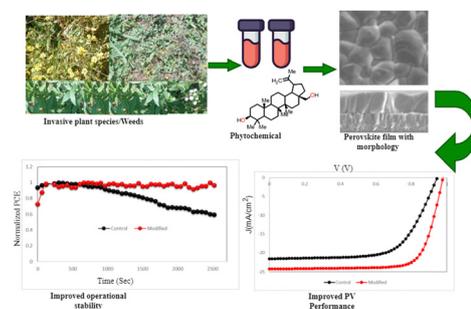
Nikolaos Karousis* and Dimitrios Tasis*



741

Recent trends on the application of phytochemical-based compounds as additives in the fabrication of perovskite solar cells

Naomy Chepngetich, Gloria M. Mumbi, Getnet Meheretu M., Koeh K. Richard,* Geoffrey K. Yegon, Sarah C. Chepkwony, Charles Rono K., Dahiru Sanni, Abdulhakeem Bello and Esidor Ntsoenzok

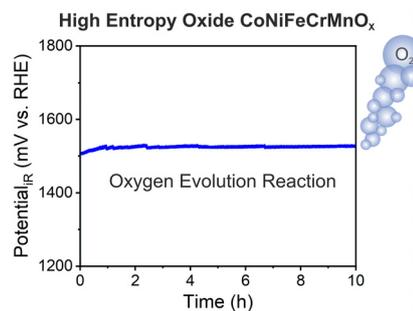


COMMUNICATIONS

765

Fabrication of nanocrystalline high-entropy oxide CoNiFeCrMnO_x thin film electrodes by dip-coating for oxygen evolution electrocatalysis

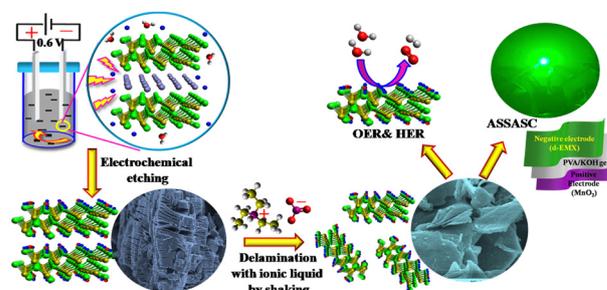
Qingyang Wu, Achim Alkemper, Stefan Lauterbach, Jan P. Hofmann and Marcus Einert*



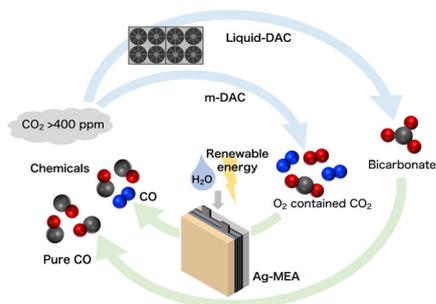
774

A quick and effective strategy for the synthesis of $\text{Ti}_3\text{C}_2\text{T}_x$ via electrochemical method

Shrabani De, Sourav Acharya, Satyanarayan Sahoo and Ganesh Chandra Nayak*



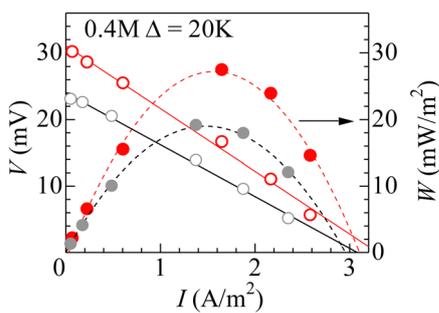
778



A membrane electrode assembly-type cell designed for selective CO production from bicarbonate electrolyte and air containing CO₂ mixed gas

Akina Yoshizawa, Manabu Higashi, Akihiko Anzai and Miho Yamauchi*

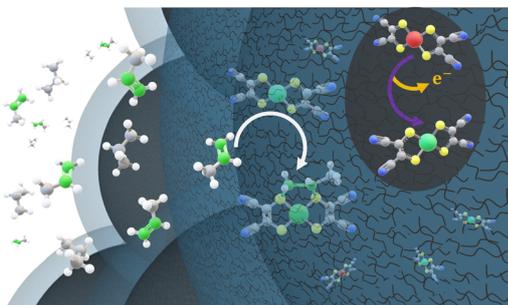
784



Precipitation enhancement of liquid thermoelectric conversion with Fe(ClO₄)₂/Fe(ClO₄)₃ dissolved in DMF

Akihiro Wake, Dai Inoue and Yutaka Moritomo*

790

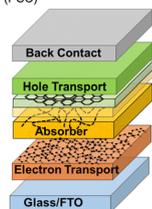


Electrochemically modulated separation of olefin–paraffin gas mixtures in membrane electrode assemblies

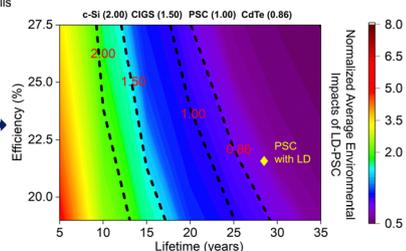
Toshihiro Akashige, Adlai B. Katzenberg, Daniel M. Frey, Debdyuti Mukherjee, César A. Urbina Blanco, Brian Chen, Yoshiyuki Okamoto and Miguel A. Modestino*

800

Integration of lower dimensional (LD) materials into hole transport, absorber, and electron transport layers of perovskite solar cells (PSC)



Improved environmental performance of LD materials integrated PSC compared to crystalline silicon, CIGS, and CdTe PV technologies.



Life cycle assessment of low-dimensional materials for perovskite photovoltaic cells

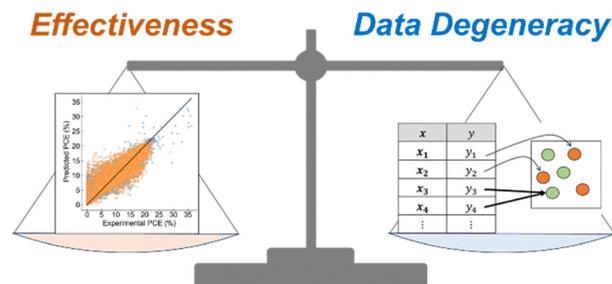
Achyuth Ravilla, Carlo A. R. Perini, Juan-Pablo Correa-Baena, Anita W. Y. Ho-Baillie and Ilke Celik*



812

Effectiveness and limitation of the performance prediction of perovskite solar cells by process informatics

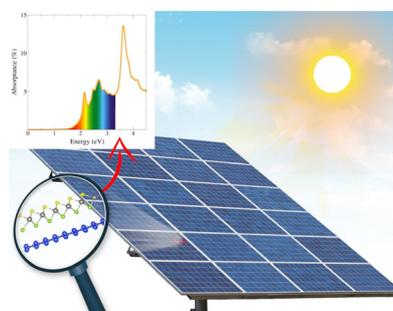
Ryo Fukasawa, Toru Asahi and Takuya Taniguchi*



821

Optical properties enhancement via WSSe/silicene solar cell junctions

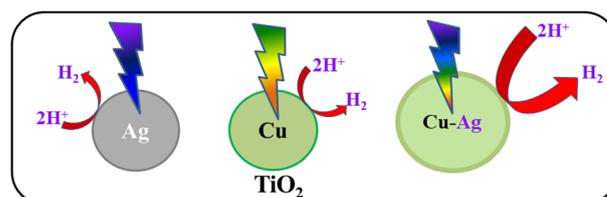
Renan Narciso Pedrosa,* Cesar E. P. Villegas, A. R. Rocha, Rodrigo G. Amorim and Wanderlã L. Scopel



829

Bimetallic and plasmonic Ag and Cu integrated TiO₂ thin films for enhanced solar hydrogen production in direct sunlight

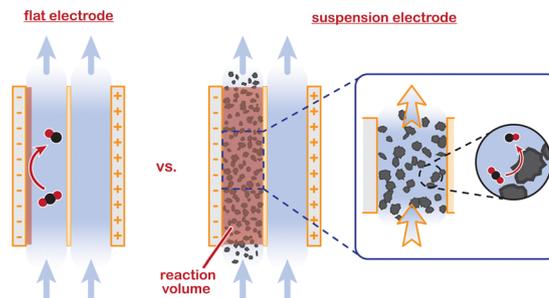
Sunesh S. Mani, Sivaraj Rajendran, Pushkaran S. Arun, Aparna Vijaykumar, Thomas Mathew* and Chinnakonda S. Gopinath*



841

Practical potential of suspension electrodes for enhanced limiting currents in electrochemical CO₂ reduction

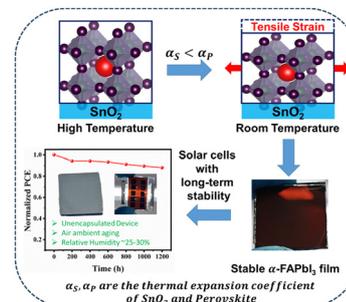
Nathalie E. G. Ligthart, Gerard Prats Vergel, Johan T. Padding and David A. Vermaas*



894

Stress-induced stabilization of the photoactive FAPbI₃ phase under ambient conditions without using an additive approach

Shivam Porwal, Nitin Kumar Bansal, Subrata Ghosh and Trilok Singh*



904

Oxygen-rich hierarchical porous carbon nanosheets derived from the KOH/KNO₃ co-activation treatment of soybean straw for high-performance supercapacitors

Yunxuan Li, Chuixiong Kong, Zurong Du,* Ju Zhang, Xuan Qin, Jiwei Zhang, Chulin Li, Yang Jin and Shenggao Wang*

