

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 4(5) 591-710 (2025)



Cover

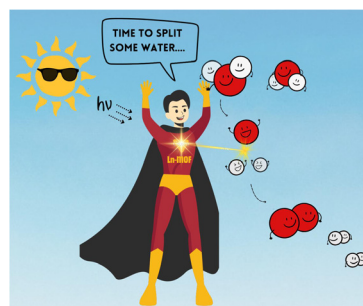
See Abdelrahman Mostafa,
Matteo C. Romano *et al.*,
pp. 624–638.
Image reproduced by
permission of
Lia Tagliavini from
Energy Adv., 2025, 4, 624.

REVIEW

597

Recent advances in lanthanide-based metal–organic frameworks for photocatalytic hydrogen evolution applications

Peter Danita Patricia and Rajadurai Vijay Solomon*

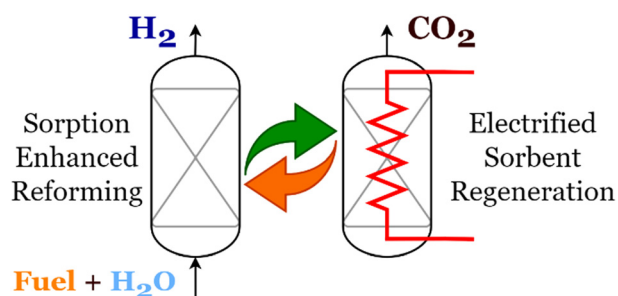


PAPERS

624

A novel electrified sorption enhanced reforming process for blue hydrogen production

Abdelrahman Mostafa,* Alessandra Beretta,
Gianpiero Groppi, Enrico Tronconi and
Matteo C. Romano*



Royal Society of Chemistry approved training courses

Explore your options.
Develop your skills.
Discover learning
that suits you.

**Courses in the classroom,
the lab, or online**

Find something for every
stage of your professional
development. Search our
database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit rsc.li/cpd-training



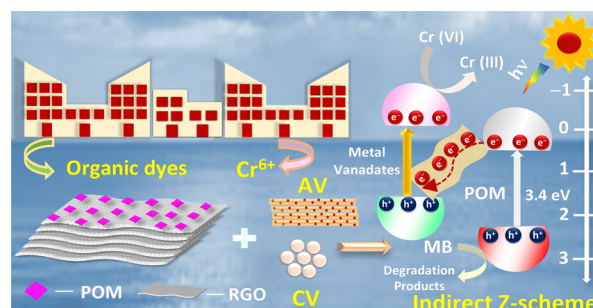
**SAVE
10%**



639

Polyoxometalate-loaded reduced graphene oxide-modified metal vanadate catalysts for photoredox reactions through an indirect Z-scheme mechanism

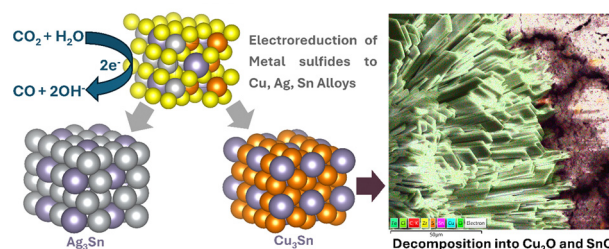
Soumita Samajdar, Gajiram Murmu, Maitrayee Biswas, Srikrishna Manna, Sumit Saha* and Srabanti Ghosh*



657

In situ generation of Cu- and Ag–Sn alloys from metal sulfides for CO₂ reduction

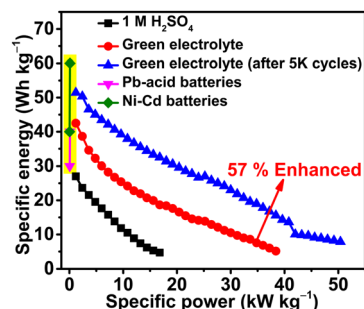
Sebastian A. Sanden, Anne Schmidt, Miłosz Kożusznik, Yannik Haver, Yannick Weidemann, Kevinjeorjios Pellumbi, Sven Rösler, Kai Junge Puring, Andrzej Mikuta and Ulf-Peter Apfel*



666

Durable, rate-capable and high-energy hybrid supercapacitor from PANI/ZnO/SnO₂ nanocomposite with zero-waste electrolyte approach

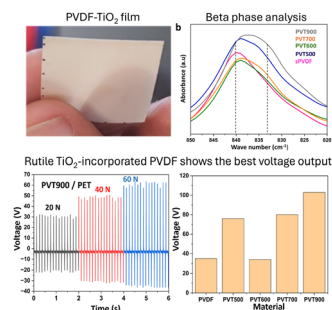
Aranganathan Viswanathan* and Vanchiappan Aravindan*

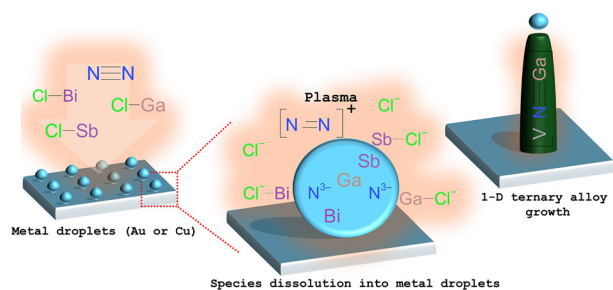


683

Electroactive phase dependent triboelectric nanogenerator performance of PVDF–TiO₂ composites

Irthasa Aazem, Charchit Kumar, Ryan Walden, Aswathy Babu, Amit Goswami, Steven J. Hinder, Gaurav Khandelwal, Daniel M. Mulvihill, Gerard McGranaghan and Suresh C. Pillai*





Dilute anion alloyed III-nitride nanowires for photoelectrochemical water splitting

S. J. Calero-Barney, A. C. Nouduri, A. N. Andriotis, M. Menon and M. K. Sunkara*

