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ISSN 2753-1457 CODEN EANDBJ 3(10) 2419-2660 (2024)



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Inside cover

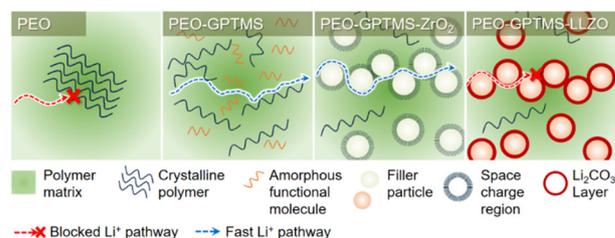
See Ghazaleh Gharib, Ali Koşar *et al.*, pp. 2439–2452. Image reproduced by permission of Zülal Mugañlı, İsmail Bütün, Ghazaleh Gharib and Ali Koşar from *Energy Adv.*, 2024, 3, 2439.

PAPERS

2428

Ion-conductive vs. non-ion-conductive ceramic fillers in silane-linked polyethylene oxide-based composite polymer electrolytes with high room-temperature ionic conductivity

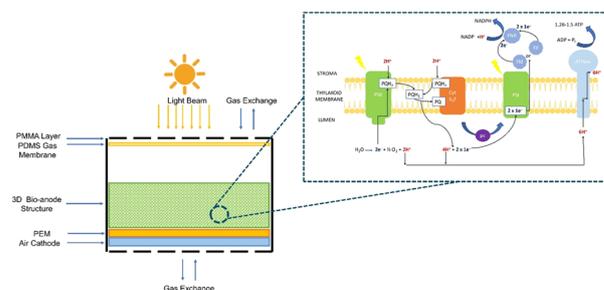
Eun Ju Jeon, Sharif Haidar, Laura Helmers, Arno Kwade and Georg Garnweitner*



2439

Electricity generation using a microbial 3D bio-anode embedded bio-photovoltaic cell in a microfluidic chamber

Zülal Mugañlı, İsmail Bütün, Ghazaleh Gharib* and Ali Koşar*



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Fundamental questions
Elemental answers

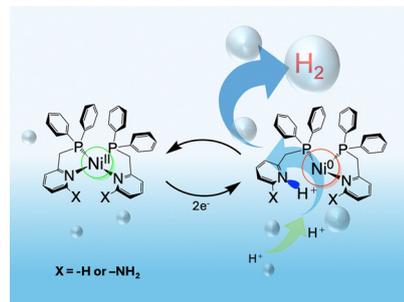


PAPERS

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Electrochemical hydrogen generation by a four-coordinate square-planar Ni(II) complex with an N₂P₂-type ligand

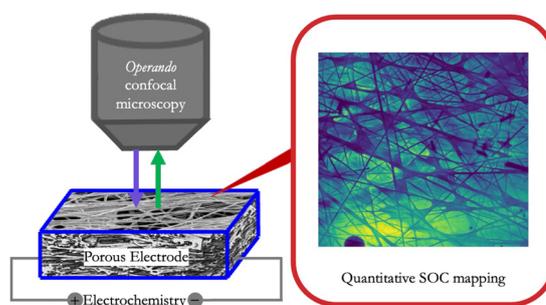
Hidenori Miyake, Satomi Hirasawa, Yurika Uno, Kenichi Nakao, Takuma Kato, Yuko Wasada-Tsutsui, Yoshikuni Hara, Tomohiro Ozawa, Tomohiko Inomata and Hideki Masuda*



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Quantitative local state of charge mapping by *operando* electrochemical fluorescence microscopy in porous electrodes

Anton M. Graf, Thomas Cochard, Kiana Amini, Michael S. Emanuel, Shmuel M. Rubinstein* and Michael J. Aziz*

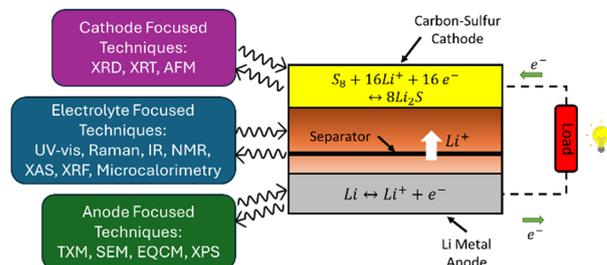


REVIEW

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Recent advances in *in situ/operando* characterization of lithium-sulfur batteries

Thomas J. Leckie, Stuart D. Robertson and Edward Brightman*

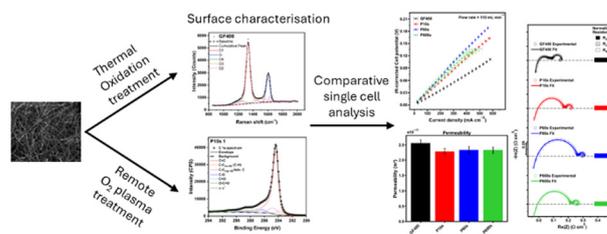


PAPERS

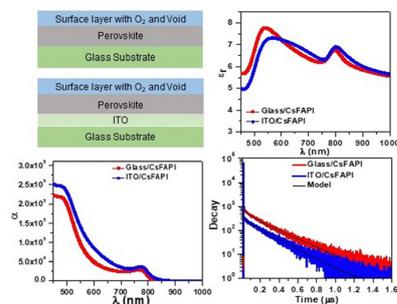
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Analysis of the impact of remote oxygen plasma treatment on the surface chemistry and electrochemical properties of graphite felt electrodes for redox flow batteries

L. Mauricio Murillo-Herrera,* Carlos J. Mingoes, J. Obrero-Pérez, Juan R. Sánchez-Valencia, Michael W. Thielke, Ángel Barranco and Ana B. Jorge Sobrido*



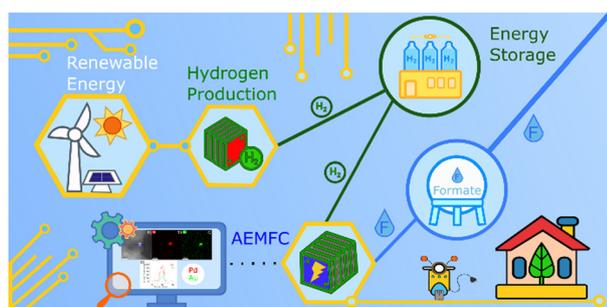
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Optical constants manipulation of formamidinium lead iodide perovskites: ellipsometric and spectroscopic twiggig

Mohd Taukeer Khan, Muhammed P. U. Haris, Baraa Alhourri, Samrana Kazim and Shahzada Ahmad*

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Direct formate anion exchange membrane fuel cells with a PdAu bimetallic nanoparticle anode electrocatalyst obtained by metal vapor synthesis

Carolina Castello, Tailor Peruzzolo,* Marco Bellini, Maria V. Pagliaro, Francesco Bartoli, Enrico Berretti, Lorenzo Poggini, Emanuela Pitzalis, Claudio Evangelisti* and Hamish A. Miller*

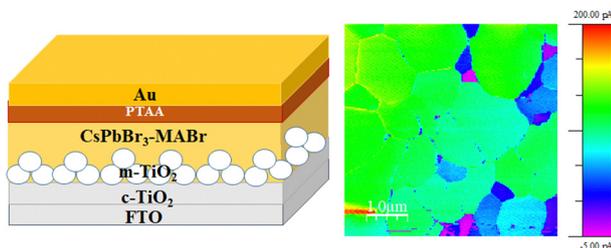
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Effect of process parameters on woody biomass fractionation in a methanol/water mixture in a semi-flow reactor

Yilin Yao, Eiji Minami* and Haruo Kawamoto

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Highly conductive flat grains of cesium lead bromide perovskites via additive engineering with methylammonium bromide

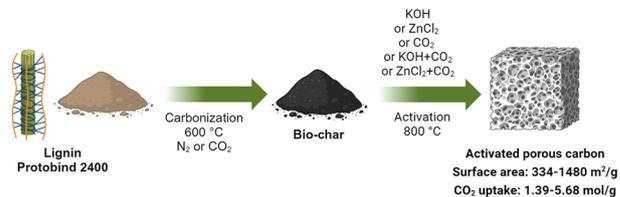
Chandra Shakher Pathak,* Deepak Aloysius, Satyajit Gupta,* Sabyasachi Mukhopadhyay and Eran Edri



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Sustainable synthesis of activated porous carbon from lignin for enhanced CO₂ capture: a comparative study of physicochemical activation routes

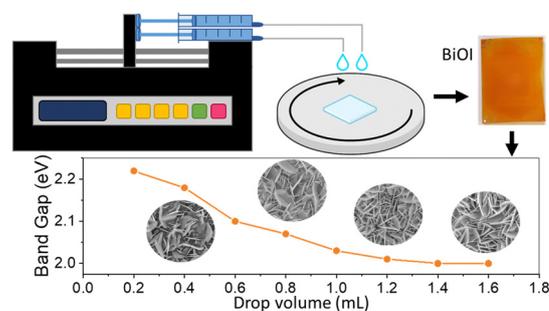
Himanshu Patel, Amar Mohanty and Manjusri Misra*



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Development of an automated SILAR method for the sustainable fabrication of BiOI/TiO₂ photoanodes

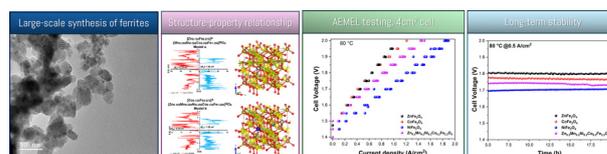
Roberto Altieri, Fabian Schmitz, Manuel Schenker, Felix Boll, Luca Rebecchi, Pascal Schweitzer, Matteo Crisci, Ilka Kriegel, Bernd Smarsly, Derck Schlettwein, Francesco Lamberti, Teresa Gatti* and Mengjiao Wang*



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Anion exchange membrane water electrolysis over superparamagnetic ferrites

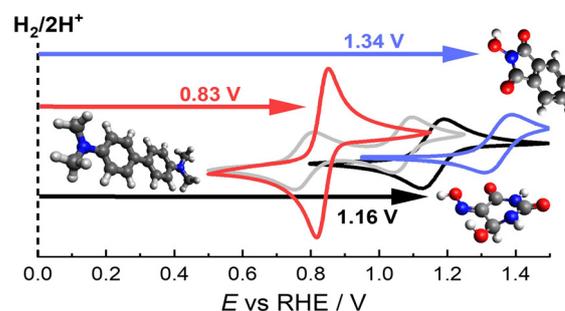
Tiago Fernandes, Ramsundar Rani Mohan, Laura Donk, Wei Chen, Chiara Biz, Mauro Fianchini, Saeed Kamali, Siavash Mohammad Alizadeh, Anna Kitayev, Aviv Ashdot, Miles Page, Laura M. Salonen, Sebastian Kopp, Ervin Tal Gutelmacher, José Gracia, Marta Costa Figueiredo and Yury V. Kolen'ko*



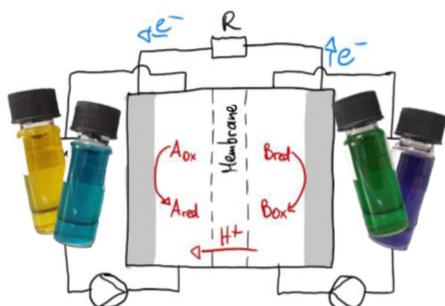
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Electrochemical and spectroscopic characterisation of organic molecules with high positive redox potentials for energy storage in aqueous flow cells

Christopher G. Cannon, Peter A. A. Klusener, Nigel P. Brandon and Anthony R. J. Kucernak*



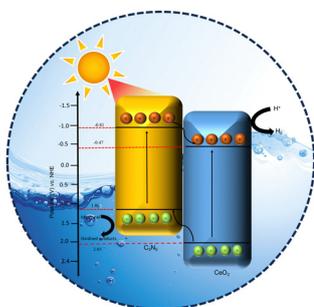
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Open circuit voltage of an all-vanadium redox flow battery as a function of the state of charge obtained from UV-Vis spectroscopy

Jana Hei and Maximilian Kohns*

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Construction of organic–inorganic hybrid composites derived from C₃N₅ incorporated with CeO₂ for enhanced photocatalytic hydrogen evolution

Ashil Augustin, Manova Santhosh Yesupatham, M. D. Dhileepan, Sanguk Son, Ezhakudiyar Ravindran, Bernardshaw Neppolian, Hyung-il Kim* and Karthikeyan Sekar*

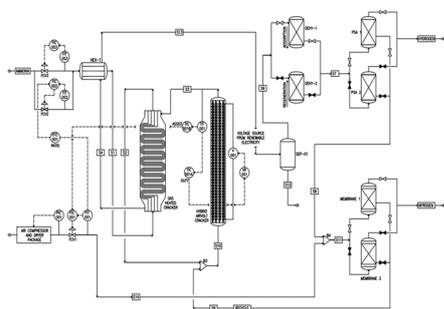
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Sustainable fermentable sugar production using a glass fiber supported gallium–molybdenum photocatalyst towards bioethanol production: LCA analysis

Rajat Chakraborty,* Sourav Barman and Aritro Sarkar

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Novel carbon-free innovation in centralised ammonia cracking for a sustainable hydrogen economy: the hybrid air-volt ammonia cracker (HAVAC) process

Chidozie Eluwah and Paul S. Fennell



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Multi-metal (Fe, Cu, and Zn) coordinated hollow porous dodecahedron nanocage catalyst for oxygen reduction in Zn–air batteries

Yanan Pan, Qi Yang, Xiaoying Liu, Fan Qiu, Junjie Chen, Mengdie Yang, Yang Fan, Haiou Song and Shupeng Zhang*

