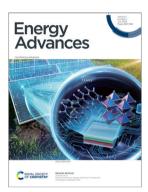
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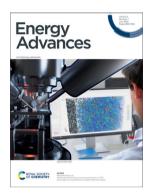
IN THIS ISSUE

ISSN 2753-1457 CODEN EANDBJ 2(7) 889-1066 (2023)



Cover

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Inside cover

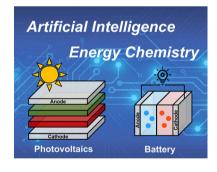
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REVIEWS

896

Machine learning in energy chemistry: introduction, challenges and perspectives

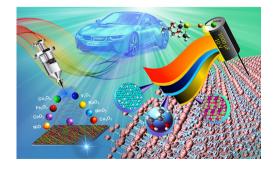
Yuzhi Xu, Jiankai Ge* and Cheng-Wei Ju*



922

Recent advances in electrospun fibers based on transition metal oxides for supercapacitor applications: a review

Abhilash Pullanchiyodan, Roshny Joy, Pranav Sreeram, Leya Rose Raphael, Akhila Das, Neethu T. M. Balakrishnan, Jou-Hyon Ahn, Alexandru Vlad, Sivaramapanicker Sreejith* and Prasanth Raghavan*



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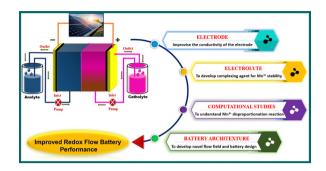
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REVIEWS

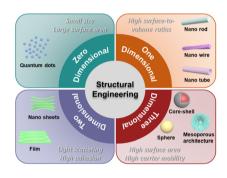
Energy storage mechanism, advancement, challenges, and perspectives on vivid manganese redox couples

R. Naresh, Vilas G. Pol* and P. Ragupathy*



Nanostructured TiO₂ for improving the solar-to-hydrogen conversion efficiency

Cong Wang and Mohamed Nawfal Ghazzal*



PAPERS

Standardized microstructure characterization of SOC electrodes as a key element for Digital Materials Design

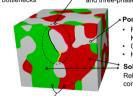
Philip Marmet,* Lorenz Holzer, Thomas Hocker, Gernot K. Boiger, Holger Bausinger, Andreas Mai, Mathias Fingerle, Sarah Reeb, Dominik Michel and Joseph M. Brader

SOC microstructure characterization

Morphological analysis for all three phases Contiguous and original volume fractions

mean radii of bulges and bottlenecks

- Constrictivity
 Tortuosity analysis Covariance function
- Predicted M-factor



Interface properties Volume specific interface area and three-phase boundary length

- Pore-phase properties Knudsen)
- Characteristic pore diameter Hydraulic radius, permeability

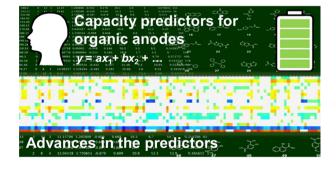
Solid single-phase properties Relative single-phase conductivities

Solid-phase composite properties Relative ionic and electronic composite conductivities

1014

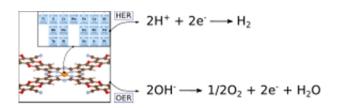
Capacity-prediction models for organic anode-active materials of lithium-ion batteries: advances in predictors using small data

Haruka Tobita, Yuki Namiuchi, Takumi Komura, Hiroaki Imai, Koki Obinata, Masato Okada, Yasuhiko Igarashi* and Yuya Oaki*



PAPERS

1022



Hydrogen and oxygen evolution reactions on single atom catalysts stabilized by a covalent organic framework

Ilaria Barlocco, Giovanni Di Liberto* and Gianfranco Pacchioni

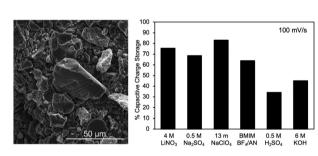
1030



A chlorinated polythiophene-based polymer as a dopant-free hole transport material in perovskite solar cells

Kakaraparthi Kranthiraja, Ryosuke Nishikubo and Akinori Saeki*

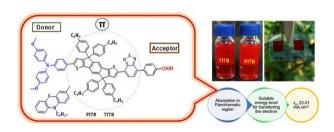
1036



Ultra-low cost supercapacitors from coal char: effect of electrolyte on double layer capacitance

Zahra Karimi, Jaron Moon, Joshua Malzahn, Eric Eddings and Roseanne Warren*

1045



 $D-\pi-A$ organic dyes derived from the indacenodithiophene core moiety for efficient dye-sensitized solar cells

Afzal Siddiqui, Nanaji Islavath, T. Swetha and Surya Prakash Singh*

PAPERS

1051

Photocatalytic activity and pH-induced morphological changes of ZnO/CuO nanocomposites prepared by chemical bath precipitation

Nargol Jalali, Amirhossein Rakhsha, Mohammad Nami, Fereshteh Rashchi* and Valmor Roberto Mastelaro

