MRS JOURNAL HIGHLIGHTS

mrs.org/publications-news

Tension gradient self-assembly to facilely fabricate polytetrafluoroethylene coatings for oil-water separation

Dong Feng, Ding Weng, Chaolang Chen, Jiadao Wang

The surface-wetting properties of surfaces are dynamic in nature and, in particular, they can lead to self-cleaning properties. In this case, oil-water separation devices can take advantage of gradient properties in enabling higher efficiencies in separation processes.
https://doi.org/10.1557/mrc.2019.65

Renewable supercapacitor based on cellulose/carbon nanotubes/[Bmim][NTf_2] ionic liquid

Bruno S. Noremberg, Ricardo M. Silva, Oscar G. Paniz, José H. Alano, Jairton Dupont, Neftali L.V. Carreño

Carbon-based materials and cellulose enable the preparation of high-performance supercapacitors. In particular, nanocomposites generated with the incorporation of ionic liquids yield high charge/discharge cycles out of these renewable materials.
https://doi.org/10.1557/mrc.2019.34

Optical microcrack sensor paints inspired by luminescent oxygen quenching phenomenon

Tsuyoshi Hyakutake, Hiroyuki Nitta, Itaru Nishizaki

Visualization of failure is often an after-the-fact phenomenon in materials. By using optical microcrack-sensing mechanisms, it is possible to employ smart paints for advanced detection of failure mechanisms. https://doi.org/10.1557/mrc.2019.38

Energy storage will play a critical role in modernizing energy grids, as they will allow a greater penetration of renewable energy and will perform applications that better match supply with demand. Applying storage technology is a business decision that can be heavily influenced by state and federal policies. The current volume of *MRS Energy & Sustainability* features critical and balanced views from authors representing academia, industry, and the public utilities sector.

Energy transformation and energy storage in the Midwest and beyond

Ellen Anderson
https://doi.org/10.1557/mre.2019.6

Storage: Jurisdictional conflicts and state options

Nancy Lange, Ted Thomas
https://doi.org/10.1557/mre.2019.9

FERC Order 841 levels the playing field for energy storage

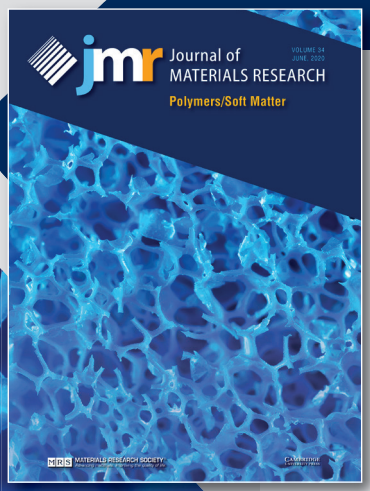
Rao Konidena
https://doi.org/10.1557/mre.2019.5

MRS MATERIALS RESEARCH SOCIETY®

CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1557/mrs.2019.192 Published online by Cambridge University Press

jmr Journal of MATERIALS RESEARCH



CALL FOR PAPERS

Call for Papers: Polymers/Soft Matter

Our understanding of soft matter, and composites that include soft matter, is advancing rapidly. Such materials include nanostructure materials, functional materials, and dielectric, thermal, and structural materials. Applications for these materials have been growing across a wide spectrum, in fields such as biomedical applications, energy storage, transmission, and conversion, lighting, and more. This is due in part to signficant advances in characterization, synthesis, processing, and computation. *Journal of Materials Research (JMR)* focuses on experimental and computation papers that report on the fundamental relationships between molecular structure and properties, morphology, and properties for both pure and hybrid materials.

Experimental or computational papers are solicited in the following areas:

- New polymers with tailored molecular structure to optimize properties
- Fundamental understanding of the relationship between morphology and properties
- Composite interface properties and behavior
- Materials for structural applications
- Materials for medical applications
- Materials for energy generation and transmission
- Materials for lighting applications

JMR publishes the latest advances about the creation of new materials and materials with novel functionalities, fundamental understanding of processes that control the response of materials, and development of materials with significant performance improvements relative to state-of-the-art materials. *JMR* welcomes papers that highlight novel processing techniques, the application and development of new analytical tools, and interpretation of fundamental materials science to achieve enhanced materials properties and uses.

ASSOCIATE EDITOR FOR POLYMERIC MATERIALS

Linda S. Schadler, The University of Vermont, USA

EDITOR-IN-CHIEF

Gary L. Messing, The Pennsylvania State University, USA

MANUSCRIPT SUBMISSION

To be considered for the journal, new and previously unpublished results significant to the development of this field should be presented. The manuscripts must be submitted via the *JMR* electronic submission system. **Note our manuscript submission minimum length of 3250 words, excluding figures, captions, and references, with at least 6 and no more than 10 figures and tables combined. Review articles may be longer but must be pre-approved by proposal to the Editor-in-Chief via jmr@mrs.org. The proposal form and author instructions may be found at mrs.org/jmr-instructions.**

jmr@mrs.org

Please direct questions to jmr@mrs.org

https://doi.org/10.1557/mrs.2019.192 Published online by Cambridge University Press