

MRS **Advances**

# Energy and Sustainability

<https://doi.org/10.1557/adv.2018.381> Published online by Cambridge University Press

# MRS Advances: Energy and Sustainability

## Associate Editors:

Elizabeth L. Fleischer, *Materials Research Society*

Marian Kennedy, *Clemson University*

## Principal Editors:

Rita Toth, *Swiss Federal Laboratories for Materials Science and Technology (EMPA), Switzerland*

Lan Fu, *The Australian National University, Australia*

Cengiz Ozkan, *University of California, Riverside, USA*

Haleh Ardebili, *University of Houston, USA*

Yan Wang, *Worcester Polytechnic Institute, USA*

Smagul Karazhanov, *Institute for Energy Technology (IFE), Norway*

Philip Edmondson, *Oak Ridge National Laboratory, USA*

Amy Marconnet, *Purdue University, USA*

Jonathan Cullen, *University of Cambridge, UK*

Noritaka Usami, *Nagoya University, Japan*

## MRS Advances Editorial Board:

**Editor-in-Chief:** David F. Bahr, *Purdue University*

Asa Barber, *University of Portsmouth, United Kingdom*

Meenakshi Dutt, *Rutgers University*

Elizabeth L. Fleischer, *Materials Research Society*

Marian Kennedy, *Clemson University*

Marilyn L. Minus, *Northeastern University*

Roger J. Narayan, *University of North Carolina/North Carolina State University*

Ruth Schwaiger, *Karlsruhe Institute of Technology, Germany*

Jeremy Theil, *Mountain View Energy*

## Materials Research Society Editorial Office, Warrendale, PA:

Ellen W. Kracht, *Publications Manager*

Susan Dittrich, *Journals Editorial Assistant*

Kirby L. Morris, *Journals Production Assistant*

Eileen M. Kiley, *Director of Communications*

## Disclaimer

Authors of each article appearing in this Journal are solely responsible for all contents in their article(s) including accuracy of the facts, statements, and citing resources. Facts and opinions are solely the personal statements of the respective authors and do not necessarily represent the views of the editors, the Materials Research Society, or Cambridge University Press.

*MRS Advances* (EISSN: 2059-8521) is published by Cambridge University Press, One Liberty Plaza, Floor 20, New York, NY 10006 for the Materials Research Society.

**Copyright © 2018, Materials Research Society.** All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press. Policies, request forms and contacts are available at: <http://www.cambridge.org/rights/permissions/permission.htm>. Permission to copy (for users in the USA) is available from Copyright Clearance Center at: <http://www.copyright.com>, email: [info@copyright.com](mailto:info@copyright.com).

## Purchasing Options:

**Premium Subscription-** Premium Subscription includes current subscription and one year's lease access to the full MRS Online Proceedings Library Archive for \$7,219.00 / £4,888.00 / €6,647.00. **Subscription-** Subscription with perpetual access to the content subscribed to in a given year, including three years of back-file lease access to content from the MRS Online Proceedings Library Archive. The price for a 2018 subscription is \$3,019.00 / £1,948.00 / €2,625.00. **MRS Members-** Access to *MRS Advances* is available to all MRS members without charge.

## Contact Details:

For all inquiries about pricing and access to *MRS Advances*, please get in touch via the following email addresses: [online@cambridge.org](mailto:online@cambridge.org) (for the Americas); [library.sales@cambridge.org](mailto:library.sales@cambridge.org) (for UK, Europe, and rest of world).

[cambridge.org/adv](http://cambridge.org/adv)

# CONTENTS

<b>Pulse Plating of Copper onto Gas Diffusion Layers for the Electroreduction of Carbon Dioxide . . . . .</b>	<b>1277</b>
Sujat Sen, McLain Leonard, Rajeswaran Radhakrishnan, Stephen Snyder, Brian Skinn, Dan Wang, Timothy Hall, E. Jennings Taylor, and Fikile R. Brushett	
<b>Giant Dielectric Constant in Al<sub>2</sub>O<sub>3</sub>/TiO<sub>2</sub> Multilayer Films Synthesized by Atomic Layer Deposition . . . . .</b>	<b>1285</b>
Takuji Tsujita, Yukihiro Morita, and Mikihiro Nishitani	
<b>Large Expansion of Operating Voltage Window in Polymer Based Flexible Solid State Supercapacitor . . . . .</b>	<b>1291</b>
Curtis White, Tristan Skinner, Kevin Santiago, Sangram K. Pradhan, and Messaoud Bahoura	
<b>Mineral Derived Lithium Solid Electrolyte . . . . .</b>	<b>1301</b>
Bo Wang	
<b>Phase Diagram of LiF-Li<sub>3</sub>PO<sub>4</sub> System: A New Mechanism of Heterovalent Anionic Isomorphism . . . . .</b>	<b>1309</b>
G.V. Zimina, M. Tsygankova, M. Sadykova, F.M. Spiridonov, V.V. Fomichev, and P.P. Fedorov	
<b>Amorphous LiCoO<sub>2</sub>-based Positive Electrode Active Materials with Good Formability for All-solid-state Rechargeable Batteries . . .</b>	<b>1319</b>
Kenji Nagao, Yuka Nagata, Atsushi Sakuda, Akitoshi Hayashi, and Masahiro Tatsumisago	