

MRS Advances

# Energy and Sustainability

<https://doi.org/10.1557/adv.2019.350> Published online by Cambridge University Press

# MRS Advances: Energy and Sustainability

## Associate Editor:

Marian Kennedy, *Clemson University, USA*

## Principal Editors:

Kimberly See, *California Institute of Technology, USA*

Cynthia Lundgren, *U.S. Army Research Laboratory, USA*

Jennifer Rupp, *Massachusetts Institute of Technology, USA*

Huiyuan Zhu, *Virginia Tech, USA*

Jin Suntivich, *Cornell University, USA*

Hongli Zhu, *Northeastern University, USA*

Elena Guillén, *Profactor GmbH, Austria*

Jiatao Zhang, *Beijing Institute of Technology (BIT), China*

Matthew Suss, *Technion-Israel Institute of Technology, Israel*

Carol Handwerker, *Purdue University, USA*

Jean-Christophe Gabriel, *CEA, France*

Pablo Boix, *University of Valencia, Spain*

Yuanyuan Zhou, *Brown University, USA*

Barry Thompson, *University of Southern California, USA*

Wanli Ma, *Soochow University, China*

Alex Redinger, *University of Luxembourg, Luxembourg*

Sohini Kar-Narayan, *University of Cambridge, United Kingdom*

Caofeng Pan, *Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, China*

Xudong Wang, *University of Wisconsin-Madison, USA*

## MRS Advances Editorial Board:

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

Meenakshi Dutt, *Rutgers University, USA*

Elizabeth L. Fleischer, *Materials Research Society, USA*

Marian Kennedy, *Clemson University, USA*

Marilyn L. Minus, *Northeastern University, USA*

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

Ruth Schwaiger, *Karlsruhe Institute of Technology, Germany*

Jeremy Theil, *Mountain View Energy, USA*

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

Ellen W. Kracht, *Publications Manager*

Susan Dittrich, *Journals Editorial Associate*

Kirby L. Morris, *Editorial and Production Associate*

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 © 2019, 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

## ARTICLES

- Optical Properties of Thin Films of Haycockite . . . . . 2023**  
Barys Korzun, Marin Rusu, Thomas Dittrich,  
Anatoly Galyas, and Andrey Gavrilenko
- Novel SnSb<sub>2</sub>S<sub>4</sub> Thin Films Obtained by Chemical Bath Deposition  
using Tartaric Acid as Complexing Agent for Their Application as  
Absorber in Solar Cells . . . . . 2035**  
L.A. Rodríguez-Guadarrama, I.L. Alonso-Lemus,  
J. Campos-Álvarez, and J. Escorcia-García
- Electrodeposition of Poly and Nanocrystalline Cu-In-Se Absorbers  
for Optoelectronic Devices . . . . . 2043**  
Shalini Menezes, Anura P. Samantilleke,  
Sharmila J. Menezes, Yi Mo,  
and David S. Albin
- Characterization of Thin CdTe Solar Cells with a CdSeTe Front  
Layer . . . . . 2053**  
Alexandra M. Bothwell, Jennifer A. Drayton,  
Pascal M. Jundt, and James R. Sites
- Fabrication and Performance Test of Biodegradable  
Supercapacitor . . . . . 2063**  
Hu Li, Yubo Fan, and Zhou Li