

MRS **Advances**

Characterization, Modeling and Theory

<https://doi.org/10.1557/adv.2018.542> Published online by Cambridge University Press

MRS Advances: Characterization, Modeling and Theory

Associate Editor:

Ruth Schwaiger, *Karlsruhe Institute of Technology, Germany*

Principal Editors:

Volkan Ortolan, *Purdue University, USA*
Olivier Thomas, *Aix Marseille Université, France*
Ulli Pietsch, *University of Siegen, Germany*
Ruth Schwaiger, *Karlsruhe Institute of Technology, Germany*

Robert Maass, *University of Illinois at Urbana-Champaign, USA*
Peter M. Derlet, *Paul Scherrer Institute, Switzerland*

MRS Advances Editorial Board:

Editor-in-Chief: David F. Bahr, *Purdue University, USA*
Asa Barber, *University of Portsmouth, United Kingdom*
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:

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.

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 (for the Americas); library.sales@cambridge.org (for UK, Europe, and rest of world).

cambridge.org/adv

CONTENTS

Combining Fast Imaging and Variable Temperature Studies in Atomic Force Microscopy	2705
Sergei Magonov and Shijie Wu	
Tip Induced Surface Defect migration and Conductivity Studies in Tetragonal, Rhombohedral and Mixed-phase epitaxial BiFeO₃ Thin Films	2713
M.M. Saj Mohan, M.V. Sreenath, and Ranjith Ramadurai	
Nanomechanical Characterization of Porous Materials by Atomic Force Microscopy	2719
D.L.P. Lacerda, F. Ptak, and R. Prioli	
Investigation of BMI-PF₆ Ionic Liquid/Graphite Interface Using Frequency Modulation Atomic Force Microscopy	2725
Harshal P. Mungse, Takashi Ichii, Toru Utsunomiya, and Hiroyuki Sugimura	
Characterizing Macroscopic Thermal Resistance Across Contacting Interfaces Through Local Understanding of Thermal Transport	2735
Seshu Nimmala, S. Aria Hosseini, Jackson Harter, Todd Palmer, Eric Lenz, and P. Alex Greaney	
Nanoscale Friction of Graphene	2743
F. Ptak, C.M. Almeida, and R. Prioli	
Probing Adhesion of Metallic Nanoparticles on Polymeric Fibrous and Flat Architectures	2749
Temitope Q. Aminu and David F. Bahr	