

MRS **Advances**

Electronics and Photonics

<https://doi.org/10.1557/adv.2016.607> Published online by Cambridge University Press

MRS Advances: Electronics and Photonics

Associate Editor:

David F. Bahr, *Purdue University*

Principal Editors:

Sebastian Reineke, *IAPP*

Carl-Mikael Zetterling, *Royal Institute of Technology*

Olindo Isabella, *Delft University of Technology*

Martyn McLachlan, *Imperial College London*

Jacek Furdyna, *Notre Dame*

Maria Tamargo, *City College of New York*

Chee Hing Tan, *The University of Sheffield*

Regina Ragan, *University of California, Irvine*

Thomas Cooper, *Air Force Research Laboratory*

Coskun Kocabas, *Bilkent Universitesi*

Jang-Ung Park, *UNIST*

Johan Liu, *Chalmers University of Technology*

Karlheinz Bock, *TU Dresden*

Takanobu Kiss, *Kyushu University*

Peter Trefonas, *Dow Electronic Materials*

Julien Pernot, *Universite Grenoble Alpes*

MRS Advances Editorial Board:

Chair: David F. Bahr, *Purdue University*

Asa Barber, *University of Portsmouth,
United Kingdom*

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

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 © 2016, 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 \$6,875.00 / £4,655.00 / €6,330.00. *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 2016 subscription is \$2,875.00 / £1,855.00 / €2,500.00. *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).

journals.cambridge.org/adv

CONTENTS

* Low Temperature Metalorganic Chemical Vapor Deposition of Semiconductor Thin Films for Surface Passivation of Photovoltaic Devices	3379
Sneha Banerjee, Rajendra Dahal, and Ishwara Bhat	
* II-VI Material Integration with Silicon for Detector and PV Applications	3391
T.A. Gessert, E. Colegrove, B. Stafford, R. Kodama, Wei Gao, H.R. Moutinho, D. Kuciauskas, R.C. Reedy, T.M. Barnes, and S. Sivananthan	
Elastic and Plastic Stress Relaxation in Highly Mismatched SiGe/Si Crystals	3403
Fabio Isa, Arik Jung, Marco Salvalaglio, Yadira Arroyo Rojas Dasilva, Mojmir Meduňa, Michael Barget, Thomas Kreiliger, Giovanni Isella, Rolf Erni, Fabio Pezzoli, Emiliano Bonera, Philippe Niedermann, Kai Zweiacker, Antonia Neels, Alex Dommann, Pierangelo Gröning, Francesco Montalenti, and Hans von Känel	
Control of Magnetic Coercivity in Epitaxial Ni/VO₂/YSZ/Si(001) Heterostructures by Manipulation of Ni Thin Film Growth Modes . . .	3409
Gabrielle M. Foley, Srinivasa Rao Singamaneni, John Prater, and Jay Narayan	
Effect of the Formation Temperature of the AlN/Si Interface on the Vertical-direction Breakdown Voltages of AlGaN/GaN HEMTs on Si Substrates	3415
Yuya Yamaoka, Kazuhiro Ito, Akinori Ubukata, Toshiya Tabuchi, Koh Matsumoto, and Takashi Egawa	

*Invited Paper

Optimization of Copper Schottky Contacts on Nanocrystalline ZnO Thin Films by Atomic Layer Deposition 3421
 Mei Shen, Triratna P. Muneshwar,
 Ken Cadien, Ying Y. Tsui, and Doug Barlage

Electrical Properties of Bottom Gate Poly-si TFTs by NiSi₂ Seed-induced Lateral Crystallization and Its Applications 3429
 Sol Kyu Lee, Ki Hwan Seok, Zohreh Kiaee,
 Hyung Yoon Kim, Hee Jae Chae,
 Yong Hee Lee, Gil Su Jang, and Seung Ki Joo

A Design Methodology for Phosphor Mixtures for Tunable Spectrum LEDs 3435
 Partha S. Dutta and Kathryn M. Liotta

Predictive and Descriptive Models for Transient Photoconductivity in Amorphous Oxide Semiconductors 3441
 Jiajun Luo and Matthew Grayson