

MRS Advances

Innovations and Technology for Rural India

<https://doi.org/10.1557/adv.2019.274> Published online by Cambridge University Press

MRS Advances: Innovations and Technology for Rural India

Associate Editor:

David F. Bahr, *Purdue University, USA*

Principal Editors:

Manish Kumar, *Organisation for Science Innovations and Research, India*

Devesh Kumar Avasthi, *Amity Institute of Nanotechnology, India*

Vijay Thakur, *Cranfield University, United Kingdom*

Nagendra K. Kaushik, *Kwangwoon University, Republic of Korea*

MRS Advances Editorial Board:

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

Meenakshi Dutt, *Rutgers University, 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 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 © 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.

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

ARTICLES

- Temperature Induced Spin Crossover Behaviour in Mononuclear Cobalt(II) *bis* Terpyridine Complexes 1597**
Venkata Nikhil Raj M., Kishalay Bhar,
Tanveer A. Khan, Surbhi Jain, Franc Perdih,
Partha Mitra, and Anuj K. Sharma
- Al₂O₃-Water Nanofluids for Heat Transfer Application 1611**
Lakshita Phor, Tanuj Kumar, Monika Saini,
and Vinod Kumar
- Synthesis of Mixed AuZn Nanoparticles by Spark Discharge Technique 1621**
Shubhra Kala and F.E. Kruis
- Comparative Study of the Photostability of Two Glycine Molecules in Different Medium 1631**
Satish Kumar and Ashok Jangid
- A Comparative Study of Structural, Thermal and Conducting Properties of Polyaniline, Polypyrrole and Poly (Ani-*co*-Py) Copolymer. 1639**
Monika Saini, Nidhi Sheoran, Rajni Shukla,
Tanuj Kumar, and S.K. Singh
- Comparative Studies on Impact of Lithium Substitution in Nano Magnesium Ferrite. 1649**
Ravi Kant and Ajay Kumar Mann
- Size Dependent Morphology, Magnetic and Dielectric Properties of BiFeO₃ Nanoparticles 1659**
Nidhi Sheoran, Monika Saini,
Ashok Kumar, Vinod Kumar, Tanuj Kumar,
and Mukesh Sheoran
- SHI Induced Evolution of Surface and Wettability of BaF₂ Thin Films 1667**
Ratnesh K Pandey, Tanuj Kumar,
Udai B Singh, Shikha Awasthi,
and Avinash C Pandey

Nano-patterning on Si (100) Surface Under Specific Ion Irradiation Environment. 1673

R.P. Yadav, Vandana, Jyoti Malik,
Jyoti Yadav, A.K. Mittal, and Tanuj Kumar