

MRS

Advances

Nanomaterials and Synthesis

<https://doi.org/10.1557/adv.2016.180> Published online by Cambridge University Press

MRS

MATERIALS
RESEARCH
SOCIETY®

CAMBRIDGE
UNIVERSITY PRESS

MRS Advances: Nanomaterials and Synthesis

Associate Editor: Marilyn L. Minus, *Northeastern University*

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

Principal Editor: Yanglong Hou, *Peking University*

Principal Editor: Yugang Sun, *Argonne National Lab*

Principal Editor: Shadi A. Dayeh, *University of California-San Diego*

Principal Editor: Ming Xu, *Huazhong University of Science and Technology*

Principal Editor: Paul Ohodnicki, *National Energy Technology Laboratory*

MRS Advances Editorial Board:

Chair: David F. Bahr, *Purdue University*

Asa H. Barber, *University of Portsmouth*

Frank W. DelRio, *National Institute of Standards*

Elizabeth L. Fleischer, *Materials Research Society*

Marilyn L. Minus, *Northeastern University*

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

MRS Editorial Office:

Ellen W. Kracht, *Publications Manager, Materials Research Society, Warrendale, PA*

Susan Dittrich, *Journals Editorial Assistant, Materials Research Society, Warrendale, PA*

Kirby L. Morris, *Journals Production Assistant, Materials Research Society, Warrendale, PA*

Eileen M. Kiley, *Director of Communications, Materials Research Society, Warrendale, PA*

MRS Advances (EISSN: 2059-8521) is published by Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473 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

Synthesis and Characterization of Copper-iron Nitride Thin Films	203
Hrishikesh Kamat, Xingwu Wang, James Parry, Yueling Qin, and Hao Zeng	
Temperature-stable NdFeB Micromagnets with High-energy Density Compatible with CMOS Back End of Line Technology.	209
Tim Reimer, Fabian Lofink, Thomas Liseç, Claas Thede, Steffen Chemnitz, and Bernhard Wagner	
Europium Oxide-hematite Magnetic Ceramic Nanoparticles	215
Monica Sorescu, Lucian Diamandescu, John DiGnazio, and Tianhong Xu	
Carbon-substituted Hematite and Magnetite Nanoparticles	221
Monica Sorescu and Richard Trotta	
High Magnetic Field Annealing of Mn-Ga Intermetallic Alloys	227
Daniel R. Brown, Ke Han, Theo Siegrist, Tiglet Besara, and Rongmei Niu	
Magnetic Iron Sulfide Nanoparticles for Potential Applications in Gas Sensing	235
Sixberth Mlowe, Shivram Sopan Garje, Thomas Moyo, and Neerish Revaprasadu	
Direct Observation of Reverse Magnetic Domain and Magnetic Domain Wall Motion in Nd-Fe-B Magnet at High Temperature by Lorentz Microscopy	241
Toshimasa Suzuki, Koichi Kawahara, Masaya Suzuki, Kenta Takagi, and Kimihiro Ozaki	
A Combinatorial Approach to Enhance the Biocompatibility and Heating Efficiency of Magnetic Hyperthermia- Serum Albumin Conjugated Ferrimagneticmagnetite Nanoparticles.	247
Viveka Kalidasan, Xiaoli Liu, Jun Ding, Ananya Dasgupta, and Sreedharan Sajikumar	