

MRS

Advances

Mechanical Behavior and Failure Mechanisms of Materials

<https://doi.org/10.1557/adv.2017.411> Published online by Cambridge University Press

MRS

MATERIALS
RESEARCH
SOCIETY®

CAMBRIDGE
UNIVERSITY PRESS

MRS Advances: Mechanical Behavior and Failure Mechanisms of Materials

Associate Editor:

Marian Kennedy, *Clemson University*

Principal Editors:

John J. Lewandowski, *Case Western Reserve University*

Timothy J. Rupert, *University of California, Irvine*

MRS Advances Editorial Board:

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

Asa Barber, *University of Portsmouth, United Kingdom*

Meenakshi Dutt, *Rutgers University*

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*

Jeremy Theil, *Mountain View Energy*

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 © 2017, 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 2017 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

* Environmental Resistant Coatings for High Temperature Mo and Nb Silicide Alloys	1323
J.H. Perepezko	
Bcc / B2 Phase Equilibria and Phase Transformation from B2 to β' in Refractory Nb-X(Pd, Rh, Ir)-Al	1335
T. Yamanouchi, S. Miura, M. Ohno, and K. Ikeda	
Structure, Magnetic Properties and Hyperfine Parameters of Nd-substituted Ni-Fe-Ga Heusler Alloys	1341
Monica Sorescu, Felicia Tolea, Mihaela Valeanu, and Mihaela Sofronie	
Microstructure of Gas Atomised γ-TiAl Based Alloy Powders.	1347
Daniel Laipple, Li Wang, Marcus Rackel, Andreas Stark, Bernd Schwebke, Andreas Schreyer, and Florian Pyczak	
Microstructure and Mechanical Properties of Fe-Al-Nb-B Alloys	1353
Shahbaz Ahmed Azmi, Alena Michalcová, Lucia Senčėkova, and Martin Palm	
The Use of Fluorine to Protect β-solidifying γ-TiAl-based Alloys Against High-temperature Oxidation.	1361
Alexander Donchev, Mathias Galetz, Svea Mayer, Helmut Clemens, and Michael Schütze	

*Invited Paper