# 8<sup>th</sup> Global Innovations Symposium: Trends in Materials and Manufacturing Technologies for Energy Production 2007

February 25 – March 1, 2007 Orlando, Florida, USA

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 www.proceedings.com

ISBN: 978-0-87339-677-6

Some format issues inherent in the e-media version may also appear in this print version.

#### A Publication of **The Minerals, Metals & Materials Society (TMS)** 184 Thorn Hill Road Warrendale, Pennsylvania 15086-7528

(724) 776-9000

#### Visit the TMS Web site at http://www.tms.org

Statements of fact and opinion are the responsibility of the authors alone and do not imply an opinion on the part of the officers, staff, or members of TMS. TMS assumes no responsibility for the statements and opinions advanced by the contributors to its publications or by the speakers at its programs. Registered names and trademarks, etc., used in this publication, even without specific indication thereof, are not to be considered unprotected by the law.

No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or otherwise, without written permission from the publisher.

Printed in the United States of America

ISBN Number 978-0-87339-677-6

ISSN Number 109-9586

Authorization to photocopy for internal or personal use beyond the limits of Sections 107 and 108 of the U.S. Copyright Law is granted by TMS, provided that the base fee of \$7.00 per copy is paid directly to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923 USA, www.copyright.com. Prior to photocopying items for educational classroom use, please contact the Copyright Clearance Center, Inc.

For those organizations that have been granted a photocopy license by the Copyright Clearance Center, a separate system of payment has been arranged.

This consent does not extend to copying items for general distribution or for advertising or promotional purposes or to republishing items whole or in part in any work in any format.

Please direct republication or special copying permission requests to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923 USA; (978) 750-8400; www.copyright.com.



Copyright 2007, The Minerals, Metals & Materials Society. All rights reserved.

If you are interested in purchasing a copy of this book, or if you would like to receive the latest TMS publications catalog, please telephone (724) 776-9000, ext. 270, or (800) 759-4TMS.

## COLLECTED PROCEEDINGS: STRUCTURE, EXTRACTION, PROESSING, AND PROPERTIES TABLE OF CONTENTS

### 8th Global Innovations Symposium: Trends in Materials and Manufacturing Technologies for Energy Production

### Session I

Distribution of Oxygen in mc-Silicon Ingots for Solar Cell Applications
In Situ Passivation during High Pressure Gas Atomization of Improved MRE2Fe14B for High Performance Permanent Magnet Applications
Magnetostriction Studies in Single Crystals of Iron-Gallium Alloys
Studies of Magnesium Oxide-Coated Lithium Cobalt Oxide Materials
Corrosion Behavior of Iron-Gallium Alloys in Aqueous Environments
Investigation of Steel-Compound-Parts Manufactured by Indirect Impact Extrusion
Development of Advanced Thermal Barrier Coatings for Mo-Si-B Materials
Hydrogen Effects on Laser Engineered Net Shape (LENS) Repaired Weldments
Author Index

Subject Index