

MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 1434

Recent Advances in Superconductors, Novel Compounds and High-TC Materials

April 9-13, 2012
San Francisco, California, USA

Printed from e-media with permission by:

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

ISBN: 978-1-5108-0479-1

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

©Materials Research Society 2012

This reprint is produced with the permission of the Materials Research Society and Cambridge University Press.

This publication is in copyright, subject to statutory exception and to the provisions of relevant collective licensing agreements. No reproduction of any part may take place without the written permission of Cambridge University Press.

Cambridge University Press
Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Tokyo, Mexico City

Cambridge University Press
32 Avenue of the Americas, New York, NY 10013-2473, USA
www.cambridge.org

Materials Research Society
506 Keystone Drive, Warrendale, PA 15086
www.mrs.org

CODEN: MRSPDH

ISBN: 978-1-5108-0479-1

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-part Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate.

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Magnetic Properties Of Fe-Principles Superconductors As A Function Of Pressure And Doping	1
<i>G. Profeta, N. Colonna, A. Continenza</i>	
RE Dependence Of Superconductivity In Parent T'-RE₂CuO₄ - Implication On The Nature Of Superconductivity	10
<i>M. Naito, A. Ikeda, H. Yamamoto, T. Manabe</i>	
Molecular Beam Epitaxy Growth Of Sr_{1-x}K_xFe₂As₂ And Ba_{1-x}K_xFe₂As₂	17
<i>M. Naito, S. Ueda, S. Takeda, S. Takano, A. Mitsuda</i>	
Microstructure Analysis Of GdBa₂Cu₃O_{7-δ} Coated Conductors By The RCE-DR Process	23
<i>S.-M. Choi, J.-W. Lee, S.-H. Moon, S.-I. Yoo</i>	
Model Of Subgrain Structure Formation In HTS Cuprates And Ferropnictides	29
<i>C. Tretiatchenko, V. Svetchnikov, H. Wiesmann</i>	
Nanostructured Epitaxial Thin Films Of Fe-Based Superconductors With Enhanced Superconducting Properties	35
<i>P. Mele, K. Matsumoto, H. Nagayoshi, K. Fujita, Y. Yoshida, Y. Ichino, T. Kiss, A. Ichinose, M. Mukaida, B. Maiorov, F. Balakirev, S. Baily, L. Civale</i>	
High-T_c And High-J_c SmFeAs(O,F) Films On Fluoride Substrates Grown By Molecular Beam Epitaxy	45
<i>M. Naito, S. Ueda, S. Takeda, S. Takano, A. Yamamoto</i>	
Effect Of Twin Structure On Strain Dependences Of Critical Current	51
<i>A. Semenov, C. Tretiatchenko, V. Svetchnikov, V. Pan, H. Wiesmann</i>	
Estimation Of Local Current Transport Properties In Thin Film Superconductor Based On Scanning Hall-Probe Microscopy	57
<i>K. Higashikawa, K. Shiohara, M. Inoue, T. Kiss, M. Yoshizumi, T. Izumi</i>	
Relationship Between Critical Current Properties And Nanorod Morphology In REBa₂Cu₃O_y	63
<i>M. Haruta, N. Fujita, Y. Ogura, T. Nakata, T. Maeda, A. Ichinose, P. Mele, K. Matsumoto, S. Horii</i>	
Relationship Between Grain Size And The Degrees Of Orientation In A Twinned ErBa₂Cu₃O_y Superconductor Oriented In Modulated Rotating Magnetic Fields	69
<i>S. Horii, S. Okuhira, M. Yamaki, M. Haruta, J.-I. Shimoyama</i>	
Author Index	