

Editorial Office • 506 Keystone Drive • Warrendale, PA 15086-7573 USA
Tel. 724-779-3004 ext. 522; fax 724-779-8313; Bulletin@mrs.org; http://www.mrs.org/

About the Materials Research Society

The Materials Research Society (MRS), a not-for-profit scientific association founded in 1973, promotes interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes over 12,000 scientists, engineers, and research managers from industrial, government, and university research laboratories in the United States and close to 70 countries.

The Society's interdisciplinary approach differs from that of single-discipline professional societies because it promotes information exchange across the many technical fields touching materials development. MRS sponsors two major international annual meetings encompassing approximately 70 topical symposia, and also sponsors numerous single-topic scientific meetings. The Society recognizes professional and technical excellence and fosters technical interaction in local geographic regions through Sections and University Chapters.

MRS participates in the international arena of materials research through the International Union of Materials Research Societies (IUMRS). MRS is a member of the Federation of Materials Societies and is an affiliate of the American Institute of Physics.

MRS publishes symposium proceedings, *MRS Bulletin*, *Journal of Materials Research*, and other publications related to current research activities.

MRS Bulletin (ISSN: 0883-7694) is published 12 times a year by the Materials Research Society, 506 Keystone Drive, Warrendale, PA, 15086-7573. Periodical postage paid at Warrendale, PA and at additional mailing offices. POSTMASTER: Send address changes to *MRS Bulletin* in care of the Materials Research Society, at the address listed; tel. 724-779-3003; fax 724-779-8313. Printed in the U.S.A.

Membership in MRS is \$100 annually for regular members, \$25 for students. Dues include an allocation of \$29 (\$17 for students) to a subscription to *MRS Bulletin*. Individual member subscriptions are for personal use only. Non-member subscription rates are \$200 for one calendar year (12 issues) within the U.S.A. and \$255 elsewhere. Single copies may be purchased for \$25 each. Requests from subscribers for missing journal issues will be honored without charge only if received within six months of the issue's actual date of publication; otherwise, the issue may be purchased at the single-copy price.

MRS Bulletin is included in *Current Contents®/Engineering, Computing, and Technology*; *Current Contents®/Physical, Chemical, and Earth Sciences*, the *SciSearch®* online database, *Research Alert®*, *Science Citation Index®*, and the *Materials Science Citation Index™*. Back volumes of *MRS Bulletin* are available in 16 mm microfilm, 35 mm microfilm, or 105 mm microfiche through University Microfilms Inc., 300 North Zeeb Road, Ann Arbor, Michigan 48106, USA.

Send Letters to the Editor to:

MRS Bulletin
Materials Research Society
506 Keystone Drive
Warrendale, PA 15086-7573 USA
Fax 724-779-8313
Bulletin@mrs.org

Letters must include your name, affiliation, and full contact information.

Editor

E.L. Fleischer

Managing Editor

J. Meiksin

Technical Editor

A. Bertram Wilson

Art Director

E. Stiller

Design/Production

S. Franklin

Editorial Assistant

R.D. Covington

Advertising

M.E. Kaufold and D.L. Watterson

Circulation

S. Forrest

Guest Editors

C.R. Kagan and M.A. Ratner

Special Contributors

J. Abiade, M. Cortalezzi, J. DiMaio,
F. Frankel, L.Y. Hu, S. Khizroev, D. Litvinov,
A. Passerone, G. Rao, S. Recillas Gispert,
V. Rodríguez Lugo, S. Sosa, and
S. Trohalaki

Special Consultants

Y. Ballim, M.-I. Baraton, G.-M. Chow,
and D. Dimos

Associate Technical Editor

T. Palucka

Associate Editor—Europe

I.W. Boyd, University College London
Dept. of Electronic and
Electrical Engineering
Torrington Place
London WC1E 7JE, UK
Tel. 44-171-380-7300 or 7302

Book Review Board

J.M. Phillips (Chair), R.W. Cahn,
M. Coltrin, G. Kellogg, G.G. Long,
and L. Olafsen

MRS Office of Public Affairs

499 South Capitol Street SW, Suite 600
Washington DC 20003
Tel. 202-256-5211

EDITORIAL BOARD

A.L. Greer, Chair
Cambridge University
Cambridge, UK

V.S. Arunachalam
Carnegie Mellon University
Pittsburgh, PA

E. Arzt
Max-Planck-Institut
für Metallforschung und
University of Stuttgart
Stuttgart, Germany

R.W. Cahn
Cambridge University
Cambridge, UK

E.J. Kramer
University of California—
Santa Barbara
Santa Barbara, CA

G.G. Long
Argonne National Laboratory
Argonne, IL

S.C. Moss
Aerospace Corporation
Los Angeles, CA

S.T. Picraux
Arizona State University
Tempe, AZ

Y. Shiohara
ISTEC
Tokyo, Japan

C.C. Tsai
Quanta Display Inc.
Taiwan

J.H. Westbrook
Brookline Technologies
Ballston Spa, NY

VOLUME ORGANIZERS

2003

L.A. Clevenger
IBM Microelectronics
Hopewell Junction, NY

A.M. Donald
Cambridge University
Cambridge, UK

J.R. Weertman
Northwestern University
Evanston, IL

2004

P.S. Drzaic
Alien Technology Corp.
Morgan Hill, CA

T.E. Haynes
Oak Ridge National Laboratory
Oak Ridge, TN

H. Van Swygenhoven
Paul Scherrer Institute
Villigen, Switzerland

2005

S.A. Carter
University of California,
Santa Cruz
Santa Cruz, CA

M.E. Davis
California Institute
of Technology
Pasadena, CA

A.G. Evans
University of California,
Santa Barbara
Santa Barbara, CA

T.P. Russell
University of Massachusetts
Amherst, MA

2004 MRS OFFICERS

President

H.E. Katz
Bell Labs/Lucent Technologies

Secretary

A.J. Hurd
Los Alamos National Laboratory

Executive Director

Materials Research Society
J.B. Ballance

Vice President and President-Elect

D.J. Eaglesham
Lawrence Livermore National Laboratory

Immediate Past President

M.J. Mayo
GUIRR, National Research Council

INTERNATIONAL UNION OF MATERIALS RESEARCH SOCIETIES

President

R.J. Nemanich
North Carolina State Univ.
Raleigh, NC, USA

First Vice President

L. Zhou
NIN
Xian, Shaanxi, China

Second Vice President

J.E.E. Baglin
IBM Almaden Research Center
San Jose, CA, USA

Secretary

M.J. Yacamán
University of Texas at Austin
Austin, TX, USA

Immediate Past President

P.A. Glasow
Erlangen, Germany

General Secretary

R.P.H. Chang
Northwestern University
Evanston, IL, USA

IUMRS ADHERING BODIES

Australian Materials Research Society (A-MRS)
J.S. Williams, Australian National University

Chinese Materials Research Society (C-MRS)
L. Zhou, NW Institute for Nonferrous Metal Research

European Materials Research Society (E-MRS)
H. Grimmeiss, University of Lund

Materials Research Society (MRS)
H.E. Katz, Bell Labs/Lucent Technologies

Materials Research Society of Argentina (MRS-Argentina)
R. Romero, IFIMAT

Materials Research Society of India (MRS-I)
R.A. Mashelkar, Council of Scientific & Industrial Research

Materials Research Society of Japan (MRS-J)
T. Kishi, National Institute for Materials Science

Materials Research Society of Korea (MRS-K)
I.-H. Choi, Korea National University

Materials Research Society of Russia (MRS-Russia)
N.Z. Lyakhov, Russian Academy of Sciences

Materials Research Society of Singapore (MRS-S)
B.V.R. Chowdari, National University of Singapore

Materials Research Society of Taiwan (MRS-T)
J.-M. Liu, ITRI

Mexican Materials Research Society (Mexican-MRS)
V. Rodríguez Lugo, Benemérita Universidad Autónoma de Puebla