Inside: Energy Quarterly EQ

MRS Bulletin

December 2011 Vol. 36 No. 12
www.mrs.org/bulletin

MRS MATERIALS RESEARCH SOCIETY
Advancing materials. Improving the quality of life.

Laser micro- and nanofabrication of biomaterials

ALSO IN THIS ISSUE

Semiconductor nanowires: A platform for nanoscience and nanotechnology.

CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1557/mrs.2011.326 Published online by Cambridge University Press

https://doi.org/10.1557/mrs.2011.326 Published online by Cambridge University Press

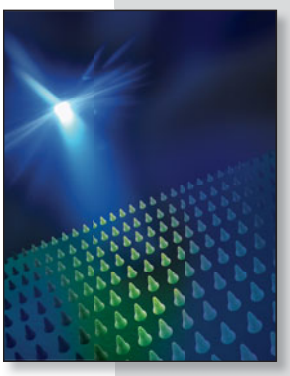
https://doi.org/10.1557/mrs.2011.326 Published online by Cambridge University Press

MRS Bulletin DECEMBER 2011 Volume 36 Number 12 ISSN: 0883-7694 CODEN: MRSBEA

CONTENTS

LASER MICRO- AND NANOFABRICATION OF BIOMATERIALS

Energy Quarterly



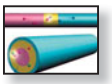
ON THE COVER

Laser micro- and nanofabrication of biomaterials. This issue of *MRS Bulletin* focuses on academic and industrial developments for laser processing of materials for various applications as biomaterials, and the challenges associated with commercialization of such laser biomaterials. The cover image shows pulsed laser deposition of a platinum thin film. Image courtesy of Roger Winstead, North Carolina State University. The bottom image is derived from a scanning electron micrograph of a platinum-coated microneedle array that may be used for transdermal biosensing. These conical microneedles have heights of 818±35 μm and base diameters of 390±14 μm. Image courtesy of Joshua R. Windmiller, University of California, San Diego. See the technical theme that begins on page 973.

https://doi.org/10.1557/mrs.2011.326 Published online by Cambridge University Press

MRS MATERIALS RESEARCH SOCIETY
Advancing materials. Improving the quality of life.
www.mrs.org/bulletin

TECHNICAL FEATURE



DEPARTMENTS

OPINION

NEWS & ANALYSIS

1065 SOCIETY NEWS

1072 CAREER CENTRAL

FEATURES

www.mrs.org/bulletin
MRS members—access *MRS Bulletin* online

www.materialsforenergy.org
Join the conversation in the Materials for Energy blog

www.mrs.org/mymrs
MRS Publications Alert—
receive advance Table of Contents by email

http://journals.cambridge.org/mrsbulletin-rss
Subscribe TODAY to the *MRS Bulletin* RSS Feed

https://doi.org/10.1557/mrs.2011.326 Published online by Cambridge University Press

MRS MATERIALS RESEARCH SOCIETY
Advancing materials. Improving the quality of life.

MRS Bulletin

EDITORIAL OFFICE 506 Keystone Drive, Warrendale, PA 15086-7573 USA
Bulletin@mrs.org tel 724.779.2747 fax 724.779.8313 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 almost 16,000 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 ASTRA 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, print; ISSN 1938-1425, online) is published 12 times a year by the Materials Research Society, 506 Keystone Drive, Warrendale, PA 15086-7573. Periodical postage paid at New York, NY, and at additional mailing offices. POSTMASTER: Send address changes to *MRS Bulletin* in care of the Journals Department, Cambridge University Press, 100 Brook Hill Drive, West Nyack, NY 10994-2113, USA. Printed in the U.S.A.

Membership in MRS is $115 annually for regular members, $30 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 $330 for one calendar year (12 issues) within North America and $396 elsewhere. 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.

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 on microfiche through University Microfilms Inc., 300 North Zeeb Road, Ann Arbor, MI 48106, USA.

Send Letters to the Editor to **Bulletin@mrs.org**. Include your name, affiliation, and full contact information.

https://doi.org/10.1557/mrs.2011.326 Published online by Cambridge University Press