Inside: Energy Quarterly EQ

MRS Bulletin

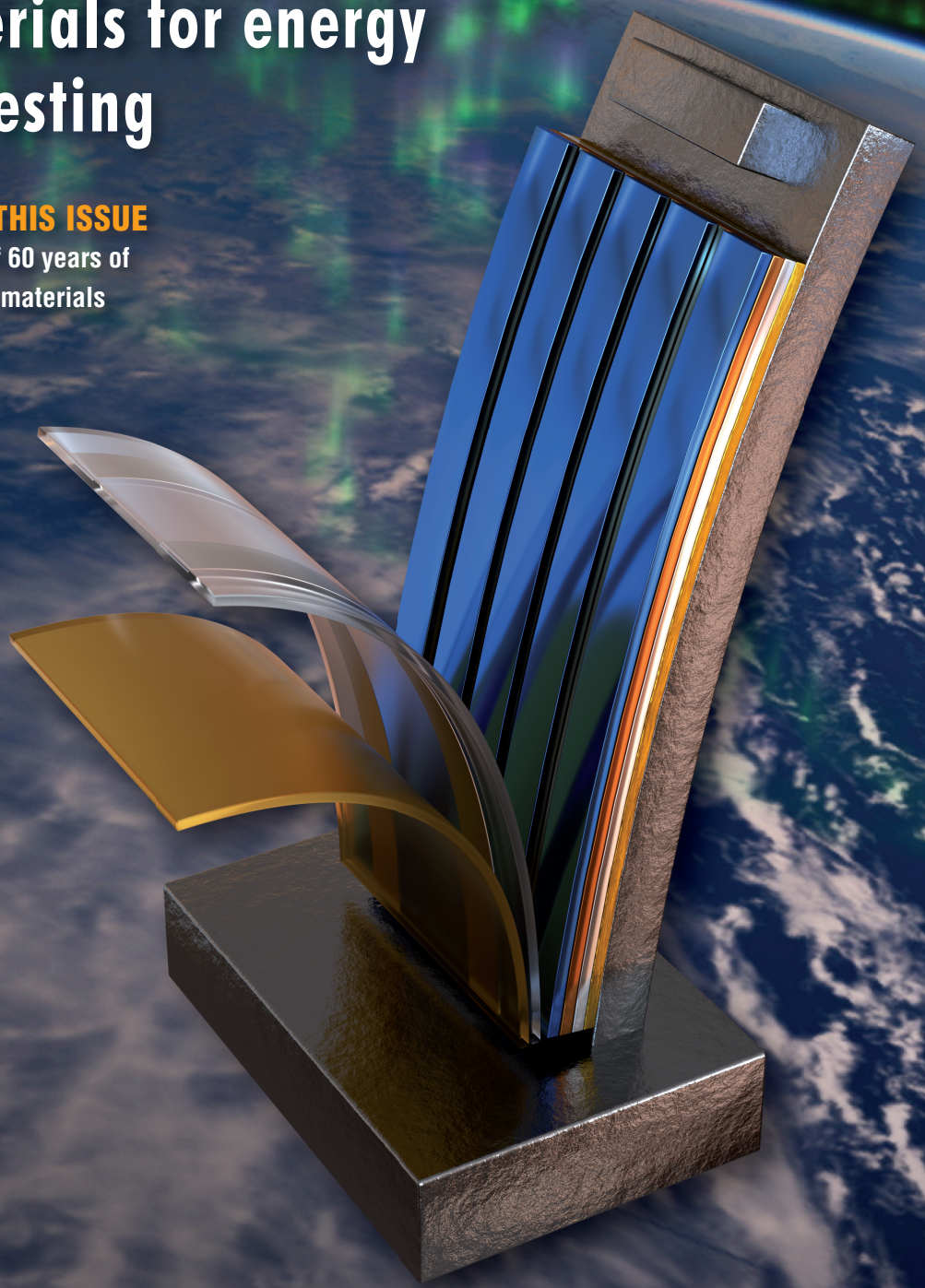
March 2018 Vol. 43 No. 3
www.mrs.org/bulletin

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

Materials for energy harvesting

ALSO IN THIS ISSUE

Glimpses of 60 years of research in materials chemistry



CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1557/mrs.2018.64 Published online by Cambridge University Press

https://doi.org/10.1557/mrs.2018.64 Published online by Cambridge University Press

https://doi.org/10.1557/mrs.2018.64 Published online by Cambridge University Press

MRS Bulletin March 2018 Volume 43 Number 3 ISSN: 0883-7694 CODEN: MRSBEA

CONTENTS

MATERIALS FOR ENERGY HARVESTING

www

www.mrs.org/bulletin

www.mrs.org/energy-quarterly

www.mrs.org/mymrs

http://journals.cambridge.org

mrsbulletin-rss

@mrsbulletin

TECHNICAL FEATURE

Energy Quarterly

ON THE COVER

Materials for energy harvesting. Energy harvesting from environmental sources, including mechanical vibrations, magnetic fields, heat, and light, has become highly relevant, especially for implementation of the Internet of Things vision that requires self-powered wireless sensor networks for sustainable deployment. This issue explores the design and development of materials that can meet the practical requirements for energy harvesting. The cover shows a schematic view of a magneto-mechano-electric energy harvester. The harvester is composed of magnetostrictive alloy plates (right side), piezoelectric slabs (middle layer, blue and yellow tones), and permanent magnet mass (upper side, metallic cube). Piezoelectric slabs are laminated with electrodes (second on the left, silver color) and protection polymer layers (first layer on left, amber color). The background shows sources from which energy can be harvested—vibrations (ocean tides) and magnetic fields. Image courtesy of Shuxiang Dong and Jungho Ryu. See the technical theme that begins on page **176**.

https://doi.org/10.1557/mrs.2018.64 Published online by Cambridge University Press

DEPARTMENTS

OPINION

NEWS & ANALYSIS

246 CAREER CENTRAL

SOCIETY NEWS

FEATURES

Erratum: In *MRS Bulletin* **43** (2), 2018, p. 131, the online version of the article "Latino engineering faculty in the United States" was incorrectly displayed as a Research Article rather than an Article Commentary. The article metadata has been updated.

https://doi.org/10.1557/mrs.2018.64 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 and headquartered in Warrendale, Pennsylvania, USA, promotes interdisciplinary materials research. Today, MRS is a growing, vibrant, member-driven organization of over 16,000 materials researchers spanning over 80 countries, from academia, industry, and government, and a recognized leader in the advancement of interdisciplinary materials research.

The Society's interdisciplinary approach differs from that of single-discipline professional societies because it promotes information exchange across many scientific and technical fields touching materials development. MRS conducts three major international annual meetings and also sponsors numerous single-topic scientific meetings. The Society recognizes professional and technical excellence and fosters technical interaction through University Chapters. In the international arena, MRS implements bilateral projects with partner organizations to benefit the worldwide materials community. The Materials Research Society Foundation helps the Society advance its mission by supporting various projects and initiatives.

MRS Bulletin (ISSN: 0883-7694, print; ISSN 1938-1425, online) is published monthly by the Materials Research Society, 506 Keystone Drive, Warrendale, PA 15086-7573. Permission required to reproduce content. 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 $130 annually for regular members, $32 for students, and includes an electronic subscription to *MRS Bulletin.* Print subscriptions are available to MRS members for an additional $25. Individual member subscriptions are for personal use only. Non-member subscription rates are $560 (USD) for one calendar year (12 issues). 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.2018.64 Published online by Cambridge University Press