

MRS Bulletin

November 2018 Vol. 43 No. 11
www.mrs.org/bulletin

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

Materials for strain-mediated magnetoelectric systems

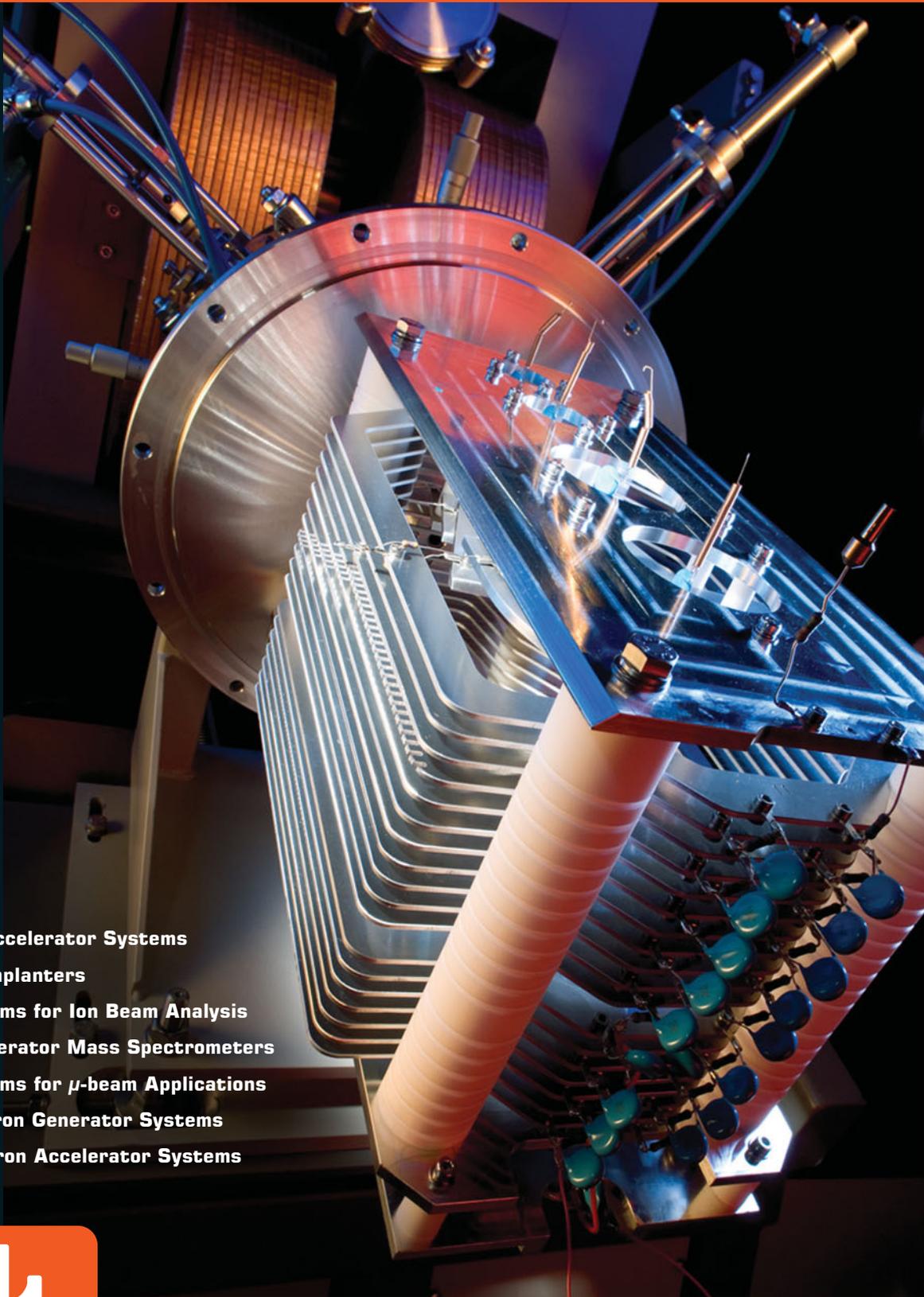
ALSO IN THIS ISSUE

Toward affordable and
sustainable use of precious
metals in catalysis and
nanomedicine



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235th ECS Meeting

DALLAS, TX
May 26-May 31, 2019
Sheraton Dallas

2019

Abstract deadline: December 14, 2018



ECEE 2019

Bioelectrochemistry and Energy Storage

GLASGOW, SCOTLAND

July 21-26, 2019
Scottish Event Campus



Abstract deadline: January 4, 2019



236th ECS Meeting

ATLANTA, GA
October 13-17, 2019
Hilton Atlanta

2019

Abstract submission opens in November 2018

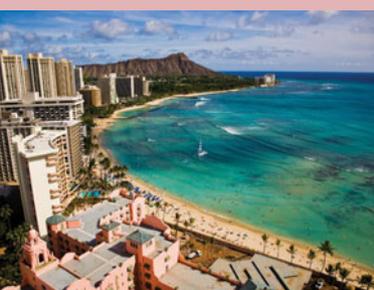


237th ECS Meeting

with the 18th International Meeting
on Chemical Sensors (IMCS 2020)

MONTREAL, CANADA

May 10-15, 2020
Palais des congrès de Montréal



PRiME 2020

HONOLULU, HI
October 4-9, 2020
*Hawaii Convention Center &
Hilton Hawaiian Village*



www.electrochem.org/meetings

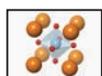
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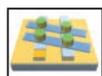
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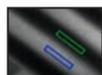
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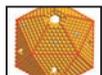


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ON THE COVER

Materials for strain-mediated magnetolectric systems. This issue of *MRS Bulletin* explores strain-mediated magnetolectric materials. The cover image is an illustration of a strain-mediated magnetolectric motor that potentially could be used in a robotic scope in the human vascular system. The bottom part is a piezoelectric with the side columns representing the electrodes. These electrodes produce an oscillating voltage around the circumference of the piezoelectric. As the piezoelectric expands and contracts, it strains the magnetoelastic circular disk on the top surface. This strain rotates the magnetization around the periphery of the disk. At the edge of the disk is a superparamagnetic particle that is magnetically attached to the magnetoelastic circular disk. As the magnetic moment rotates, so does the superparamagnetic particle. The particle is attached to a flagellum-type system to create propulsion through the vascular system. See the technical theme that begins on p. 822.

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- Stan Whittingham selected for 2018 David Turnbull Lectureship Award
- Giulia Galli receives 2018 Materials Theory Award
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* Please visit our exhibit booth at the 2018 MRS Fall Meeting.

Erratum: The credit for the cover image of the October issue of *MRS Bulletin* should have been listed as Hyung-Tae Lim from Changwon National University.



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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.

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