# AMERICAN CERAMIC SOCIETY 174, 444/c6 TIU,

emerging ceramics & glass technology

JANUARY/FEBRUARY 2013



- · X-ray characterization of piezoelectrics
- . Edge chip testing of ceramics
- Joining SiC nuclear fuel claddings
- January meeting guides: ICACC and Expo, EMA
- Meet ACerS president Richard Brow

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### feature articles

	Meet ACerS president, Richard Brow
	ACerS' 2012-2013 president reflects on his career and what ACerS means to him.
	In situ X-ray characterization of piezoelectric ceramic thin films
	Characterization of thin film ferroelectrics with advanced X-ray scattering technology reveals fundamental mechanisms of piezoelectricity.
	Edge chip testing of ceramics
	New test methods provide quantifiable measurement of edge chipping of ceramics.
	Where are the Ceramic CAREER Awards, Class of 2012?
	The five 2012 NSF Ceramics Program CAREER awards hail from five states. Overall, CAREER awards represent 15 percent of the Ceramics Program portfolio.
	Novel silicon carbide joining for new generation of accident-tolerant
	nuclear fuels
	Silicon carbide tubes may allow safer nuclear fuel rod systems, but sealing the tube with a SiC plug is a materials challenge. Investigators at EWI are finding success with a new joining method.
	Case study: Building an ultra-high-temperature mechanical testing system 36 Eric W. Neuman, Harlan J. Brown-Shaklee, Jeremy Watts, Greg E. Hilmas, and William G. Fahrenholtz
	Unable to find an off-the-shelf system to test ceramics at temperatures up to 2,600°C, this team designed and built a system to do the job.

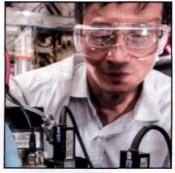
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**Correction:** Incorrect contact information for Delkic & Associates was printed in the December 2012 ceramicSOURCE directory. The correct listing is:

Delkic & Associates PO Box 1726 Ponte Verde, FL 32004 Phone: 904-285-0200 Fax: 904-273-1616

Российской академии наук (ЦНБ Эро FAI)



#### cover story

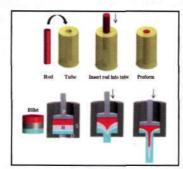
Cai Zhonghou, beamline scientist at the Advanced Photon Source at Argonne National Lab, aligns a sample in the nanodiffractometer. (Credit: Agresta; ANL.)

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Meet ACerS president, Richard Brow

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#### research briefs

Multimaterials expanding options for multifunctional fiber optics (Credit: Tao et al.; IJAGS..)

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#### AMERICAN CERAMIC SOCIETY

## bulletin

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<ul> <li>GOMD awards: Submit nominations</li> <li>St. Louis Section/RCD 49<sup>th</sup> Annual Symposium: March 26-28</li> <li>Refractories scholarship opportunity for students</li> <li>Names in the news</li> </ul>
Ceramics in Energy  • ARPA-E award helps Berkeley Lab groups shine smart windows tech  • Ultrathin rust films trap sunlight for splitting water
Advances in Nanomaterials  • Perovskite oxides: Group shows technique for engineering 'perfect' heterointerfaces  • New ultrathin VO, film device perfectly, reproducibly absorbs infrared light
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American Geramic Society Bulletin covers news and activities of the Society and its members, includes items of interest to the ceramic community and provides the most current information concerning all aspects of ceramic technology, including R&D, manufacturing, engineering and marketing.

American Ceramic Society Bulletin (ISSN No. 0002-7812). ©2013. Printed in the United States of America. ACerS Bulletin is published monthly, except for February, July and November, as a "dual-media" magazine in print and electronic format (www.ceramicbulletin.org).

Editorial and Subscription Offices: 600 North Cleveland Avenue, Suite 210, Westerville, OH 43082-6920. Subscription included with American Ceramic Society membership. Nonmember print subscription rates, including online access: United States and Canada, 1 year \$95; international, 1 year \$150.\* Rates include shipping charges. International Remail Service is standard outside of the United States and Canada. \*International nonmembers also may elect to receive an electronic-only, e-mail delivery subscription for \$75.

Single issues, January-November: member \$6.00 per issue; nonmember \$7.50 per issue. December issue (ceramicSOURCE): member \$20, nonmember \$25. Postage/handling for single issues: United States and Canada, \$3 per item; United States and Canada Expedited (UPS 2nd day air), \$8 per item; International Standard, \$6 per item.

POSTMASTER: Please send address changes to American Ceramic Society Bulletin, 600 North Cleveland Avenue, Suite 210, Westerville, OH 43082-6920.

Periodical postage paid at Westerville, Ohio, and additional mailing offices. Allow six weeks for address changes.

ACSBA7, Vol. 92, No. 1, pp 1-64. All feature articles are covered in Current Contents.