

AMERICAN CERAMIC SOCIETY

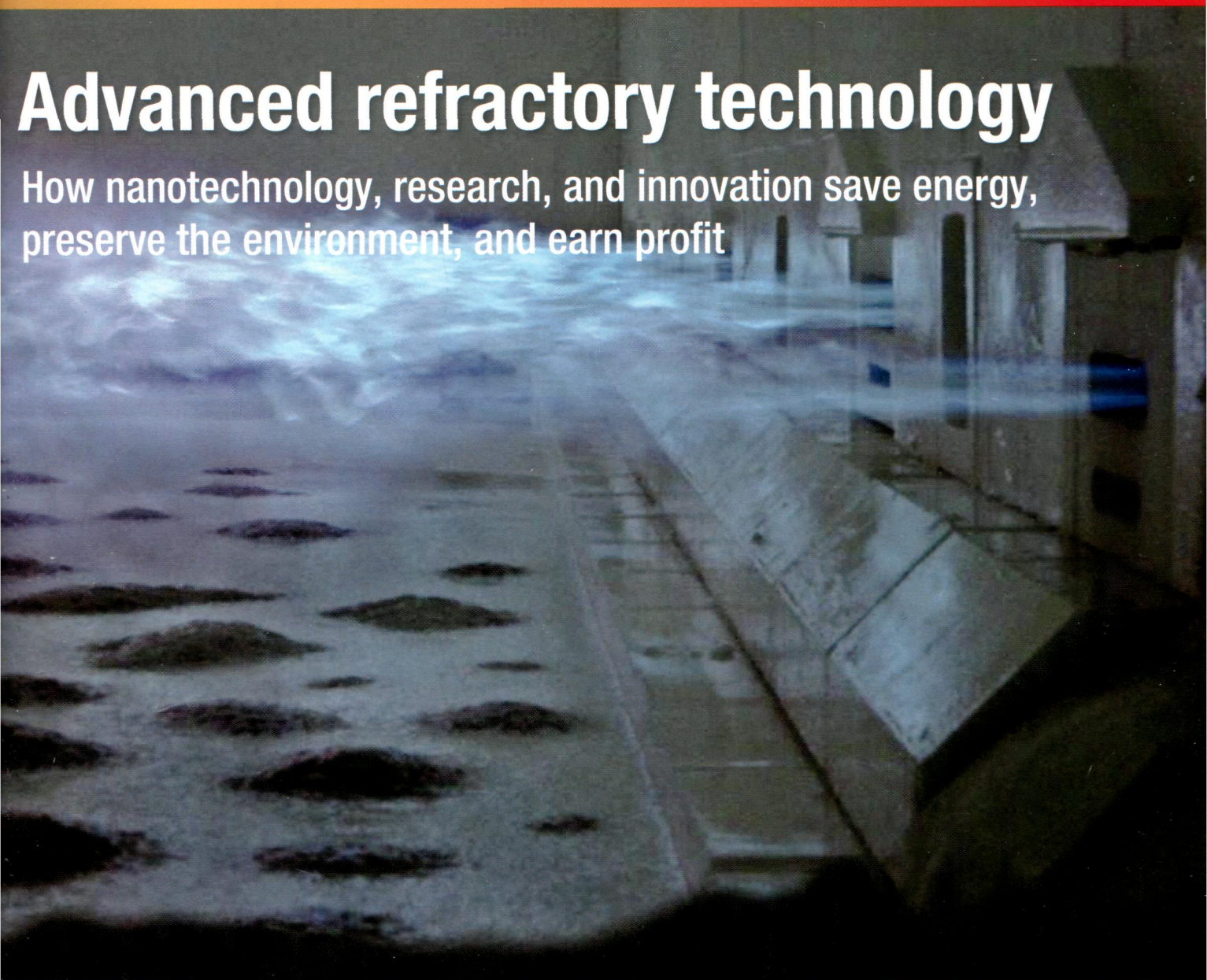
# bulletin

emerging ceramics & glass technology

SEPTEMBER 2013

## Advanced refractory technology

How nanotechnology, research, and innovation save energy, preserve the environment, and earn profit



Unifrax: A mid-sized company's approach to innovation •

Nanotech meets refractory tech •

Better refractories, greener future •

ACerS leaders build international ties •

Meeting previews: UNITECR, MS&T'13, ICACC'14, EMA'14 •



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September 2013 • Vol. 92 No. 7

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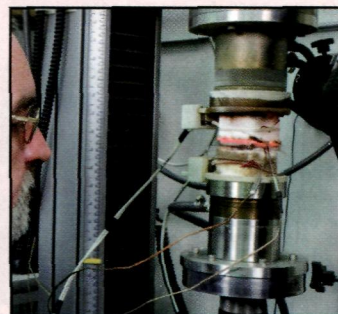
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#### Cover image:

Refractories in a container glass melting furnace. Fused cast alumina-zirconia-silica (AZS) refractories line the glass melt contact regions and superstructure walls, and high-silica brick lines the crown. This image shows the beginning campaign operational condition in a furnace expected to run for more than 10 years. Credit: Owens-Illinois Inc.



## cover story

### Innovation at Unifrax: A win-win proposition

(Credit: Unifrax.)

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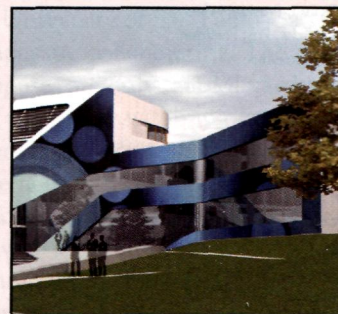


## ACerS spotlight

### Euro tour yields new collaborations for ACerS

(Credit: ACerS.)

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## ceramics in energy

### Oxide nanolayers make colorful solar panels

(Credit: Fraunhofer IOF.)

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*American Ceramic Society Bulletin* covers news and activities of the Society and its members, includes items of interest to the ceramics community, and provides the most current information concerning all aspects of ceramic technology, including R&D, manufacturing, engineering, and marketing.

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