

# MRS Bulletin

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MRS

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

## Paper-based technology

### ALSO IN THIS ISSUE

Shape-controlled synthesis  
of metal nanocrystals

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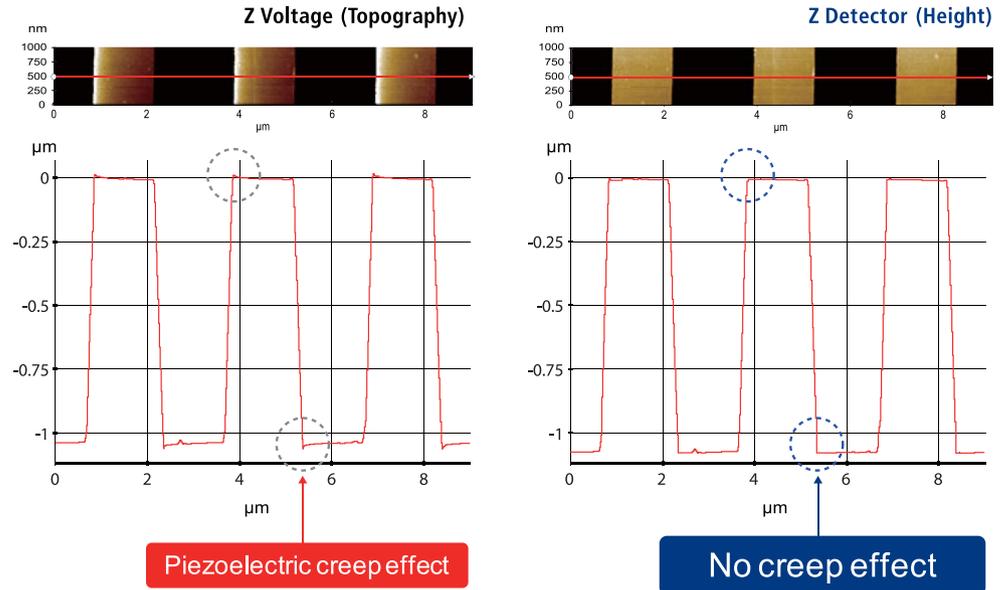
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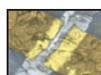


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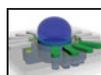


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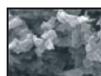
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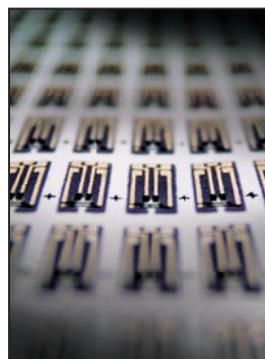
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#### ON THE COVER

**Paper-based technology.** Paper is the newest material that is beginning to transform the device landscape. This issue of *MRS Bulletin* highlights the use of paper to create novel devices for diagnostics, microfluidics, and electronics that combine low cost and high performance, and how this age-old material is still in its infancy in

this context with intriguing applications. The devices shown on the cover are printed electronic circuits layered onto wax-printed fluidic channels. Image courtesy of Jabulani R. Barber. See the technical theme that begins on page 299.



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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 three major international annual meetings encompassing approximately 125 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 the Alliance for Science & Technology Research in America and is an affiliate of the American Institute of Physics.

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## ARM200F TEM with Cold FEG

GaN [211] HAADF at 200 kV

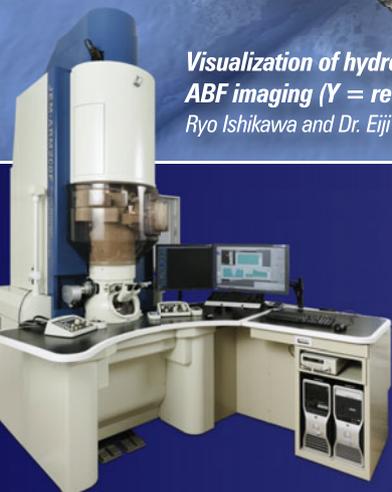
ABF, HAADF and EELS  
 $\text{Ca}_3\text{Co}_4\text{O}_9$  (110)  
Data courtesy of Dr. Robert Klie,  
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Visualization of hydrogen atomic columns in  $\text{YH}_2$  by  
ABF imaging (Y = red, H = green) Data courtesy of  
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