

# INTERFACE

Vol. 22, No. 4  
Winter 2013



## 47 High Temperature Materials for Energy Conversion

by Jeffrey W. Fergus

## 49 Highlights from the 2013 National Science Foundation Solid Oxide Fuel Cell Promise, Progress, and Priorities (SOFC-PPP) Workshop

by Jason D. Nicholas

## 55 Reversible Solid Oxide Fuel Cell Technology for Green Fuel and Power Production

by Nguyen Q. Minh and Mogens B. Mogensen

## 63 Design of Materials for Solar-Driven Fuel Production by Metal-Oxide Thermochemical Cycles

by Mark D. Allendorf, James E. Miller, and Anthony H. McDaniel

## 69 High Temperature Materials Corrosion Challenges for Energy Conversion Technologies

by Elizabeth Opila

3 From the Editor: A Phase Transition

7 From the President: Science and Technology on a Global Scale and the Society's Role

8 San Francisco, CA Meeting Highlights

18 Candidates for Society Office

24 Society News

36 People News

42 The Chalkboard: The Potentiostat and the Voltage Clamp

45 Tech Highlights

74 Section News

76 Awards

79 New Members

83 ECS Fellowship Reports

93 Student News

103 Cancun, Mexico Call for Papers

### On the cover . . .

Scanning electron micrograph of diffusion couple between manganese oxide and chromium oxide. (Photo taken by Kangli Wang, Auburn University, 2009.)

Cover design by Dinia Agrawala