

# MRS Bulletin



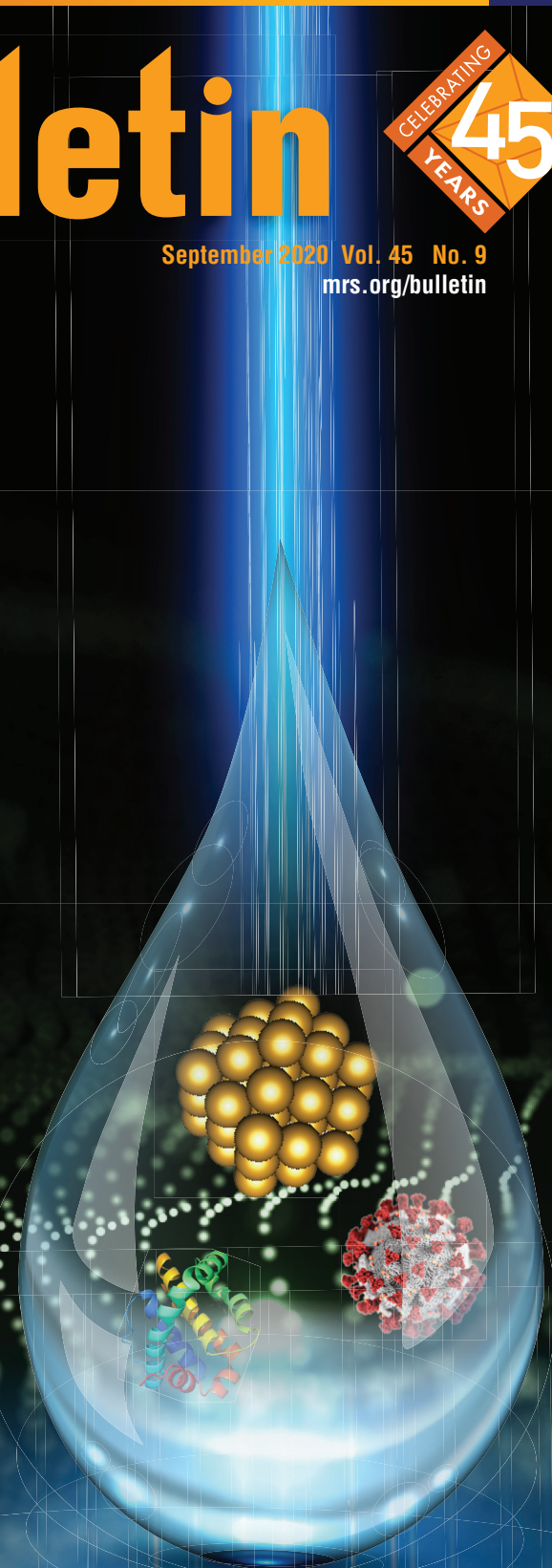
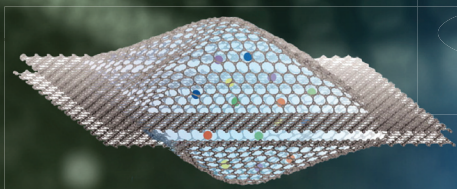
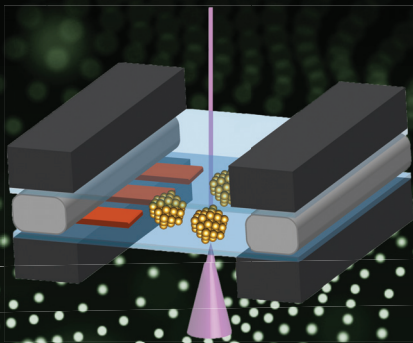
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September 2020 Vol. 45 No. 9  
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## Liquid phase electron microscopy

### ALSO IN THIS ISSUE

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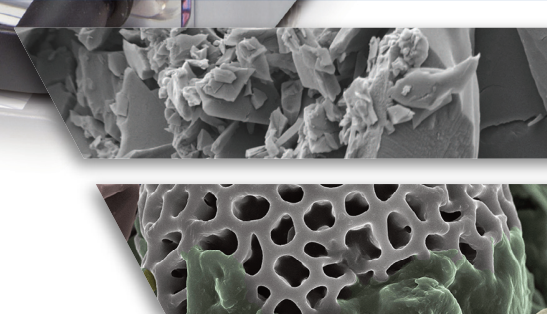
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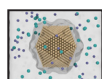
# CONTENTS

## LIQUID PHASE ELECTRON MICROSCOPY



- 704 **Liquid phase transmission electron microscopy for imaging of nanoscale processes in solution**

Utkur Mirsaidov, Joseph P. Patterson, and Haimei Zheng, Guest Editors



- 713 **Nucleation, growth, and superlattice formation of nanocrystals observed in liquid cell transmission electron microscopy**

Qian Chen, Jong Min Yuk, Matthew R. Hauwiller, Jungjae Park, Kyun Seong Dae, Jae Sung Kim, and A. Paul Alivisatos



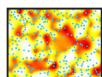
- 727 **Chemical and physical transformations of carbon-based nanomaterials observed by liquid phase transmission electron microscopy**

Lucas R. Parent, Maria Vratsanos, Biao Jin, James J. De Yoreo, and Nathan C. Gianneschi



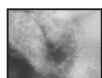
- 738 **In situ electrochemical scanning/transmission electron microscopy of electrode–electrolyte interfaces**

Raymond R. Unocic, Katherine L. Jungjohann, B. Layla Mehdi, Nigel D. Browning, and Chongmin Wang



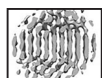
- 746 **Electron-beam-driven chemical processes during liquid phase transmission electron microscopy**

Taylor J. Woehl, Trevor Moser, James E. Evans, and Frances M. Ross



- 754 **Liquid phase electron microscopy of biological specimens**

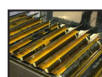
Diana B. Peckys, Elena Macías-Sánchez, and Niels de Jonge



- 761 **Chemical and bonding analysis of liquids using liquid cell electron microscopy**

Peter Ercius, Jordan A. Hachtel, and Robert F. Klie

## TECHNICAL FEATURE



- 769 **Nanophotonic materials for space applications**

2019 MRS Fall Meeting

MRS Bulletin Postdoctoral Publication Prize

Ognjen Ilic

## Energy Quarterly



- 697 **Editorial**

**Materials science, energy transition, and the pandemic**

Y. Shirley Meng

- 698 **Energy Sector Analysis**

**Greening the production and utilization of ammonia**

Tianyu Liu

FEATURE EDITOR: Sabrina Sartori

- 700 **Energy Sector Analysis**

**COVID-19 disrupts battery materials and manufacture supply chains, but outlook remains strong**

Boris Dyatkin

FEATURE EDITOR: Y. Shirley Meng



## DEPARTMENTS



### NEWS & ANALYSIS

#### 685 **Materials News**

- **A legend reborn: Additive manufacturing creates Wootz-Damascus steel**  
N. Balasubramanian
- **High-speed video analyzes microcracking during additive manufacturing of tungsten**  
Boris Dyatkin

#### 687 **Science Policy**

- **The COVID-19 pandemic informs future directions of US research universities**  
Judy Meiksin



### SOCIETY NEWS

#### 703 **MRS Journal Highlights**

#### 779 **MRS plans joint 2022 MRS Spring Meeting events with societies in South Korea, Japan, and Singapore**

Lori A. Wilson and Gopal R. Rao

#### 781 **Profiles**

**Takiya Ahmed Foskey: Chemist and community outreach champion**

Humaira Taz



### FEATURES

#### 694 **Beyond the Lab**

**Smart textiles respond to human emotions**

Tal Fox

#### 783 **Announcements**

**MRS Movers & Shakers**



### CAREER CENTRAL

#### 782 **Career Feature**

**How to define your “field of endeavor” for your EB-1A/NIW petition**

Marco Pignone

#### ADVERTISERS IN THIS ISSUE

Page No.

American Elements .....	Outside back cover
High Voltage Engineering .....	Inside front cover
Electron Microscopy Sciences .....	681



#### ON THE COVER

**Liquid phase electron microscopy.** Liquid phase or liquid cell transmission electron microscopy (TEM) is a powerful and emergent platform for nanoscale imaging and characterization of physical, chemical, and biological processes of materials in liquids. It can be used to explore nanoscale details of solution processes directly. Details of the development and applications of liquid cell TEM are discussed in this issue of *MRS Bulletin*. The cover shows a stylized representation of liquid phase TEM. The smaller image in the top left is a microfabricated flow liquid cell that sandwiches a thin layer of solution containing either a precursor solution or nanoparticles between two ultrathin SiN<sub>x</sub> membrane windows that are separated by a spacer. On the bottom left is a static graphene liquid cell that sandwiches nanodroplet pockets of precursor solution between two graphene layers. See the technical theme that begins on p. 704.



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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 more than 14,000 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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