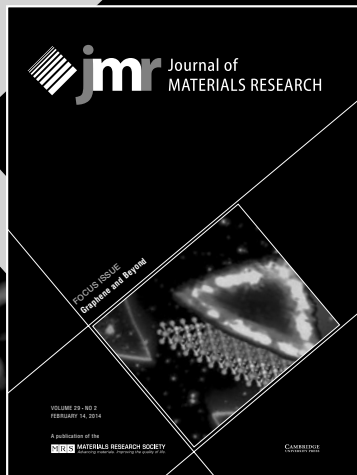


Submission Deadline—June 30, 2013



Graphene and Beyond

The discovery of graphene, i.e., a single atomic layer of carbon, can be considered a defining point in the research and development of stable, truly 2D material systems. This breakthrough has opened up the possibility of isolating and exploring the fascinating properties of atomic layers of several other layered materials, which upon reduction to single/few atomic layers, will offer functional flexibility, new properties, and novel applications. Today, the materials research community continues to discover and harness new low-dimensional allotropes, perhaps at an historically unprecedented rate. In this context, graphene and other 2D material systems (i.e., MoS_2 , WS_2 , WSe_2 , MoSe_2 , etc.) have become versatile platforms for new materials research and device architectures, and are finding their way into nearly every facet of the research world, including conductive polymers, transparent electrodes, chemical sensors, high-frequency devices, optoelectronic sensors, alternative energy, and bio-inspired systems, to name a few. At the same time, researchers from diverse disciplines are pushing the frontiers of these materials by developing innovative arrays of ribbon, hybrid, functionalized, doped, and heterostructures, often resulting in dramatically new scientific and engineering directions.

Abstracts related to experimentally demonstrated and theoretically predicted properties, including details of the synthesis, structure, chemistry, stacking sequence, and transport manipulation of these materials, are solicited. This includes interdisciplinary topics related to the materials science, chemistry, physics, mechanics, and engineering of 2D materials such as graphene, graphane, transition-metal dichalcogenides, silicene, and others.

Contributed papers are solicited in the following areas:

- ◆ Graphene and related carbon nanomaterials
- ◆ 2D-layered oxides, nitrides, and sulfides
- ◆ General properties of flat and tubular 1D-layered systems: nanotubes and nanoribbons
- ◆ Creation of atomic layers from layered materials by exfoliation and unzipping
- ◆ Creation of atomic layers from layered materials by chemical vapor deposition
- ◆ Chemical modification of 2D-layered materials and derivatives
- ◆ Structural and electronic characterization of 2D-layered materials including sheets, nanoribbons, and concentric tubules
- ◆ New physics of layered systems: sheets, tubules, and nanoribbons
- ◆ Applications of 2D-layered materials and derivatives

GUEST EDITORS

Joshua A. Robinson, Pennsylvania State University

Mauricio Terrones, Pennsylvania State University

John Boeckl, Air Force Research Laboratory

Joshua E. Goldberger, The Ohio State University

MANUSCRIPT SUBMISSION

To be considered for this issue, new and previously unpublished results significant to the development of this field should be presented. The manuscripts must be submitted via the *JMR* electronic submission system by June 30, 2013. Manuscripts submitted after this deadline will not be considered for the issue due to time constraints on the review process. Submission instructions may be found at www.mrs.org/jmr-instructions. Please select "Focus Issue: *Graphene and Beyond*" as the manuscript type. All manuscripts will be reviewed in a normal but expedited fashion. Papers submitted by the deadline and subsequently accepted will be published in the Focus Issue. Other manuscripts that are acceptable but cannot be included in the issue will be scheduled for publication in a subsequent issue of *JMR*.

jmr@mrs.org
Please contact jmr@mrs.org with questions.

CALL FOR PAPERS

MATERIALS RESEARCH SOCIETY®

2013 Board of Directors

Officers

O. Auciello, *President*
B.M. Clemens, *Immediate Past President*
T. Benson Tolle, *Vice President and President-Elect*
S.J. Hearne, *Secretary*
M.R. Fitzsimmons, *Treasurer*
T.M. Osman, *Executive Director*

Directors

A.C. Arias
S.M. Baker
D. Cahen
D.B. Dimos
S. Eglash
C-B. Eom
S. Ermer
E. Garfunkel
S.M. Haile
A.M. Hodge
O. Kraft
H. Matsumura
F.C. Meldrum
E.A. Stach
S.K. Streiffer
S.E. Trolier-McKinstry

2013 Publications Committee

P.C. McIntyre, *Chair*
P.B. Messersmith, *Editors Subcommittee*
R.A. Vaia, *New Publication Products Subcommittee*
J.M. Phillips, *Publications Quality Subcommittee*

2013 MRS Committee Chairs

M.S. Whittingham, *Academic Affairs*
C.B. Carter, *Awards*
N. Bassim, *Government Affairs*
D.S. Ginley, *Meetings Committee*

Y. Chabal, *Member Engagement*
P.C. McIntyre, *Publications*
A. Risbud, *Public Outreach*

MRS Headquarters

T.M. Osman, *Executive Director*
J.A. Dillen, *Director of Finance and Administration*
P.A. Hastings, *Director of Meeting Activities*
E.K. Novak, *Director of Communications*

Journal of Materials Research Founding Sponsors

Allied-Signal Inc.
Xerox Corporation

About the Materials Research Society

The Materials Research Society (MRS®) is a not-for-profit scientific association founded in 1973 to promote interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes over 16,000 scientists from industrial, government, and university research laboratories in the United States and abroad.

The Society's interdisciplinary approach to the exchange of technical information is qualitatively different from that provided by single-discipline professional societies because it promotes technical exchange across the various fields of science affecting materials development. MRS sponsors three major international annual meetings encompassing many topical symposia, as well as numerous single-topic scientific meetings each year. It recognizes professional and technical excellence, conducts tutorials, and fosters technical exchange in various local geographical regions through Section activities and Student Chapters on university campuses.

MRS publishes symposia proceedings, the *MRS Bulletin*, and other volumes on current scientific developments. The *Journal of Materials Research*, the archival journal spanning fundamental developments in materials science, is published twenty-four times a year by Cambridge University Press for the MRS. *MRS Communications* is a full-color letters and perspectives journal focused on groundbreaking work across the spectrum of materials research.

MRS regular and student members may subscribe to *Journal of Materials Research*. See inside front cover for subscription rates for *Journal of Materials Research*.

MRS is an Affiliated Society of the American Institute of Physics and participates in the international arena of materials research through associations with professional organizations.

For further information on the Society's activities, contact MRS Headquarters, 506 Keystone Drive, Warrendale, PA 15086-7573; telephone (724) 779-3003; fax (724) 779-8313.



A publication of the
MRS MATERIALS RESEARCH SOCIETY
Advancing materials - improving the quality of life.

Periodical Rate Postage Paid at New York, NY
and Additional Mailing Offices

Postmaster—Send change of address notice to:

ISSN: 0884-2914

Cambridge University Press
100 Brook Hill Drive
West Nyack, NY 10994-2113, USA