

# PHYSICAL REVIEW B

## CONDENSED MATTER AND MATERIALS PHYSICS

### Editors

PETER D. ADAMS  
ANTHONY M. BEGLEY

### Associate Editors

ALLEN GOLAND  
WILLES H. WEBER

KELVIN G. LYNN  
MICHAEL WEINERT

### Senior Assistant Editors

JULIE KIM-ZAJONZ  
DANIEL T. KULP

### Assistant Editors

MANOLIS ANTONOYIANNAKIS  
ALISON Y. LOUDON

MATTHEW D. EAGER  
BRADLEY RUBIN  
KIRSTEN TAYLOR

SUSAN H. FARRANT  
JAMES W. TAYLOR

### Senior Editorial Assistant

MARIE RUPOLO

### EDITORIAL BOARD

#### Term ending 31 December 2006

M. A. MOORE  
KARIN RABE  
PHILIP L. TAYLOR  
SUKEKATSU USHIODA  
MATTHIAS SCHEFFLER

#### Term ending 31 December 2007

VINCENT H. CRESPI  
DANIEL W. HONE  
ANNA PAINELLI  
DAVID VANDERBILT  
Z. VALY VARDENY

#### Term ending 31 December 2008

JOHN R. CLEM  
MATTHEW P. A. FISHER  
STEVEN A. KIVELSON  
DOUGLAS L. MILLS  
MICHAEL PEPPER  
DAVID B. TANNER

The American Physical Society  
One Physics Ellipse  
College Park, MD 20740-3844

President JOHN J. HOPFIELD  
President-Elect LEO P. KADANOFF  
Vice-President ARTHUR BIENENSTOCK  
Editor-in-Chief MARTIN BLUME  
Treasurer  
and Publisher JOSEPH W. SERENE  
Executive Officer JUDY R. FRANZ

---

APS Editorial Office  
1 Research Road, Box 9000  
Ridge, NY 11961-9000  
Phone: (631) 591-4020  
Fax: (631) 591-4141  
Email: prb@aps.org  
Web: <http://publish.aps.org/>  
Submissions: [prbtex@aps.org](mailto:prbtex@aps.org) or  
<http://authors.aps.org/ESUB/>

---

Member Subscriptions:  
APS Membership Department  
One Physics Ellipse  
College Park, MD 20740-3844  
Phone: (301) 209-3280  
Fax: (301) 209-0867  
Email: [membership@aps.org](mailto:membership@aps.org)

---

Institutional Subscriptions:  
APS Subscription Services  
Suite 1N01  
2 Huntington Quadrangle  
Melville, NY 11747-4502  
Phone: (516) 576-2270, (800) 344-6902  
Fax: (516) 349-9704  
Email: [subs@aps.org](mailto:subs@aps.org)

**Manuscripts** should be submitted electronically in acceptable format (see <http://authors.aps.org/ESUB/> or inquire at [prbtex@aps.org](mailto:prbtex@aps.org)). If this is not possible, send one copy to the Editorial Office. Submission is a representation that the manuscript has not been published previously and is not currently under consideration for publication elsewhere. Authors should provide indexing codes according to the PACS scheme (available at <http://publish.aps.org/PACS/>). An executed APS copyright-transfer form must be provided (effective only on acceptance for publication); the form is available via our Web submission server and via <http://authors.aps.org/>. Information for contributors may be found on our Web server or in the January and July issues.

To help defray editorial and production expenses, authors of articles which are not submitted in acceptable electronic format are expected to pay a **publication charge** of \$120 plus \$120 per journal page. Acceptable formats are REV<sub>T</sub><sub>E</sub>X (preferred), L<sub>A</sub>T<sub>E</sub>X, plain T<sub>E</sub>X; MS Word; PostScript figures. **Reprints** are offered for sale to authors.

For information about **subscription prices** and about the **online version** of the journal, see our Web server, or inquire at [assocpub@aps.org](mailto:assocpub@aps.org). **Member** inquiries regarding **subscriptions**, renewals, address changes, missing or damaged copies, microfilm, and single-copy orders should be addressed to the APS Membership Department. **Institutional subscribers** should address subscription inquiries to APS Subscription Services. For address changes please send both old and new addresses, and if possible, send the mailing label from a recent issue.

Copyright © 2006 by The American Physical Society. All rights reserved.  
*Physical Review B*<sup>TM</sup> is a trademark of The American Physical Society.

**Rights and Permissions:** See <http://forms.aps.org/author/copyfaq.html>.

**Copying:** No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the written permission of the publisher, except as stated below. Single copies of individual articles may be made for private use or research. Authorization is given to copy articles beyond the use permitted by Sections 107 and 108 of the U.S. Copyright Law, provided the copying fee of \$23.00 per copy per article is paid to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA.

**Reproduction** of an entire Article in a reprint collection, or for advertising or promotional purposes, or republication in any form requires permission from APS. Permission must be sought from the Associate Publisher, The American Physical Society, One Physics Ellipse, College Park, MD 20740-3844; email: [assocpub@aps.org](mailto:assocpub@aps.org).

**Other Use:** Permission is granted to quote from the journal with the customary acknowledgment of the source. Permission must be sought from the APS Associate Publisher to reproduce a figure, table, or excerpt of an Article. Authorization for private use or research does not extend to systematic or multiple reproduction, to copying for promotional purposes, to distribution in any format, or to republication in any form. In all such cases, specific permission from APS must be obtained.

**Physical Review B** [ISSN: 1098-0121 (print), 1550-235X (online); CODEN PRBMDO; printed in USA] is published four times a month by The American Physical Society, 1 Research Road, Box 9000, Ridge, NY 11961-9000.

POSTMASTER: Send address changes to Physical Review B, APS Subscription Services, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502. The 2006 print + online base price is \$5990. Periodicals postage rates are paid at Huntington Station, NY, and additional mailing offices.