

# PHYSICAL REVIEW B

## CONDENSED MATTER AND MATERIALS PHYSICS

### Editor

PETER D. ADAMS

### Associate Editors

ANTHONY M. BEGLEY ALLEN GOLAND  
KELVIN G. LYNN FRANK NARDUCCI  
MYRON STRONGIN MICHAEL WEINERT

### Assistant Editors

DANIEL T. KULP  
R. MARK WILSON

### Senior Assistants to the Editor

MATTHEW D. EAGER SUSAN H. FARRANT  
JULIE KIM-ZAJONZ BRADLEY RUBIN

### EDITORIAL BOARD

Term ending 31 December 2002

JOHN R. CLEM  
BARBARA A. JONES  
MICHAEL R. NORMAN  
DOUGLAS OSHEROFF  
JOHN A. POPLÉ

Term ending 31 December 2003

HIDETOSHI FUKUYAMA  
PATRICIA M. MOONEY  
J. B. PENDRY  
JOSE A. RIERA  
B. SRIRAM SHASTRY

Published through the  
American Institute of Physics  
by

**The American Physical Society**

#### President

WILLIAM F. BRINKMAN

#### President-Elect

MYRIAM P. SARACHIK

#### Vice-President

HELEN R. QUINN

#### Editor-in-Chief

MARTIN BLUME

#### Treasurer and Publisher

THOMAS J. MCILRATH

#### Executive Officer

JUDY R. FRANZ

#### Editorial Office:

**The American Physical Society**

1 Research Road, Box 9000  
Ridge, NY 11961-9000

Phone: (631) 591-4020

Fax: (631) 591-4141

Email: [prb@aps.org](mailto:prb@aps.org)

Web: <http://publish.aps.org/>

Submissions: [prbtex@aps.org](mailto:prbtex@aps.org) or

<http://publish.aps.org/ESUB/>

#### Production and distribution by

**American Institute of Physics**

Suite 1N01

2 Huntington Quadrangle  
Melville, NY 11747-4502

Phone: (516) 576-2200

Fax: (516) 576-2643

Email: [prb1@aip.org](mailto:prb1@aip.org)

**Manuscripts** may be **submitted** electronically if in appropriate format (see <http://publish.aps.org/ESUB/> or inquire at [prbtex@aps.org](mailto:prbtex@aps.org)). Alternatively, send three copies 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. A signed APS **copyright-transfer** form (effective only on acceptance for publication) must be provided; the form is available on our Web server and appears at the end of the 3 December 2001 issue of *Physical Review Letters*. 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 published articles are requested to pay a **publication charge** of \$95 per article plus \$95 per journal page. Publication charges are not requested for properly prepared electronic submissions. Acceptable formats are REVTeX (preferred), LaTeX, Harvmac, Plain TeX; 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, One Physics Ellipse, College Park, MD 20740-3844 [phone: (301) 209-3280; fax: (301) 209-0867; email: [membership@aps.org](mailto:membership@aps.org)]. **Nonmembers** should address subscription inquiries to APS Subscription Services, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502 [phone: (516) 576-2270 or (800) 344-6902; fax: (516) 349-9704; email: [subs@aps.org](mailto:subs@aps.org)]. For address changes please send both old and new addresses, and, if possible, include an address stencil imprint from the mailing wrapper of a recent issue; allow six weeks advance notice.

#### Copyright 2002 by The American Physical Society

**Permission** to quote excerpts or to reprint any figures or tables should be obtained directly from an author. The American Physical Society for its part hereby grants permission to quote excerpts and reprint figures and/or tables from its journals with acknowledgment of the sources. **Individual** teachers, students, researchers, and libraries in nonprofit institutions acting for them are permitted to make hard copies of articles for use in teaching or research, provided such copies are not sold. **Copying of articles for sale** by document delivery services or suppliers, or beyond the free copying allowed above, is permitted against payment of a copying fee. The current copying fee is \$20.00, per article, per copy. Express permission of APS is not required, except for purposes stated below, provided that the fee is paid through the Copyright Clearance Center, Inc. (CCC), 222 Rosewood Drive, Danvers, MA 01923. Contact the CCC for information on how to report copying and remit payments. **Reproduction** in a reprint collection, or for advertising or promotional purposes, or republication in any form requires permission of one of the authors and a license from APS. Such a license must be sought from Barbara Hicks, Associate Publisher, The American Physical Society, One Physics Ellipse, College Park, MD 20740-3844. Permission from the author must be sought and obtained from him or her directly.

**Physical Review B (ISSN: 0163-1829; CODEN PRBMDO; printed in USA) is published four times a month (twice on the 1st and twice on the 15th of each month) by The American Physical Society through the American Institute of Physics.**

**POSTMASTER: Send address changes to Physical Review B, APS Subscription Services, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502. The 2002 print + online subscription price is \$5465 Academic Base; \$6015 Carnegie Doctoral/Equivalent; \$6570 Carnegie Research/Equivalent/Corporate & Government. Periodicals postage rates are paid at Huntington Station, NY, and additional mailing offices.**