

### Editorial Board

**William Bonfield, Editor**

Department of Materials Science & Metallurgy, University of Cambridge

**Jonathan Ashmore**

Department of Physiology, University College London

**Christopher Dobson**

Department of Chemistry, University of Cambridge

**Francis Doyle III**

Department of Chemical Engineering, University of California, Santa Barbara

**Wendy Hall**

Department of Electronics and Computer Science, University of Southampton

**Larry Hench**

Department of Materials, Imperial College London

**Richard Henderson**

MRC Laboratory of Molecular Biology, University of Cambridge

**C. James Kirkpatrick**

Institut für Pathologie, Johannes Gutenberg-Universität Mainz

**Richard Kitney**

Department of BioEngineering, Imperial College London

**Michael Klein**

Laboratory for Research on the Structure of Matter, University of Pennsylvania

**Tadashi Kokubo**

Research Institute for Science and Technology, Chubu University

**Tom McLeish**

IRC in Polymer Science and Technology, University of Leeds

**Hubert Markl**

Fachbereich Biologie, Universität Konstanz

**Gary Messing**

Department of Materials Science and Engineering, Pennsylvania State University

**Steve Oliver**

School of Biological Sciences, University of Manchester

**Patrick Prendergast**

Department of Mechanical & Manufacturing Engineering, Trinity College Dublin

**Sir George Radda**

University Laboratory of Physiology, University of Oxford

**David Rand**

Department of Mathematics, University of Warwick

**Neil Rushton**

Orthopaedic Research Unit, University of Cambridge

**John Ryan**

Bionanotechnology IRC, University of Oxford

**Simon Tavaré**

Department of Biological Sciences, University of Southern California

**Richard Timpler**

Department of Chemistry, Imperial College London

**Robert Williamson**

The Murdoch Institute, Royal Children's Hospital, Melbourne

**Ioannis Yannas**

Department of Mechanical Engineering, Massachusetts Institute of Technology

**Publishing Editor:**

**Tim Holt** (tel: +44 (0)20 7451 2649; fax: +44 (0)20 7976 1837;

tim.holt@royalsoc.ac.uk)

**6–9 Carlton House Terrace, London SW1Y 5AG, UK**

**www.journals.royalsoc.ac.uk**

**Journal Production Manager: Matthew Llewellyn**

**AIMS AND SCOPE**

*Interface* is a new international journal publishing papers from the interface between the physical sciences, including mathematics, and the life sciences. It provides a high-quality forum to publish rapidly and interact across this boundary in two main ways: *Interface* publishes research applying chemistry, engineering, materials science, mathematics and physics to the biological and medical sciences; it also highlights discoveries in the life sciences that allow advances in the physical sciences. Both sides of the interface are considered equally.

Copyright © 2005 The Royal Society

Except as otherwise permitted under the Copyright, Designs and Patents Act, 1988, this publication may only be reproduced, stored or transmitted, in any form or by any other means, with the prior permission in writing of the publisher, or in the case of reprographic reproduction, in accordance with the terms of a licence issued by the Copyright Licensing Agency. In particular, the Society permits the making of a single photocopy of an article from this issue (under Sections 29 and 38 of this Act) for an individual for the purposes of research or private study.

**SUBSCRIPTIONS**

*Journal of the Royal Society Interface* (ISSN 1742-5689) is published quarterly. Full details of subscriptions may be obtained on request from the Subscription Sales Department, The Royal Society, 6–9 Carlton House Terrace, London, SW1Y 5AG. Tel +44 (0)20 7451 2646; fax +44 (0)20 7976 1837; email: sales@royalsoc.ac.uk. The Royal Society is Registered Charity No 207043.

| Subscription prices<br>2005 calendar year | Europe     | USA & Canada | All other countries |
|---|------------|--------------|---------------------|
| Printed version                           | £495/\$840 | £520/\$885   | £530/\$900          |