

# Our changing nature

The choice of materials science for the Nature Publishing Group's (NPG's) first research title in the physical sciences was in many ways an obvious one. For more than 130 years the journal *Nature* has been in the business of integrating multidisciplinary science into a single high-impact journal. Materials science represents one of the most exciting areas of interdisciplinary science and technology, blending physics, chemistry, biology and engineering into an innovative, if not always cohesive, whole (see the historical Commentary by Robert Cahn on page 3). Given the broad inclusive approach of NPG to science publishing, *Nature Materials* seemed a natural fit.

Materials science is widely recognized today as one of the three fastest growing technologies — together with biotechnology and information technology — that play a major role in global economic growth, and will be crucial to the future development of society. The current expansion of the field — exemplified by the rapid developments in our ability to manipulate structures at the nano and atomic scales — and its increasing impact on traditional disciplines is progressively strengthening the central role that materials research is set to play in this century.

The range of fundamental and technological questions that materials science seeks to answer is paralleled by the range of techniques it uses (see, for example, new developments in terahertz spectroscopy, page 26). From the creation of nanoscale materials (page 54) to the modelling and prediction of materials properties by ever-more powerful computers (page 45) and the design of materials with sophisticated structures and functions inspired by the living world, materials science is pushing the frontiers of science and technology. The interface between materials science and biology is one of the most exciting collaborative scientific endeavours, because it is providing clues to the fundamental processes regulating interactions between bioactive materials and living tissues; the ultimate goal being the growth of new organs.

This diversity and 'frontier' spirit can sometimes be problematic. With so many disciplines using different technologies and speaking different jargon, communication is not always easy — the prime example being the scientific cultural gap between scientists involved in research into 'soft' and 'hard' matter. Moreover, in spite of its recent recognition, materials science still suffers from image problems associated with its engineering origins. Materials societies are slowly acknowledging the changing face of the subject, but more needs to be done to make it more attractive to the outside world.

The community is already served by a wide range of scientific journals, and some may ask whether another is needed. We firmly believe that materials research would benefit from being represented by a truly interdisciplinary publication that can help record and shape its future. We do not intend to replace any existing journal, but on the basis of the advice and enthusiasm of a broad range of scientists, we propose a conceptually different approach whereby different disciplines can come together and exchange ideas. A strong aspect of this approach is displayed by our News and Views section (from page 5) where you will find thought-provoking articles by experts in the field on exciting new developments in materials science, including reports of inspiring meetings.

We aim to both inform and involve the community, and we look forward to working with you to make *Nature Materials* an invaluable and enjoyable source of information. To achieve this goal, we welcome commentaries concerning policy, funding, education or materials science in general, and in our correspondence section we will publish short contributions on matters arising from previous issues. Moreover, the journal's website offers a series of online services including electronic submission, continuous publication and supplementary information.

We are often asked about our editorial procedure and relationship with *Nature*. Like *Nature*, we place high priority on rapid editorial decisions and publication. *Nature Materials* has a full-time editorial staff and no external editorial board. Instead, as at *Nature*, decisions are made by the editors, often after consultation with outside experts. This allows editorial flexibility and helps ensure that the opinions of a particular individual or group do not dominate any particular field. Despite having much in common, however, the two journals are editorially independent. It will be for authors alone to decide where to submit their manuscripts, and *Nature* will of course continue to publish materials science research.

The physical sciences have always been an important part of NPG, and are flourishing following the launch of community websites for physics ([www.nature.com/physics](http://www.nature.com/physics)) and materials science ([www.nature.com/materials](http://www.nature.com/materials)). Encouraged by the feedback from these communities, we are delighted to welcome you to *Nature Materials* and we hope that you will enjoy reading the journal as much as we have enjoyed creating it.

Left to right

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