

book reviews

must provide a service to the scientific communities rather than just add to the overall explosive numbers of scientific papers.

Nonlinear Phenomena in Complex Systems delivers to the community in a couple of ways. First, it provides a mostly regional forum (primarily Central and Eastern European) for both experimental and theoretical research in interdisciplinary complex systems. Thus it gives both an editorial and a scientific voice to the many creative individuals who were previously relegated to the cloistered world of Soviet science journals. Lest those of us in the United States get too uppity, we should remember that it was only a few decades ago that *Physical Review* was considered a regional or 'colonial' journal.

But the journal must ultimately stand on quality alone, and the quality and content of the papers in *Nonlinear Phenomena* are rather uneven. One problem lies in the presentation of technical data. Topics covered range from esoteric mathematical proofs and formalisms to practical experimental research. Unfortunately, there seems to have been little editorial attempt to persuade the authors to make their papers more accessible to an interdisciplinary audience. This is an extremely important aspect and very hard to pull off.

Apart from issues of content, there are also problems with the quality of presentation. Specifically, the figures range in quality from adequate to unreadable. This at least must be addressed for the journal to survive.

On the positive side, there are articles from regional conferences that are quite stimulating. Clearly, a reader interested in the latest in interdisciplinary complex systems research would do better initially to peruse this journal's competitors, for example *Chaos* and the *International Journal of Bifurcations and Chaos*. But *Nonlinear Phenomena* is an improving publication that serves a regional audience with papers that range from the banal to the fascinating. ■

► <http://ccisc.bas-net.by/npcs>

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Backing the n-word

Journal of Nanoparticle Research

editor-in-chief Mihail C. Roco
Kluwer. 4/yr. \$278 (institutional),
\$88 (individual)

Saul Tendler

When Shakespeare penned the line "I do not like her name", he could have been thinking about nanotechnology. Derived from the Greek *nanos* for dwarf, it may revolutionize our lives through the creation of nanometre-scale sensors, devices and machines. How-

ever, early claims about the potential of the subject leave many people cautious about using the n-word.

The *Journal of Nanoparticle Research* seeks to embrace all things nanotechnology while avoiding its name. With a hard focus on nanoparticles, the scope of the journal includes fundamental science, chemical synthesis, modelling, simulations, instrument development and molecular/particulate self-assembly into higher-order architectures. This broad remit extends from the biological and chemical to the physical sciences. The first volume of the journal has attracted an impressive number of full papers, many from leading groups with international reputations. Perhaps unsurprisingly, the majority of the papers cover the production and properties of inorganic nanoparticulate systems.

The journal carries both long and short papers, reviews, technology notes and meeting reports. There are also policy papers on funding initiatives. Intriguingly, the journal allows papers directed towards education: the first edition has a splendid paper on making the nanoworld comprehensible for schools and beyond. Given the publication's specialist nature, though, it may be that some of this outreach activity will fall away over time.

There are many top-quality physico-chemical journals that would publish much of the work found in the first volume. But such publications do not attract a sufficient critical mass of papers in this area to create a comprehensive view. With quality basic science, and applications assured in areas as diverse as catalysis and drug delivery, *Journal of Nanoparticle Research* provides a cross-disciplinary focal point for the subject. Success is assured if it can maintain this focus. ■

► <http://www.wkap.nl/journalhome.htm/1388-0764>

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Plant power against pollution

International Journal of Phytoremediation

editor-in-chief Guy R. Lanza
CRC Press. 4/yr. \$385 (institutional, print plus online), \$295 (institutional, print or online), \$125 (to members of the Association for the Environmental Health of Soils)

William Purvis

Phytoremediation relies on the natural properties of plants to help clean up hazardous metal and organic wastes. Bioremediation with microorganisms was used in the *Exxon Valdez* oil spill in Alaska and also after the Chernobyl nuclear power plant accident. The idea of using plants to extract, inactivate, transform or degrade contaminants is appealing — they bring 400 million years of evolutionary processes across hugely diverse groups. Moreover, increased environmental awareness and the need for sustainable development have sparked intense activity in this area across the world, particularly in the United States.

Appropriately, the first issue of *International Journal of Phytoremediation* features an invited and readable review article by renowned ecotoxicologist André Sobolewski, who discusses the biological and non-biological processes responsible for removing metal from mine drainage by wetlands. This is the classic application, and uptake by plants is only part of the story. Bacteria may accumulate and transform metals which may also be sorbed to organic matter and inorganic materials.

Phytoremediation is an interdisciplinary subject, its success depending on diverse areas of science that include genetics, physiology, biochemistry, microbiology, soil science, geochemistry and engineering. This journal necessarily takes a broad view



and encourages the submission of papers describing technologies that combine chemical and other processes with phytoremediation.

The role of the microorganisms involved is well treated and geochemistry has not been neglected, trends that I hope will continue. Ways of enhancing metal availability to improve its uptake by plants are also discussed. The journal has achieved a sensible balance between original research articles, invited reviews, special commentaries and technical notes. The fact that much activity is currently US-based may explain the strong preponderance of US scientists in the impressive editorial board, although leading scientists from other countries are also represented.

This journal is the first of its kind devoted to phytoremediation. Its appearance is timely considering the importance of the subject and the rapidly growing literature at present scattered across journals devoted to diverse disciplines. It should allow improved communication between scientists and lead to the further collaborations necessary to extend our knowledge in this field. The journal deserves to succeed and will undoubtedly be of value to many life and Earth scientists.

♦ <http://www.crcpress.com:80/us/jour/jourinfo/15126514.asp?mcsid=>

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Green and red lights at the cell

Traffic: The International Journal of Intracellular Transport

editors Frances M. Brodsky, Mark C. P. Marsh & Sandra L. Schmid
Munksgaard. 12/yr. \$380 (institutional), \$120 (individual)

Reinhard Jahn

Since the classic work of George Palade and colleagues in the sixties, the field of cell membrane traffic has undergone an almost exponential growth. Milestones include the introduction of yeast genetics for identifying genes involved in individual trafficking steps and the development of cell-free assays for investigating membrane transport. More recently, the dramatic progress in live-cell microscopy and the inroads of structural biology have transformed our understanding of trafficking proteins.

Traffic is the first journal devoted entirely to the coverage of membrane traffic. Launched at the start of this year by a group of renowned scientists including Frances

Brodsky, Mark Marsh, Sandy Schmid and the late Thomas Kreis, the goal is to create "a central journal to gather together publications that are of most interest to those working on intracellular trafficking".

Published monthly, about half of the journal space is devoted to short and well-illustrated reviews centred around a common theme. Other features include a "toolbox" section covering technical developments (recently including galleries of crystal structures of trafficking proteins, and a collection of John Heuser's stunning three-dimensional electron micrographs), meeting reports, and commentaries by senior scientists about current issues of general interest. The remainder contains research papers.

Where does *Traffic* stand after the first seven issues? Obviously, it is very difficult to start a new journal in a highly competitive field. So far, *Traffic* publishes only three to five research papers a month, too few to have a serious impact. In a world driven by 'impact factor' mania, students and postdocs are not easily persuaded to submit high-quality papers to a new journal with a still uncertain acceptance and will turn instead to established cell biology journals. However, it is refreshing to see senior scientists serving the community as enthusiastic editors in a journal market increasingly dominated by professional editors with limited research experience and by revenue-oriented business managers.

Despite its (still) small size, *Traffic* has succeeded in attracting many leading scientists, as can be seen by a glance at the editorial board and, more importantly, by the list of contributors.

The journal's appeal is heightened by an attractive layout and excellently reproduced drawings and images, mostly in colour. *Traffic* still has a long way to go before it becomes a 'must read' for the trafficking community, but it has made a strong start and is well on its way. All it needs now is its growing accep-

tance as an attractive forum for the publication of excellent research articles. ■

♦ <http://journals.munksgaard.dk/traffic.nsf/at/forside-1304>

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The nidus and the crucible

Evolution & Development

editor-in-chief Rudolf A. Raff
Blackwell Science. 6/yr. Print only:
institutional: \$195 (US), \$215 (elsewhere);
individual: \$80 (US), \$100 (elsewhere).
Combined print/online: institutional:
\$214.50 (US), \$234.50 (elsewhere);
individual: \$88 (US), \$108 (elsewhere)

Moya Meredith Smith

This journal emerges from the melting pot of our knowledge of how genes act during development to produce such a diversity of characteristics. It is an exciting new arrival on the scene. At the cutting edge of integrated biological science, it offers us a merging of two disciplines separated by a century of dispute. Will it bring the 'reciprocal illumination' long advocated by the classic theory that an understanding of development will illuminate that of evolution, and vice versa?

There is increasing interaction between the separate disciplines of palaeontology, population biology, developmental biology and molecular biology. And the journal aims to show how evolution and development are intimately related despite being fundamentally different processes. However, these separate disciplines have distinct and opposite concepts. One emphasizes diversity and the elimination of genetic options by natural

