

Gelling together

Richard Jones

Polymer Gels and Networks. Editor-in-chief T. Tanaka. Elsevier. 4/yr. £151, \$235.

Polymer Reaction Engineering. Editors A. Penlidis and K. F. O'Driscoll. Dekker. 3/yr. \$225 (institutional), \$112.50 (personal).

Trends in Polymer Science. Editor William Hawthorne. Elsevier. 12/yr. USA and Canada £490, elsewhere £318 (institutional); \$110, £69 (personal); \$55, £34 (student).

THE white of a fried egg and the epoxy resin matrix of a high-performance composite material may not seem to have much in common. But both are examples of gels, and the appearance of *Polymer Gels and Networks* is an expression of faith that such apparently disparate systems can be brought together within a single conceptual framework. The scope of the journal, then, is wide, ranging from the theoretical physics underlying the attempt to understand the gelation process, through polymer materials science, to biopolymer gels, important primarily as food materials but also because of their growing potential in biomedicine. In the near future lies the promise of gels as so-called intelligent or smart materials (although to my mind the term 'instinctive materials' reflects more accurately their capabilities) — materials that can react mechanically to changes in their environment, or membranes whose transport properties can be controlled electrochemically.

Despite its wide scope, the journal is at present modest in size — four issues a year, each with half a dozen papers or so. But the editors have been successful in attracting papers from a truly international community. In particular, the prominence of Japanese workers in the field of biopolymer gels is well reflected in the origin of papers published so far.

Polymer Reaction Engineering represents a much more closely defined community: those involved in the chemical engineering of polymerization, with a heavy emphasis on mathematical modelling and process simulation. From a superficial perspective, an outsider might take this to be a mature field. In fact, rapidly

increasing competitive pressures in the plastics industry have made the task of understanding and improving such existing processes an urgent and challenging matter. To some extent there are journals that already cover this ground, including *Polymer Engineering and Science* and *Journal of Applied Polymer Science*, but this latest publication may well be able to find a more specialized niche.

In contrast to this trend towards specialization, *Trends in Polymer Science* aims to bring unity to the whole field of polymer science, based on brief, invited, reviews of what the editors consider to be the exciting issues of the moment. It is an attractive formula, one that has clearly been most successful for the other *Trends* journals. But I feel that *TIPS*, as the publishers would no doubt like it to be known, has yet to find its feet.

First impressions are favourable; a colourful and well designed cover highlights the lead review article for each issue. But inside the journal has a dull and unattractive layout, only with very few poorly reproduced photographs. A "Viewpoint" column gives an invited author the chance to grind an axe of his or her choice; I welcome the attempt to stimulate debate and it is particularly pleasing that the authors of these articles are

industrialists as well as academics. But judging by the extreme paucity of letters published in response to some fairly provoking debating positions, an outsider might judge the polymer-science community to be not terribly lively, a conclusion that would be reinforced by reading the book reviews and conference reports, with their worthy and dully informative aura.

But it is the review articles that are at the heart of such a publication, and here I think there are also problems. Although several articles have been excellent, some have succumbed to a pitfall that faces all short reviews; they lack both the comprehensiveness of a full review article and the readability and immediacy of more popular science writing. The choice of topics, too, does not yet seem to have achieved a happy balance; underrepresented areas include polymer physics, particularly in its theoretical aspects, as well as the engineering side of polymer science.

I have no doubt, however, that the journal will succeed; it fulfils an important need, and its price will encourage personal subscriptions (the student rate is particularly good value). But it still has some way to go before it lives up to its potential. □

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Competing chemical companions

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Bioorganic and Medicinal Chemistry. Editor-in-chief C.-H. Wong. Elsevier. 12/yr. North, Central and South America \$700, elsewhere £455.

DURING the 1990s, several new players have entered the primary literature of medicinal chemistry and bioorganic chemistry (for example, *Bioorganic and Medicinal Chemistry Letters*, *Bioorganic and Medicinal Chemistry*, *Current Medicinal Chemistry* and *Medicinal Chemistry Research*). Some of these have become established as essential reading for scientists wishing to keep abreast of the latest results in these areas (see *Nature* 359, 458; 1992).

Assessing *Bioorganic and Medicinal Chemistry* in its second year of publication, one is tempted to look back at the effects of this flourishing development of new journals. They reflect both the emergence of medicinal chemistry as a major discipline in its own right and the growing scientific and commercial interest in understanding how chemical structures control biological processes at a molecular level. The new journals also provide an outlet that will motivate medicinal chemists to present their results at a time when the traditional distinctions between organic chemistry, biology and molecular

pharmacology are becoming increasingly blurred.

As its name suggests, the new journal is closely related to *Bioorganic and Medicinal Chemistry Letters*. Readers of the other Pergamon duet, *Tetrahedron* and *Tetrahedron Letters*, will be familiar with the concept of a rapid publication journal for short preliminary communications (the *Letters*) with more detailed accounts, including full experimental procedures, appearing in *Bioorganic and Medicinal Chemistry*. Two desirable hallmarks of the Pergamon journals are retained: the graphical abstracts, which allow readers to scan the contents rapidly, and occasional "Symposia-in-Print", the first of which appeared in the June 1994 issue and attracted 24 papers on biological catalysis.

If this new journal is to be regarded as a success it will, like any other, have to compete for readers and budgets. It is clearly different from the established organic chemistry literature because, in addition to synthesis, it requires target biological data (on, for example, enzyme activity or receptor binding). A more appropriate comparison, however, is with the American Chemical Society's prototype *Journal of Medicinal Chemistry*, and here the added value is less clear. The scope of both publications is similar (all areas of medicinal and bioorganic chemistry) but

Journal prices

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