

# Hot from the laboratory

Robert M. Hazen

*Publishers of newsletters have reacted swiftly to meet the demand for information on developments in high-temperature superconductivity. What have these publications got to offer?*

THE 1986 revelation of high-temperature superconductivity was unique in the history of materials science, and of publishing. Journals quickly altered their review procedures, and even changed formats, in order to accommodate the ensuing flood of reports and the need for speed. New journals devoted exclusively to high-temperature superconductivity appeared along with dozens of special high- $T_c$  volumes and conference reports. But the normal scientific media have proved too slow for superconductor research circles. In this frenetically competitive atmosphere, knowledge is the most prized commodity, and researchers will gladly pay to get it.

Enter the superconductivity newsletters. Has a publishing niche ever been filled so quickly? Within six weeks of the 'Woodstock of Physics' on 18 March 1987 (the last-minute, all-night superconductivity session at the American Physical Society meeting in New York), the first newsletter rolled off the presses. By the end of the summer eight more had been launched. The race for publishing dollars has paralleled that for higher critical temperatures.

This article reviews most of the newsletter-style periodicals devoted to superconductor science and technology. These publications are distinguished by inclusion of news stories, review articles, lists of work not yet published or behind-the-scenes reports of superconductor research laboratories (for which read gossip), rather than original scientific reports.

The nine titles surveyed are summarized in the table overleaf, which gives the

## Supercurrents



The Superconductivity Magazine

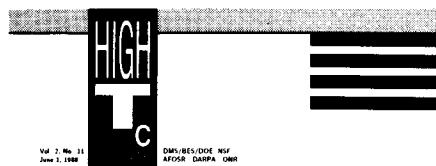


vital statistics and brief comments on each of them. Taken as a group, these publications serve a useful — perhaps vital — role by providing a rapid international communications medium. But no one needs to scan more than two or three of them. The question is, which ones?

Without doubt first prize goes to *High- $T_c$  Update*, published by the United States Department of Energy under contract with the Ames Laboratory, Iowa State University. This 8–16-page biweekly newsletter has become the international

news stories on the most significant advances and provides space for meeting and product announcements. Best of all, *High- $T_c$  Update* is free! All superconductor researchers should be on its mailing list — the newsletter is available electronically as well as in printed form — and should send their preprints (and thanks) to the editor, Ellen O. Feinberg.

Of those you have to pay for, I found the Washington-based *Superconductor Week* to be the best bet for researchers. This eight-page, weekly publication is devoted exclusively to developments in superconductivity and stands out among commercial newsletters by providing not



only rapid but usually cautious coverage of both high- $T_c$  science and technology. This was one of the first publications to report on the record-setting bismuth and thallium superconductors early in 1988, for example, and its news stories have appeared as formal citations in major physics journals. *Superconductor Week* carefully labels unconfirmed rumours as such, and the editorial staff do their homework, attending the main scientific meetings and maintaining close contact with laboratories around the world. The articles are written in a readable yet non-sense journalistic style, though I find the habit of treating strings of individual sentences as separate paragraphs rather distracting. I understand that it comes in electronic form, on NewsNet.

*Superconductivity News* (not to be confused with *Superconductor News*) is a close second, with particularly strong reporting of high- $T_c$  conferences. A thorough job is usually done in digging out news and analysing the scientific and technological implications. Monthly issues are supplemented by news updates for important stories. The regular "Handbook" feature provides a comprehensive listing of superconductivity events and products in a concise and efficient format. Subediting is slack at times, and the writing style is a bit too cute for my

transition temperature superconductor made from commonly available elements" are space fillers, not news.

*New Technology Week*, with good coverage of commercial aspects of superconductors and other electronic materials, is another option. Here the emphasis is more on government and corporate politics, rather than the science of materials. In most of the weekly 12-page issues two or more pages of superconductor news are integrated with other features. Competition between the United States and Japan, industrial research strategies and relevant Congressional legislation are typical fare.

## Superconductor Week

The overall tone is rather pessimistic, with headlines such as "National Labs Struggle with Technology Transfer" and "U.S. Ceramics Effort Pulling up the Rear". But if materials policy is your concern then *New Technology Week* is a valuable resource. Both *Superconductor Week* and *New Technology Week* go to press late on Friday and appear on Monday morning, thus ensuring the fastest possible coverage of developments.

Of the remaining periodicals, my favourite is *Supercurrents*. Launched in January 1988, this glossy monthly is the most stylish of the lot. Donn Forbes, the editor, seems determined to produce a publication that combines timely features with lasting archival value. Of special interest are interviews with leading researchers (recent issues have featured Art Sleight, Shoji Tanaka and Brian Maple, for example). Well-illustrated review articles on the science of superconductivity and realistic assessments of potential applications add to the non-ephemeral aura. *Supercurrents* will never be the first to report on high- $T_c$  breakthroughs, but it is a publication that materials research libraries should seriously consider adding to their acquisitions list.

It will be years before superconductivity researchers can settle down to a more sedate and normal routine. Meanwhile, armed with these publications, they have a reasonable hope of staying informed. □

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• Just launched by World Scientific is the first issue of *HT<sub>c</sub> News*, a free monthly newsletter which will "tend toward a more 'academic' approach", and which contains abstracts of published papers, titles and authors of forthcoming papers, conference notices and "resources information". In the United States