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 overhead, which gives the transition temperature superconductor made from commonly available elements” are space fillers, not news.

**Superconductor Week**

The overall tone is rather pessimistic, with headlines such as “National Labs Struggle with Technology Transfer” and “U.S. Effort Pulling up the Rear”. But if materials policy is your concern then Superconductors Week is a valuable resource. Both Superconductors 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 Sleigh, 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 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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