

## What's New in the World of Superconductivity (March)

### Power

#### Intermagnetics General Corporation (March 4, 2004)

Intermagnetics General Corporation (IMGC) announced that its SuperPower subsidiary has achieved a world-record performance in the production of second-generation high-temperature superconducting wire at its pilot manufacturing plant in Schenectady, New York. The company has achieved a 6 kAm performance in a 57-meter HTS wire, a performance which is 60% greater than the previous record achieved by a Japanese company in 2003. Glenn H. Epstein, chairman and chief executive officer of Intermagnetics, commented, "This is a significant milestone toward SuperPower's goal of demonstrating a manufacturing process capable of cost-effectively producing high-temperature superconductors that would be commercially viable for utility industry applications as well as for government and military uses. SuperPower's near-term objective remains to consistently reproduce and improve upon this performance in order to position itself as a global leader in commercial production of second-generation HTS wire and applied devices." Philip J. Pellegrino, president of SuperPower, added "We expect to achieve commercially viable production capabilities during 2005 with SuperPower in a leading position – worldwide – utilizing patent-protected technology and manufacturing processes that will allow us to economically adjust to the ultimate needs of the market. We continue to expect compelling market conditions will lead to a revolution in the way electricity is generated, delivered and consumed through an environmentally friendly reinforcement and upgrade of the aging, capacity-constrained power grid. In addition, we believe this technology will meet the needs of national security through military applications that require the higher power density and lighter weight associated with HTS technology, such as directed energy weapons using high-power microwaves and pulsed lasers, all-electric warships and hypersonic airborne applications, as well as naval operations involving aircraft launch and mine-sweeping.

Source:

"SUPERPOWER, INC. ACHIEVES WORLD-RECORD PERFORMANCE IN  
SECOND-GENERATION HTS WIRE"

Intermagnetics General Corporation press release (March 4, 2004)

<http://www.intermagnetics.com/superpower/news/IGCSP030404.pdf>

#### American Superconductor Corporation (March 9, 2004)

American Superconductor Corporation (AMSC) has announced a world-record performance for its second-generation HTS wire. In a briefing presented to the Departments of Energy and Defense as well as the National Institute of Standards and Technology and the National Institute of Biomedical Imaging and Bioengineering, AMSC reported that the electrical current carrying capacity of its 2G HTS wires is now twice that of the best industrial 2G HTS wires anywhere in the world and 50% higher than the company's previously reported results. AMSC obtained a current carrying capacity equal to or better than 250 A/cm-width using

multiple 10-meter lengths of wire; this performance level is close to that required for commercial applications. The announcement was made in conjunction with the release of a white paper on 2G HTS wire technology summarizing the results of recently completed tests. The white paper, along with supporting material, can be viewed on the company's website (<http://www.amsuper.com>).

Source:

"American Superconductor Reports World-Record Performance for Second Generation HTS Wire"

American Superconductor Corporation press release (March 9, 2004)

<http://www.amsuper.com/html/newsEvents/news/10335061601756.html>

### **Intermagetics General Corporation (March 18, 2004)**

Intermagetics General Corporation (IMGC) has announced its third quarter financial results for the period ending February 22, 2004. The company's net income (before charges related to the acquisition of Invivo Corporation) totaled US \$5.1 million, an increase of 20% compared to the \$4.2 million reported for the same quarter in the previous fiscal year. The net income including charges related to the acquisition of Invivo was \$4.3 million. Net revenues for the third quarter totaled \$43.1 million, and increase of 14% compared to the same quarter in the previous fiscal year. Invivo, with four weeks of contributions, accounted for \$4.7 million in revenue. Glenn H. Epstein, chairman and chief executive officer of IMGC, stated "All of our businesses reported solid performance during the third quarter." In particular, the Energy Technology sector benefited from significant progress on existing contracts from government and third-party sources, with revenues of \$1.5 million for the quarter, triple the amount received in the same quarter during the previous fiscal year.

Source:

"Intermagetics Reports Third-Quarter EPS Before Acquisition-Related Charges Up 20%"

Intermagetics General Corporation press release (March 18, 2004)

<http://ir.thomsonfn.com/InvestorRelations/PubNewsStory.aspx?partner=10215&storyId=109715>

### **American Superconductor Corporation (March 29, 2004)**

American Superconductor Corporation (AMSC) and GE Energy, a subsidiary of the General Electric Company, have announced the sale of a D-VAR (Dynamic Volt-Ampere-Reactive) reactive power compensation system to the Long Island Power Authority (LIPA). The D-VAR system, which will be installed in an East Hampton electrical substation, will be used to increase transmission grid reliability and reduce the costs and environmental impacts associated with grid operation during times of peak demand. The system provides LIPA with the flexibility of operating generators in the region only when absolutely necessary, providing both economic and environmental benefits. The unit will be AMSC's 22nd D-VAR system to be installed in North America.

Source:

"American Superconductor and GE Energy Announce Sale of D-VAR Transmission Grid Reliability System to Long Island Power Authority"

American Superconductor Corporation press release (March 29, 2004)

<http://www.amsuper.com/html/newsEvents/news/10335061601759.html>

## Communication

### Superconductor Technologies Inc. (March 1, 2004)

Superconductor Technologies Inc. (STI) has announced their financial results for their fourth quarter, ending December 31, 2003. Total net revenues for the fourth quarter amounted to US \$16.4 million, an increase of 16% compared to the \$14.2 million reported in the third quarter of 2003 and an increase of 135% compared to the \$7.0 million for the fourth quarter in the previous fiscal year. Net commercial product revenues amounted to \$12.9 million, an increase of 12% compared to the \$11.6 million reported in the prior quarter and an increase of 200% compared to the \$4.3 million for the fourth quarter in the previous fiscal year. Government and other contract revenue totaled \$3.4 million during the fourth quarter, compared to \$2.7 for the same quarter in the previous fiscal year. Approximately \$1.2 million of the government and other contract revenue in the fourth quarter of 2003 was attributed to the acquisition of Conductus in the previous fiscal year. Net income for the fourth quarter was \$910,000, compared to a net loss of \$851,000 for the prior quarter and a net loss of \$2.9 million (including \$716,000 in litigation expenses) for the same quarter in the previous fiscal year. Commented M. Peter Thomas, STI's president and chief executive officer, "Fourth quarter 2003 was our first profitable quarter -- a goal we had been striving toward throughout the year. Our commercial product gross margin improved to 32%, demonstrating the benefits of the manufacturing infrastructure improvement plan we implemented in early 2003. We anticipate experiencing continuing product cost and capacity enhancement benefits from this plan throughout 2004 and 2005." For the year ending December 31, 2003, total net revenues increased 121% to \$49.4 million, compared to \$22.4 million for the previous year. Net commercial product revenues amounted to \$38.6 million, an increase of 119% compared to the previous year. STI also recorded \$10.8 million in government and other contract revenues for the year ending December 31, 2003, compared to \$4.8 million for the previous; approximately \$4.6 million of this increase was attributed to the acquisition of Conductus. The net loss for the year ending December 31, 2003 was \$11.3 million, including litigation expenses of \$4.8 million, compared to \$21.3 million, including litigation expenses of \$3.2 million, for the previous year.

Source:

"Superconductor Technologies Inc. Announces Fourth Quarter And Year-End 2003 Results"  
Superconductor Technologies Inc. press release (March 1, 2004)

<http://ir.thomsonfn.com/InvestorRelations/PubNewsStory.aspx?partner=5951&storyId=108650>

### Superconductor Technologies Inc. (March 22, 2004)

Superconductor Technologies Inc. (STI) has launched a new product, known as AmpLink™ Rx 1900, designed to simultaneously improve the coverage of current PCS networks and provide a unique solution to the growing problem of interference. Commented M. Peter Thomas, STI's president and chief executive officer, "AmpLink helps 'future-proof' the PCS network. Our customers have told us that interference in the 1900 spectrum is a limited problem that seldom demands an HTS solution today. However, we believe that interference will become much more of a problem down the road." The AmpLink Rx 1900 is a ground-mounted unit that consists of a high-performance amplifier and up to six dual duplexers. The enhanced uplink improves network coverage and offers better in-building penetration while lowering the required handset transmission power. As network interference increases, the AmpLink Rx 1900 can be

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quickly and easily upgraded with a SuperLink Rx front-end, which uses HTS technology to increase network performance. When upgraded, the unit provides both high selectivity and high sensitivity to eliminate noise from the receiver chain. Competing products, such as conventional filters and tower-mounted amplifiers, can provide one of these benefits, but only at the expense of the other. Industry experts predict that interference in the 1900-MHz spectrum will be increasingly troublesome for wireless operators and their customers.

Source:

“Superconductor Technologies Inc. Introduces AmpLink(TM) Rx 1900 to Enhance PCS Networks”

Superconductor Technologies Inc. press release (March 22, 2004)

<http://ir.thomsonfn.com/InvestorRelations/PubNewsStory.aspx?partner=5951&storyId=109940>

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