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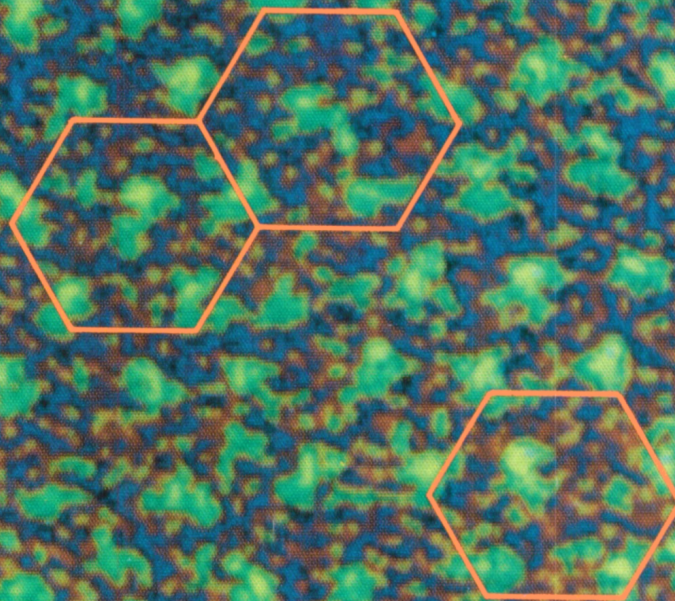
# BULLETIN

June 1990

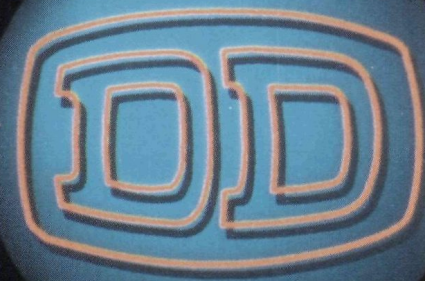
Volume XV, Number 6

Serving the International Materials Research Community

## Properties of High $T_c$ Superconductors



# A NEW CLUSTER IS BORN



## **General Ionex acquired by High Voltage Engineering Europa B.V.**

In December 1987 High Voltage Engineering Europa B.V. (HVEE) acquired Dowlisch Developments Ltd (DD), an accelerator tube manufacturer located in the United Kingdom.

On April 10, 1989, HVEE purchased the General Ionex Analytical Product Group from Genus Inc. based in the United States.

Through this acquisition HVEE positions itself as the largest and most diverse manufacturer of particle accelerators for the scientific and industrial research communities.

The acquired General Ionex (GI) product lines, which include the Tandetron accelerator systems and Model 4175 RBS Analyser, will be manufactured in HVEE's new, well-equipped facility in Amersfoort, The Netherlands.

World wide marketing of all products from HVEE, DD and GI will originate from HVEE Amersfoort with sales and service offices in the USA, Europe and Japan.

After addition of the newly acquired products HVEE's product lines include:

**- Ion Accelerator Systems**

- Air insulated accelerators up to 500 kV
- Single ended Van de Graaff accelerators up to 4 MV
- Tandem Tandetron accelerators up to 3 MV/TV

**- Research ion implanters**

- Beam energies 10 keV-9 MeV and higher

**- Systems for ion beam analysis**

- Systems for RBS, PIXE, PIGE, NRA, ERD, MACS and MEIS

**- Components**

- HV power supplies, electron and ion accelerator tubes, ion sources beamline components, beam monitoring equipment, UHV sample manipulators, etc.

For further information on this transaction and product literature please contact HVEE in Amersfoort/NL.



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# MRS BULLETIN

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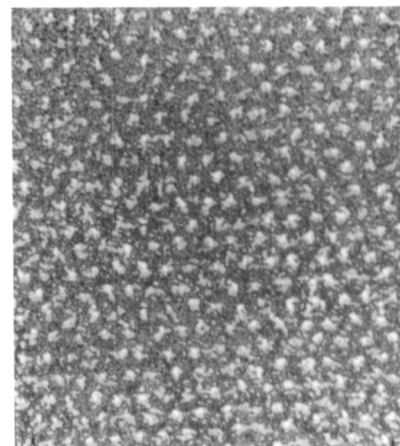
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**ON THE COVER:** Shown in green, ferromagnetic iron particles image the vortices in a single crystal of the  $Bi_2Sr_2CaCu_2O$  superconductor. The vortices form a nearly perfect hexagonal lattice with a one-micron separation. Such images have been used to establish the value of the flux quantum in these materials and to study the interactions of the vortices. Interactions of the vortices with pinning sites limit the accessible critical current. The vortex-vortex interactions may lead to interesting new physics. The image shown was produced by an AT&T collaboration of P.L. Gammel, C.A. Murray, and D.J. Bishop on crystals grown at Stanford University by D. Mitzi and A. Kapitulnik and is part of a series used to demonstrate hexatic order in the vortex array. For more information on investigations into the properties of high  $T_c$  superconductors, see the series of articles that begins on p. 31.

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The Society's interdisciplinary approach to the exchange of technical information is qualitatively different from that provided by single-discipline professional societies because it promotes technical exchange across the various fields of science affecting materials development. MRS sponsors two major international annual meetings encompassing approximately 40 topical symposia, as well as numerous single-topic scientific meetings each year. It recognizes professional and technical excellence, conducts short courses, and fosters technical exchange in various local geographic regions through Section activities and University Chapters.

MRS is an Affiliated Society of the American Institute of Physics and participates in the international arena of materials research through associations with professional organizations such as European MRS.

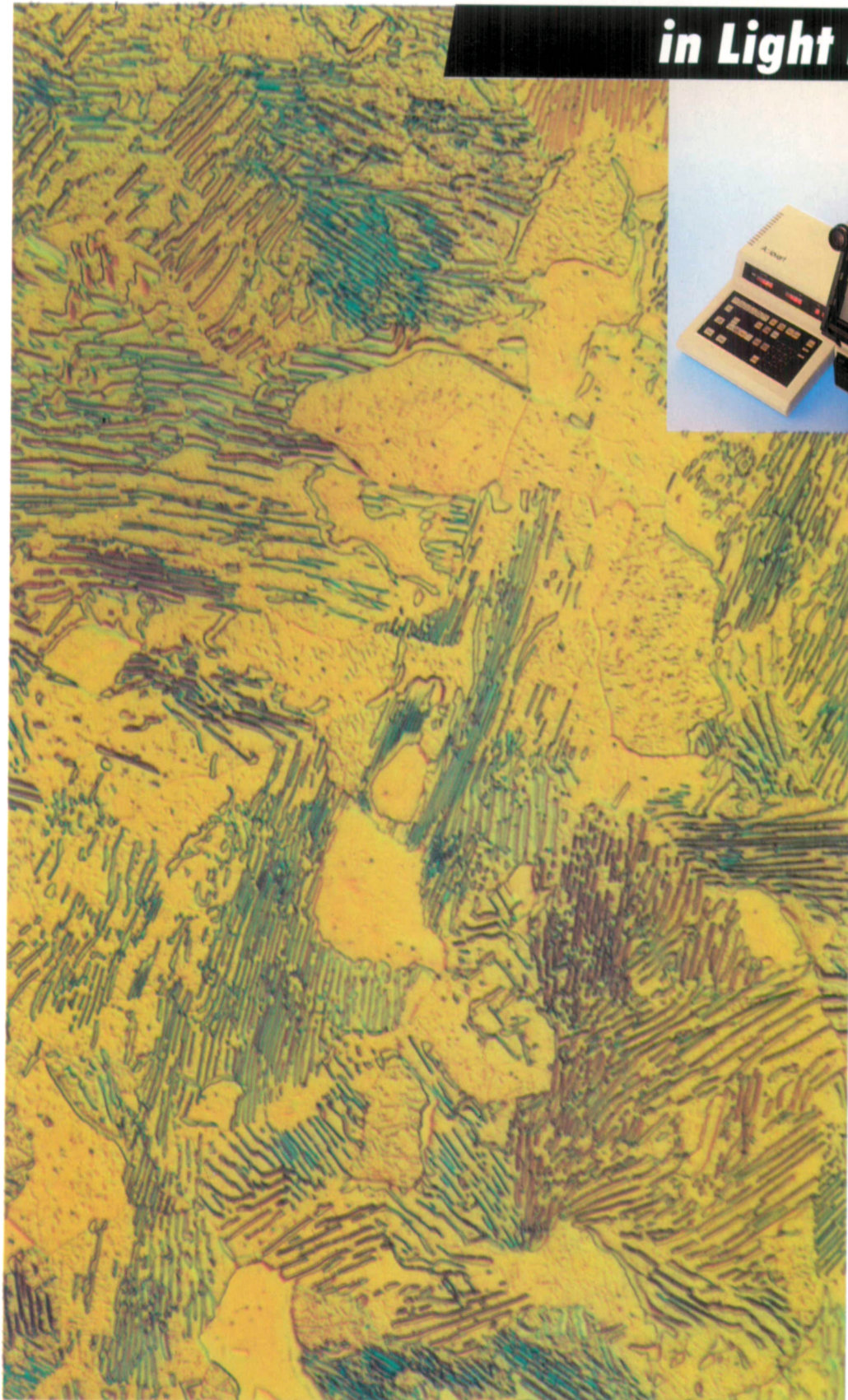
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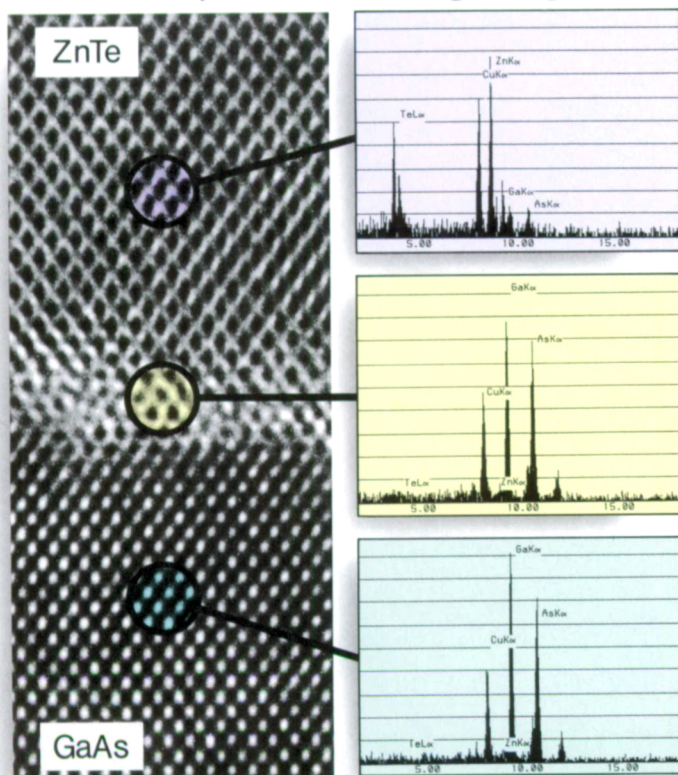
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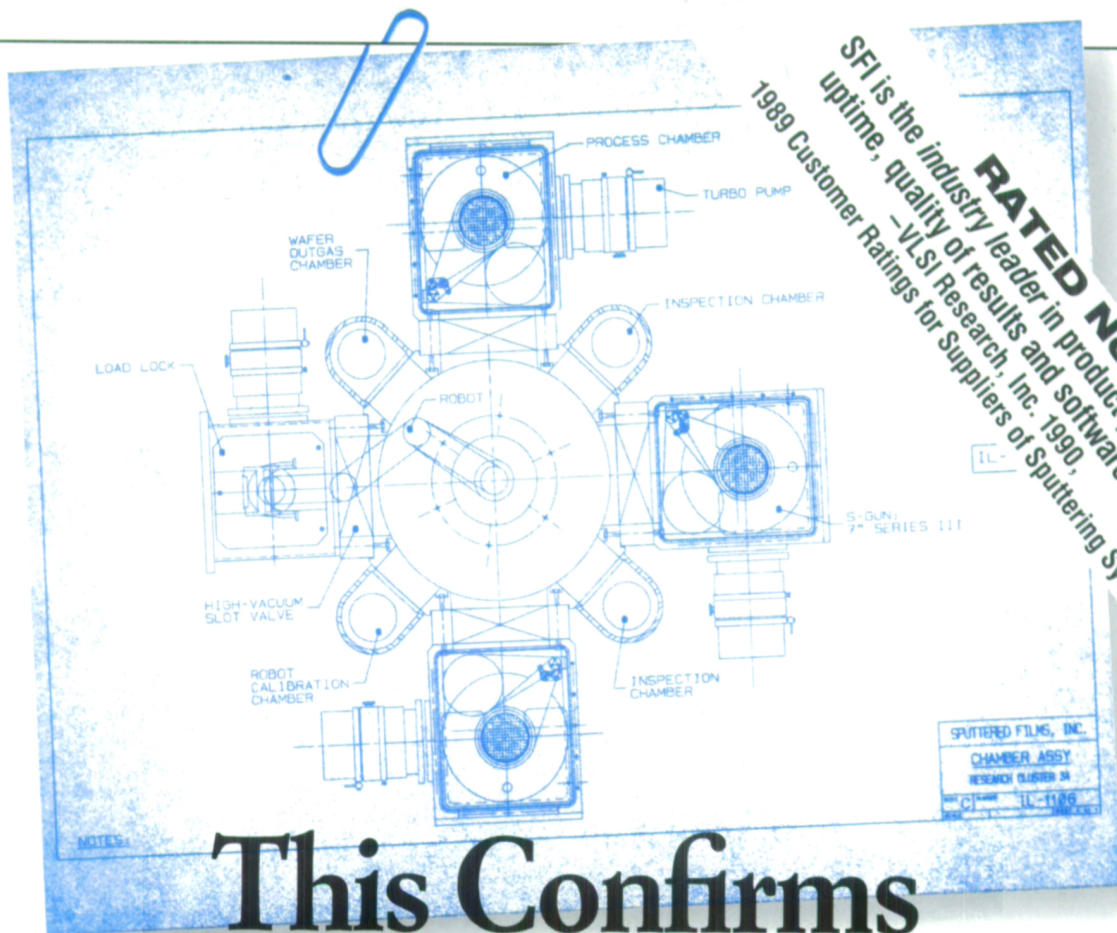
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