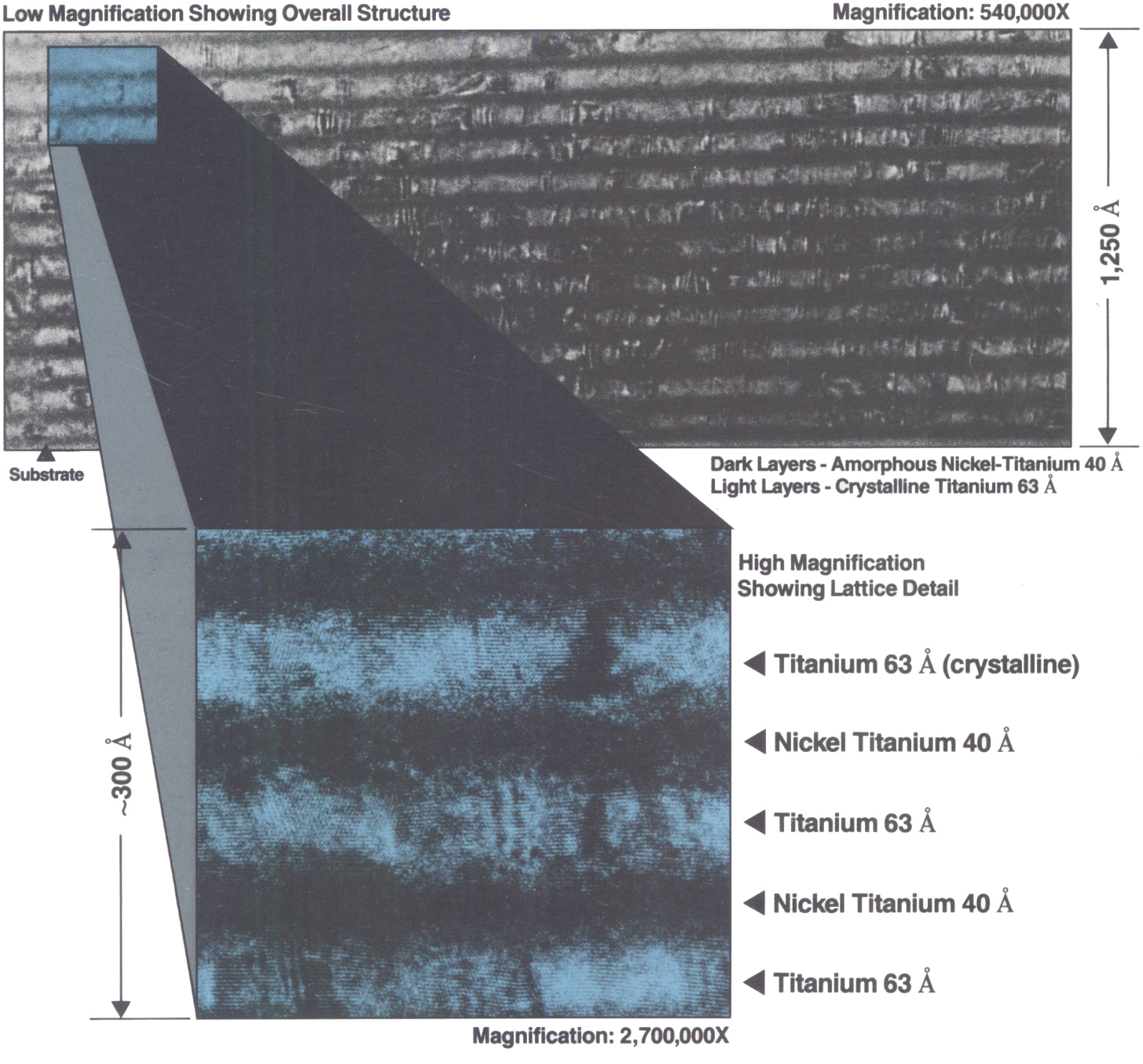
MRS BULLETIN

February 1990
Volume XV, Number 2

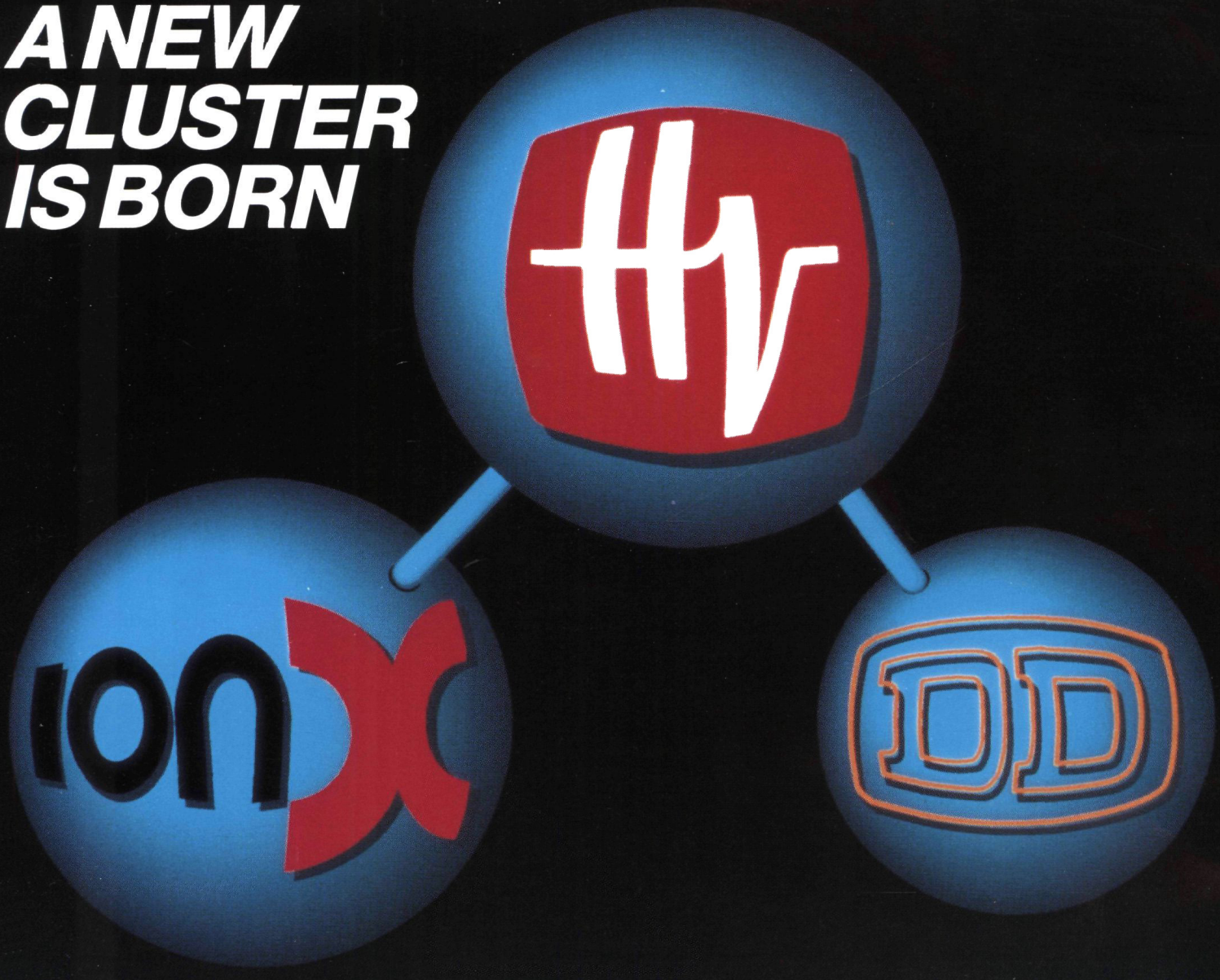
Serving the International Materials Research Community

Multilayer Materials



https://doi.org/10.1557/S0883769400060346 Published online by Cambridge University Press

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 Dowlish 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

February 1990

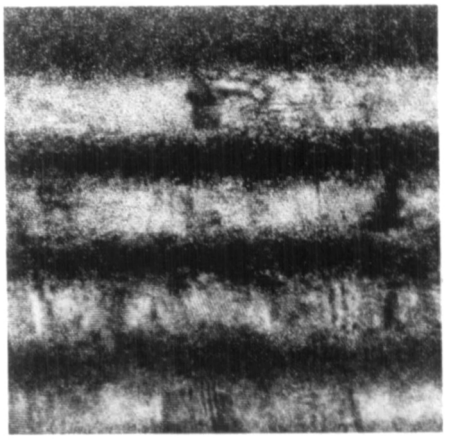
A Publication of the Materials Research Society
Volume XV, Number 2 ISSN: 0883-7694 CODEN: MRSBEA

MULTILAYER MATERIALS

SPECIAL FEATURE

MRS NEWS

DEPARTMENTS



ON THE COVER: Transmission electron lattice image of a titanium (Ti) - nickel titanium (NiTi) multilayer synthesized by magnetron sputtering. The multilayer contains 100 periods of 63 Å Ti and 40 Å NiTi. The Ti layers are crystalline with a (00.1) fiber texture while the NiTi layers are amorphous. The (00.1) Ti planes are lattice imaged in this micrograph. The grazing incidence thermal neutron reflectivity of this multilayer microstructure superlattice was measured to be >95% using facilities at the National Institute for Science and Technology. Model calculations predict thermal neutron reflectivities of ~99.6% as the neutron optical constants of Ti and Ni are very well suited to this application. The micrograph was taken by Mark A. Wall of Lawrence Livermore National Laboratory using a top-entry JEOL 200 CX transmission electron microscope at the National Center for Electron Microscopy, Lawrence Berkeley Laboratory.

MRS BULLETIN

Materials Research Society • 9800 McKnight Road • Pittsburgh, PA 15237

ABOUT THE MATERIALS RESEARCH SOCIETY

The Materials Research Society (MRS) is a nonprofit scientific association founded in 1973 to promote interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes more than 9,500 scientists from industrial, government, and university research laboratories in the United States and more than 25 countries.

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.

MRS publishes symposium proceedings, the *MRS BULLETIN, Journal of Materials Research,* and other current scientific developments.

MRS BULLETIN (ISSN: 0883-7694) is published 12 times a year by the Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237. Membership in MRS includes $25.00 ($15.00 for students) from membership dues to be applied to a subscription to the *MRS BULLETIN.* Application to mail at second class rates is pending at Pittsburgh, PA and at additional mailing offices. POSTMASTER: Send address changes to *MRS BULLETIN* in care of the Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237; telephone (412) 367-3003; fax (412) 367-4373.

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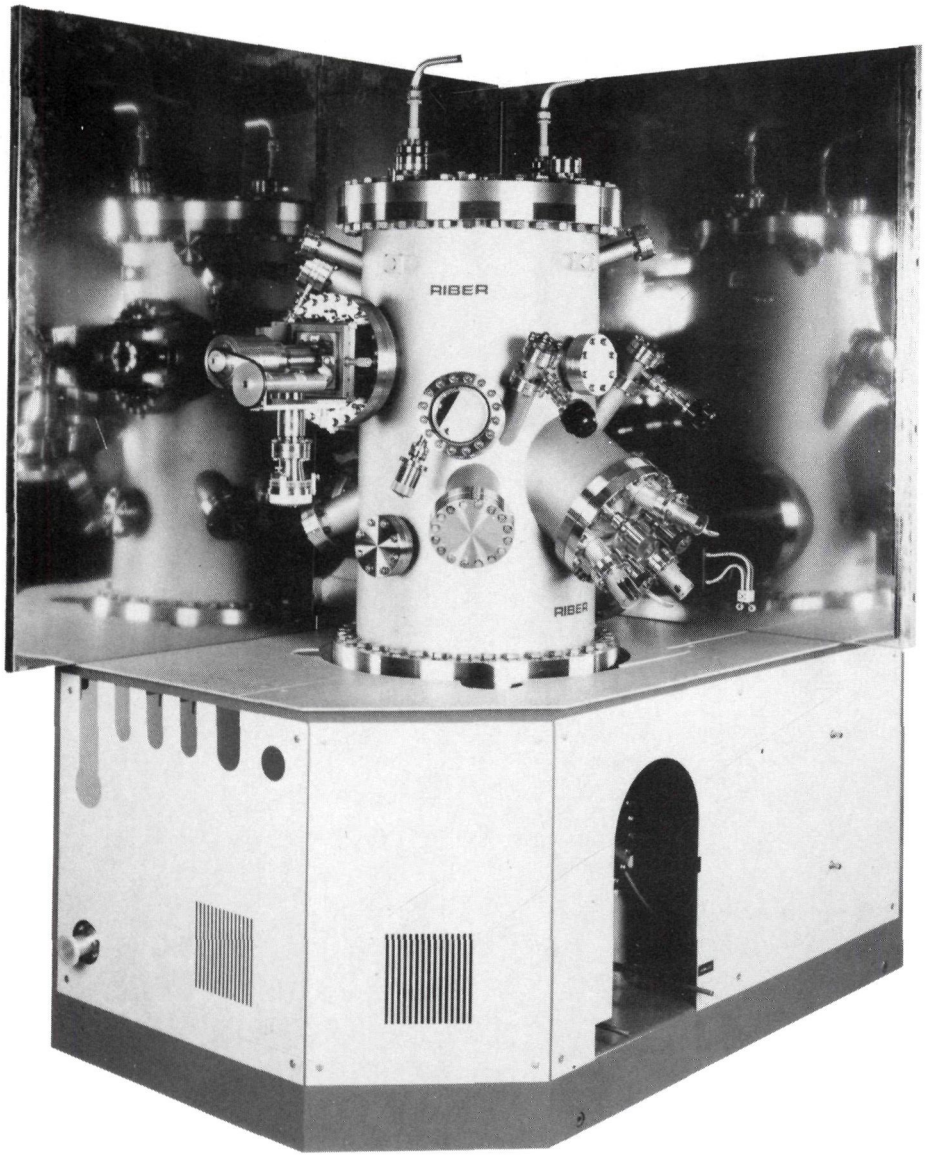

Please visit Booth Nos. 212, 214 at the MRS Show in San Francisco, April 16-21, 1990.

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Printed in USA 1M 1987

https://doi.org/10.1557/S0883769400060346 Published online by Cambridge University Press