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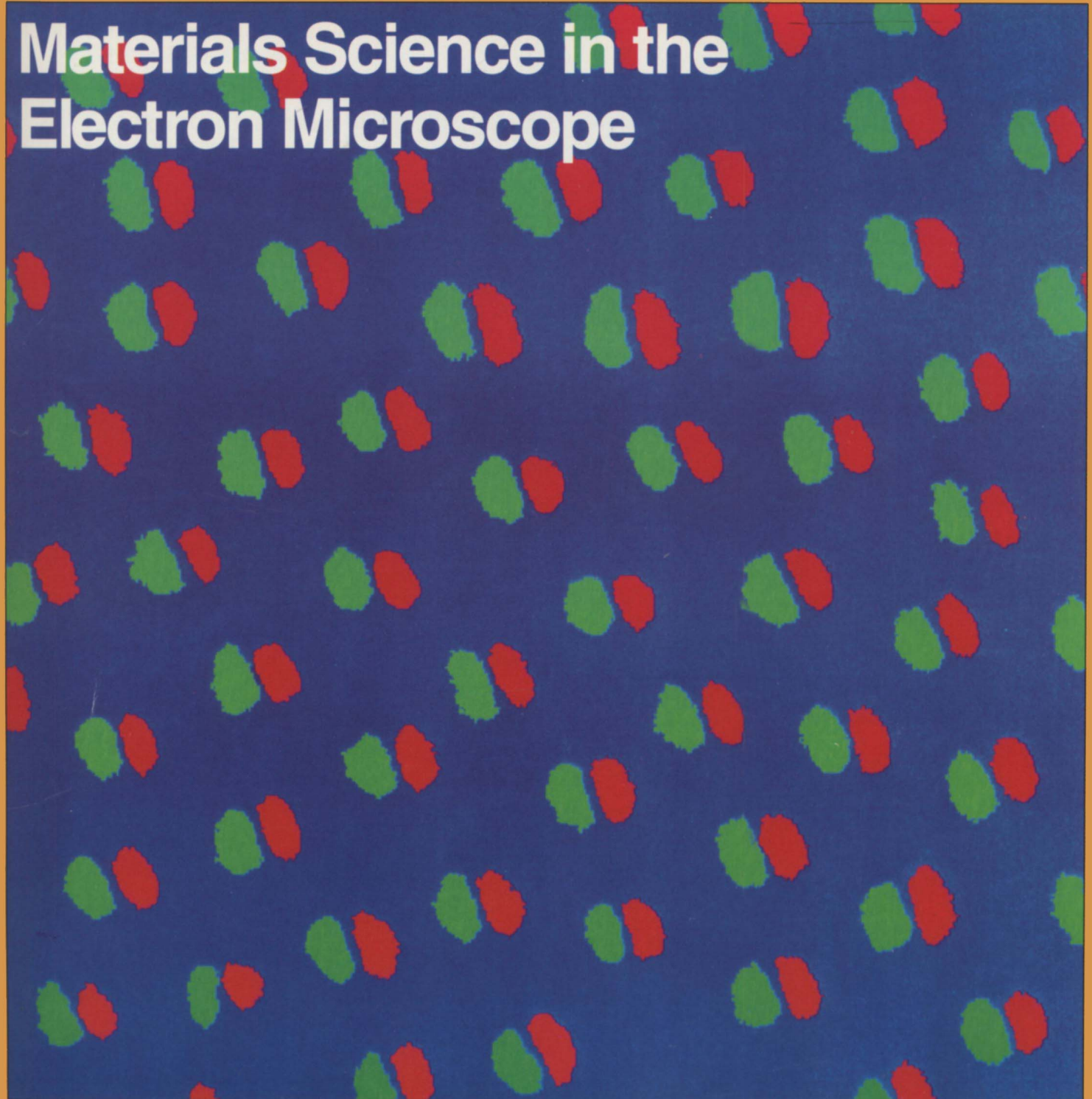
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Materials Science in the Electron Microscope



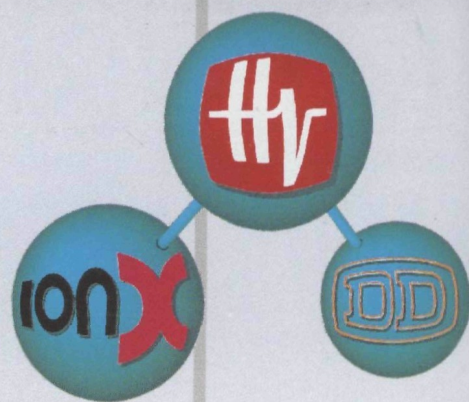
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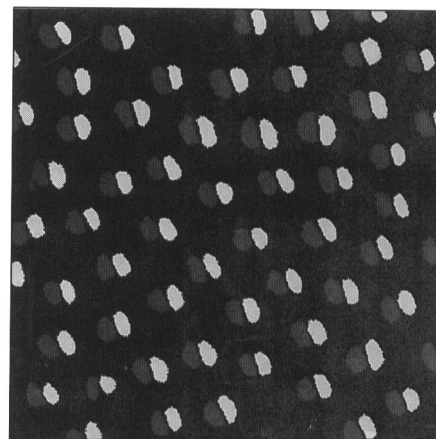
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ON THE COVER: False-color image of the vortex in Nb at 4.5 K and 100 G. The image was made by filtering a Lorentz image to bring out the vortices. In a Lorentz image, a vortex appears as adjacent spots of bright and dark contrast, which have been mapped here onto red and green, respectively, setting the background at blue. The important features of this image are as follows: (1) The line separating red and green represents the projection of the vortex core onto the image plane. (2) When the red contrast is on the righthand side, the magnetic field points upward. (3) The middle RHS of the image shows a vortex lattice dislocation due to the presence of a strong pinning center. For more about this topic, see "Observation of Vortices in Superconductors" by J.E. Bonevich, K. Harada, T. Matsuda, and A. Tonomura on p. 47.

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About the Materials Research Society

The Materials Research Society (MRS), a non-profit scientific association founded in 1973, promotes interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes nearly 11,600 scientists, engineers, and research managers from industrial, government, and university research laboratories in the United States and nearly 50 countries.

The Society's interdisciplinary approach differs from that of single-discipline professional societies because it promotes information exchange across the many technical fields touching materials development. MRS sponsors two major international annual meetings encompassing approximately 50 topical symposia, and also sponsors numerous single-topic scientific meetings. The Society recognizes professional and technical excellence, conducts short courses, and fosters technical interaction in local geographic regions through Sections and University Chapters.

MRS participates in the international arena of materials research through the International Union of Materials Research Societies (IUMRS). MRS is an affiliate of the American Institute of Physics.

MRS publishes symposium proceedings, *MRS Bulletin*, *Journal of Materials Research*, and other publications related to current research activities.

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University College London
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Torrington Place
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Tel. 71-387-7050 ext. 3956 or 7304

Book Review Editor
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MRS Office of Public Affairs
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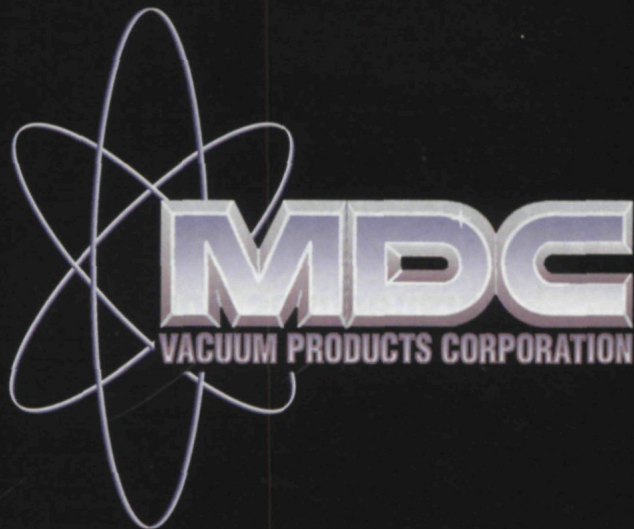
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