

trends but the choice mentioned expresses fields of magnetism of special interest to me.

In theory of magnetism the volume shows clearly the importance of the spin screw model for the magnetism of the rare earths. Theories reached at three different centres, which are in fact largely synonymous, are described.

The session on nuclear magnetic resonance in metals contains five papers. All these are thought to be important because they illustrate a new method of investigating the magnetic interactions between carriers in materials. Thus, polarization of conduction electrons and other fundamental phenomena can now be tackled by means of nuclear magnetic resonance.

Two sessions on metals and alloys are varied but it is clear that the number of studies using the Mössbauer effect is growing.

There were four sessions dealing with oxides and other compounds, two of them relating to anisotropy, relaxation and magnetic resonance. A paper by J. F. Dillon of the Bell Laboratories describing a new kind of line broadening in doped garnets is of importance. This deals with the excitation of the rare earth impurities into excited states in the microwave field leading to line broadening, *i.e.* a sort of paramagnetic resonance in a ferromagnetic.

Magnetism at low temperatures is leading to interesting results. One example is a paper by the workers at Oxford on substances with large magnetic dipole interactions. Some of these substances are a good example of a simple ferromagnetic model where experiments can be accurately interpreted theoretically.

There were, of course, sessions on magnetic thin films and on technical magnetization. One of the most important contributions in these sessions was the one by Flanders and Shtrikman of the Franklin Institute on the anisotropy distribution of ferromagnetic powders. A fine paper on the analysis of magnetothermal measurements by Bates and Pacey is included in the session on technical magnetization.

It would lead too far to go into further details but the volume will obviously serve as a document to the status of theory and practice of magnetism in 1962. It is useful for reference purposes but will not be of interest to anyone but people specializing in magnetism.

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**Proceedings of the International Conference on Magnetism and Crystallography. Kyoto, 25-30 September 1961. Volume II. Electron and neutron diffraction.** Journal of the Physical Society of Japan, Volume 17. Supplement B-II 1962. Pp. iv + 397. Price: U.S. \$ 6.00.

The 'papers' in this volume\* are in fact little more than extended abstracts, averaging about 3 pages in length, with the remarks made in discussion appended and often running to a page or more. As contributions were meant to describe recent and mostly unpublished work, the volume provides an excellent survey of the state of the subject in mid-1961. The longer papers surveying recent progress in particular aspects, with which each session opened, provide the necessary background, and the references at the end of practically every short paper permit the earnest student to follow the subject further.

Some idea of the scope of this volume is provided by the headings of the seven sessions included in it: Gas Electron Diffraction; Scattering Phenomena in Electron Diffraction; Diffraction Effects in Electron Microscopic Images; Structure Studies by Electron Diffraction; Application and Technique of Electron Diffraction; General Problems, Technique and Apparatus of Neutron Diffraction; Inelastic Scattering in Neutron Diffraction and Structure Studies of Neutron Diffraction. The text is very clearly printed and illustrated with many diagrams; electron diffraction diagrams and micrographs are reproduced on art paper. The volume is bound as a journal part, naturally enough, but those likely to make much use of it (and they will be many) would be well advised to invest in a stouter binding. The chief of the nine editors, Dr Shizuo Miyake, is to be congratulated on the speed and excellence of his work. To have such a volume of proceedings ready within little more than six months of the end of the meeting, instead of the more usual year, doubles its value to those who were unable to be present (and possibly also to those who were fortunate enough to be there).

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\* Volume I is reviewed above. For a review of Volume III see *Acta Cryst.* **16**, 236.