

time when crystal growth was more of an art than a science belongs definitely to the past.

As for all similar conferences the quality of the papers is somewhat variable, but by and large one can say that the material presented covers, on the whole adequately, the present state of the art. The book is therefore a must for every laboratory involved in growing crystals.

The publishers have done an excellent job; not only was the book published in a very short time but also the presentation is of the same high quality as that of the *Journal of Crystal Growth* published by the same company. In particular the reproduction of the numerous photographs is excellent.

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The American Mineralogical Journal. Archibald Bruce, M.D. Contributions to the History of Geology. Vol. 1. Edited by GEORGE W. WHITE. Pp. xvii + 270. New York: Hafner, 1968. Price U.S. \$ 18.00.

This facsimile of the 1814 edition of the short-lived *American Mineralogical Journal* will provide interesting reading for historians of geology and mineralogy. The simple, narrative style of many of the contributors gives us delightful accounts of pioneers of American geology in the early nineteenth century, at the same time preserving the thrill of their discoveries. This aspect of the journal should make Volume I of this series of interest not only to professional historians of the natural sciences, but to many amateur collectors on both sides of the Atlantic.

Consultation of the list of contributors to the journal reveals notable geologists and mineralogists from Europe and America. As Professor John C. Greene points out in his Introduction, Archibald Bruce had the opportunity of making the acquaintance of many leading mineralogists during a five-year period of study and travel. Count de Bournon, Charles Francis Greville, Abbé René Just Haüy and Heinrich Struve were among those notable figures whom he was privileged to encounter. The first publication of the Journal in 1810 (January) includes a comprehensive list of 'Geological Inquiries' as proposed by the London Geological Society. The varied professional status of the contributors to the Journal certainly confirmed Bruce's intentions to enlist the services of 'the miner, the quarrier, the surveyor, the engineer, the collier, the iron master and even the traveller', to assist in the making of geological observations.

Much of the content of the *Journal* is devoted to the search for and study of minerals of economic importance - coal, iron, lead, copper. Number 3 of the *Journal* includes a lengthy extract by Dr. James Millar of Edinburgh, entitled *Of the Indications of Coal and Methods of Searching for It*. The reason given for this insertion is 'the rising price of fuel due to the interruption of our supplies of coal from Great Britain due to the present state of political affairs'. A similar reference to the importation of bar-iron from England to the United States, 1810, serves, with many other such examples, to illustrate the reversal of the economic interdependence of the two countries in the intervening century and a half.

Contributions under the heading 'Intelligence' comprise many news items which will be read, even today, with considerable interest. The eruption of Vesuvius in September 1810 is graphically reported. Meteoric falls in France and Russia, 1810 and 1811, are catalogued with accuracy and William Meade M.D. gives us such an enthusiastic account of his discoveries concerning 'Elastic Marble' that one's fingers itch to repeat the experiment.

This edition of the Journal is ably supported by Professor John C. Greene's biographical account of Archibald Bruce, whose premature death at the age of forty-one cannot but be lamented by anyone who reads of his valiant attempts to establish an *American Mineralogical Journal*.

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La Fatigue des Métaux. By R. CAZAUD. Fifth edition, revised by C. POMEY, R. RABBE and CH. JANSSEN. Pp. xviii + 622. Paris: Dunod, 1969. Price 128F.

Fatigue breakdown can occur in any highly stressed machine where the imposed stresses are of a periodic nature.

The first edition of this book was published in 1937 and subsequent editions in 1943, 1948 and 1959. This latest edition is right up to date and incorporates the results of the latest theoretical and experimental work carried out all over the world. This work will be of interest to metallurgists and engineers and, indeed, to anyone involved in the design, construction or use of machinery.

The illustrations and general presentation are of the usual high Dunod standard.

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Optical crystallography. Fourth edition. By ERNEST E. WAHLSTROM. Pp. 489. London: Wiyle, 1969. Price 132s.

This is the fourth edition of a book first published in 1943. It deals in a systematic and exhaustive way with all aspects of the behaviour of light when it passes through transparent materials.

Initial chapters (about 200 pages in all) are devoted to the elementary basic concepts of optical crystallography - crystal morphology, the nature of light, the optics of isotropic materials, measurement of refractive index, polarized light and interference and other phenomena concerned with the composition and resolution of light waves.

The treatment is for the most part descriptive and the mathematics is kept to a minimum. Since the diagrams are