

"Origin of Species", said: "This book gives a natural-historical basis to our views", and since then the parallelism between "Das Kapital" and "The Origin of Species", which appeared within eight years of each other, has often been drawn. Tsetlin adds: "in widely spreading propaganda for Darwinism, Timiriazev was preparing among his numerous pupils and readers a favourable soil for the planting of dialectical materialism".

Shortly before Timiriazev's death in 1920, there appeared a volume of his more political writings, collected under the title "Science and Democracy", in which he welcomed the Bolshevik regime. For this he received a letter of hearty thanks from Lenin himself.

Tsetlin, in the preface to his book, states that his purpose is to follow the progress of Timiriazev's views "from bourgeois democracy to communism, through the medium of his own particular science". A good case is certainly made out for this; but it is a pity that Timiriazev is misrepresented in at least one important respect (that is, concerning Mendelism). Indeed, Kliment Arkadievich Timiriazev was, in the view of the present writer, a greater man than perhaps appears from Tsetlin's book.

¹ Timiriazev, by L. S. Tsetlin, U.S.S.R. Acad. Sci., 1945. Pp. 153 (in Russian).

² *North Brit. Rev.*, June, 1867.

³ I have translated this passage from p. 207 of the 1941 edition of Timiriazev's book, "Charles Darwin and his Work".

⁴ See Ashby, E., *Nature*, 158, 285 (1946).

OBITUARY

Prof. F. M. Rowe, F.R.S.

FREDERICK MAURICE ROWE, born at Stroud, Gloucestershire, in 1891, died at his home in Leeds on December 8. One of a long line of Clothworkers' Scholars from Marling School, Stroud, he entered the Department of Tinctorial Chemistry and Dyeing of the University of Leeds in 1908, graduated with first-class honours in tinctorial chemistry in 1911, and was president of the University Union during 1911-12.

After a period of research with Prof. A. G. Green on nitrohydrazo compounds and *o*-nitroamines, Rowe joined the research staff of Messrs. J. Crosfield and Sons, Ltd., of Warrington, in 1913, and was sent to study colloid chemistry with Freundlich at the Technische Hochschule, Braunschweig, Germany. In 1916, however, he resumed his association with Green, who had been appointed director of the newly established Dyestuffs Research Laboratory at the College of Technology, Manchester. Two years later, he became head of the Laboratory, where he remained until 1926. During this period, the work on *o*-nitroamines was continued, and the properties of certain azo dyes derived from hydrogenated naphthalene derivatives were investigated. He also examined tars obtained from the low-temperature carbonization of coal, and elucidated the constitution of certain yellow pigment colours, for example, the Hansa Yellows, and the composition of some rapid fast printing colours and products used in the production of insoluble azo colours. For these and other investigations he was awarded the degree of D.Sc. by the University of Leeds in 1921, and the fellowship of the Institute of Chemistry in the same year.

This was a period of re-birth for the dyestuffs industry of Great Britain and, conscious of his special responsibilities to the industry, Rowe accepted the invitation of the Society of Dyers and Colourists to undertake the heavy task of compiling and editing an authoritative work of reference on colours, their composition, method of manufacture, properties and uses. The "Colour Index" was the result, and of all Rowe's achievements it is the one most closely associated with his name. He was awarded the Gold Medal of the Society of Dyers and Colourists in 1934 in recognition of his "exceptional services to the Society and to the tinctorial industries as Editor of the *Colour Index*, 1924, and the *Supplement*, 1928".

After being appointed reader in tinctorial chemistry at the College of Technology, Manchester, in 1925, Rowe was elected to the chair of colour chemistry and dyeing at the University of Leeds in 1926, on the retirement of the late Prof. A. G. Perkin. His subsequent research was in two main fields. The first arose out of the observation that phthalazine derivatives are formed by the action of excess sodium hydroxide on the diazosulphonate derived from diazotized *p*-nitro-aniline and β -naphthol-1-sulphonic acid. On extending the work to diazosulphonates derived from other nitroamines and their derivatives, results of such interest and importance were obtained that the series of papers increased to twenty-five, some of which, though written, await publication. In addition, he undertook research on the preparation and properties of intermediates for dyes and related products.

The second main line of investigation was concerned with the application of dyes, and ranged over a wide field. Among the subjects studied were the effects of after-treatment on the aggregation, location, shade and fastness properties of insoluble azo dyes on the fibre; the reduction and dispersion of azoic dyes in presence of Lissolamine A; and the fading of dyeings on cellulose acetate rayon, due to the action of oxides of nitrogen in the atmosphere. In later years, particular attention was paid to the dyeing of wool with chrome mordant dyes. Starting with a study of the peculiar dyeing properties of wool which had been exposed to the action of light and air, the work was extended to include fundamental work on the chroming of wool and an exhaustive study of the metachrome process.

Rowe's distinction as a research worker was recognized by the award of the Worshipful Company of Dyers' Research Medal on five occasions, and by his election to the fellowship of the Royal Society in 1945. He was admitted to the livery of the Worshipful Company of Dyers in 1932, and to the honorary freedom and livery of the Worshipful Company of Clothworkers in 1944. Such distinctions were the reward of a life characterized by a high sense of duty: duty to his students, whose subsequent careers he followed with close personal interest; duty to the University, where his wise counsel will be sorely missed in a period of reconstruction and development; and duty to the industry, of which he was the academic focus. It was typical of the man that, despite these many responsibilities, he should accept a commission in the Home Guard at the time of its formation. The accumulated burden was then too great, and his health gave way in 1943. Yet indomitable courage enabled him to continue academic work to the very end of his days.

E. J. CROSS

J. B. SPEAKMAN