

Switzerland, of which town his ancestors had been burgesses since the 14th century.

The deceased baronet had a long and useful career as a member of Parliament, where he worked as an advanced Liberal with a tendency towards independence. He was a pronounced democrat, a free-trader and a Home-Ruler. Among the Royal Commissions he served upon was that on Canals and Waterways in 1906, where he was able to give point to the agitation he had started 21 years previously in favour of Government control to secure the development of this neglected means of transport.

He was created a baronet in 1895 and appointed a Privy Councillor in 1906. His death on July 2, after a brief illness, removes yet another original member of this Society and a figure everywhere known and respected in the world of chemical industry. He leaves two sons and three daughters; the eldest son, Mr. J. F. L. Brunner, succeeds to the title, and the second, Mr. Roscoe Brunner, is chairman of Messrs. Brunner, Mond and Co., a position held by his father for over 40 years.

#### PROF. ADRIAN J. BROWN.

By the passing away of Adrian J. Brown, F.R.S., M.Sc. (Birmingham), Director of the British School of Malting and Brewing, and Professor of the Chemistry and Biology of Fermentation at Birmingham University, on July 2, three days after the death of his wife, the world loses one of its foremost scientific workers in the domain of fermentation, and a man held in esteem and affection by all privileged to know him.

Born in 1852 at Burton-on-Trent, and educated first at the Grammar School of his native town and later at the Royal School of Mines, Adrian Brown acted for some time as assistant to the late Dr. Russell at St. Bartholomew's Hospital, and afterwards accepted the position of chemist at the brewery of Messrs. Salt and Co., of Burton-on-Trent. His duties in the brewery did not prevent him from investigating problems more purely scientific in character, and to this period belong some of his more important investigations on yeast growth, the mechanism of enzyme action, the heat of fermentation, etc., now ranking as classics, as well as the discovery and study of *Bacterium sylvium*. His work on semi-permeable membranes, in particular of the barley-corn, and that on the organism known as *Bacterium X*, were carried out during his occupancy of the Birmingham chair, which he filled with conspicuous success from the inauguration of the School of Malting and Brewing in 1899 to the day of his death.

Essentially fair-minded, a sportsman in the best sense of the term, and possessed of an intimate first-hand knowledge of natural history in all its branches, he was as far removed from the dry pedant as day from night, and no student who came under his influence could fail to derive profit therefrom.

His published work bears the stamp of the man and, what is indeed rare nowadays, when speech and action so often precede the taking of thought, none of it has ever required subsequent defence or modification.

Professor Brown served for some years as Examiner in Biological Chemistry to the Institute of Chemistry, as President of the Institute of Brewing, and as a member of the Council of the Chemical Society. He was elected a Fellow of the Royal Society in 1911.

He is survived by two sons and two daughters.

THOMAS H. POPE.

#### REVIEW.

BIOCHEMICAL CATALYSTS IN LIFE AND INDUSTRY. PROTEOLYTIC ENZYMES. By JEAN EFFRONT. Translated by S. C. PRESCOTT. Pp. xi + 752. (New York: J. Wiley and Sons, Inc. London: Chapman and Hall, Ltd. 1917.) Price 23s. net.

Effront's earlier work on "Enzymes and their Applications" was a classic in its day and by far the most readable book on the subject for the general student. The present volume hardly maintains this standard, though it must be admitted that the author has set himself a task of the highest magnitude. The treatment is unequal and much work of fundamental importance, particularly that published in English journals, is ignored or only very scantily quoted, thereby detracting greatly, if not entirely, from any claim of the work to be authoritative. The work of Emil Fischer, of Abderhalden and of Van Slyke in their respective fields, to mention three names only, has carried the knowledge of the protein molecule far beyond the days of Schützenberger.

After a preliminary section, Part I deals with the coagulating catalysts—thrombin, myrosinase and rennet. Successive parts are devoted to pepsin, trypsin, erepsin, and amidases and a final section deals with the applications of the enzymes in industry. The nomenclature is hardly all that can be desired, probably because the French have not yet followed international custom in this respect and the translator has been content to paraphrase the French names: galactase, for example, should be an enzyme splitting galactosides and not a trypsin.

From the point of view of our readers the most important section is that devoted to the application of the enzymes, which occupies a quarter of the book. Official pepsin is carefully described with special reference to the exacting requirements of the French codex. A section on the chemical and enzymic exploration of the stomach is very complete and suggestive. The rôle of proteolytic enzymes in breadmaking is discussed, but the references are very incomplete and the statements made, as well as the theory based on them, are of doubtful accuracy. The part played by proteolytic enzymes in brewing has been the subject of many British researches culminating in those of Horace Brown: as this work receives anything but adequate treatment the section must be regarded as unsatisfactory. Similar sections are devoted to the activity of proteolytic enzymes in yeast manufacture, cheese making and tanning.

The catalysts of the soil are somewhat fully dealt with, the author throughout writing of bacteria as if they were catalysts: this seems a bold extension of the accepted definition of an enzyme.

Some useful notes on the recovery of nitrogenous wastes contain the practical experience of the author. A final section deals with the work of Pechère in Belgium, subsequently taken up by Abderhalden, on the nutritive value of products of advanced hydrolysis of protein substances.

As already stated the book is unequal in treatment and must be read very critically by those using it. None the less it is written with much grace and charm, and the perusal of its pages cannot fail to be of value to all workers in this difficult subject.

E. F. ARMSTRONG.

#### PUBLICATION RECEIVED.

EXPLOSIVES. By E. DE BAHRN BARNETT. *Industrial Chemistry*, edited by S. RIDEAL. Pp. 241. (London: Baillière, Tindall and Cox. 1919.) Price 12s. 6d.