

surgery, and sanitation. Be this, as it may, and there is much to be said for it, there can at any rate be no doubt that yeast has been more thoroughly studied than any other micro-organism—and from the most diverse points of view. The book under review gives a clear and comprehensive account of these investigations, written by men who are peculiarly fitted for the task by their long experience in different branches of the subject. To Prof. Lindner fall the chapters on morphology, classification, and cultivation, whilst the remainder of the subject—the chemistry of the cell contents, the enzymes, and the energy relations—is dealt with by Prof. Euler.

Turning over the pages and remembering that the date of the book is 1915, one cannot help being struck by the great activity which is still being shown in research on this subject, and by the many notable additions which will have to be included in any new edition. The stream of work which has flowed uninterruptedly since Buchner laid bare the secret of zymase shows no signs of shrinking, but rather increases in volume year by year. Fresh facts are constantly being discovered and fresh light thrown on related subjects. At the moment the centre of interest and discussion is shifting from alcoholic fermentation, over which it has long rested, to the important problems raised by the nutrition of yeast and by the abundant production in the yeast-cell of one of those mysterious dietary essentials, the vitamins. In this connection many early observations were made concerning yeast, culminating in the experiments of Wildiers, who in 1901 postulated the necessity for a substance of unknown nature—which he termed "Bios"—for the growth of yeast. Some investigators have identified this with the vitamin B (water-soluble B factor) of McCollum, and an interesting controversy has arisen over the question. Another instance of the inexhaustible vitality of the subject is thus afforded, and it can be asserted with confidence that we are far from the end, perhaps rather only at the commencement, of the biochemical discoveries originating in the study of yeast. A. HARDEN.

*The Man who Did the Right Thing: A Romance of East Africa.* By Sir Harry Johnston. Pp. vii + 444. (London: Chatto and Windus, 1921.) 8s. 6d. net.

THE man who did the right thing, and (except for one moral lapse, not of his own seeking) continued to do the right thing to the end of the chapter, was, as one might expect from a narrative so naively autobiographical as this "romance," an African pioneer, explorer, naturalist, and proconsul. The scene is laid in East Africa, mainly in the missionary field, and the period covered in the narrative dates back to the entry of Germany into the race for territory that led to the partition of Africa. Apart from the underlying love-story, which does duty for the sub-title, this novel of adventure (in treatment as well as in action) is remarkable for its fidelity to detail and its trenchant analysis of character.

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To those who know something of the environments and are acquainted with the types of the leading actors in this story—not excluding the author—the interest is unflagging and the appeal irresistible. Truly it is a section cut out of real life, transparent and convincing. Names are unnecessary. The mordant criticism of officials in "the Service" (F.O. and C.O.), frankly contrasting with efficient German representatives, in the opening up of East Africa to European diplomacy, is further emphasised by the hero taking service as director (Herr Direktor!) in an Anglo-German undertaking for the exploitation of a certain concession, known as "The Happy Valley," somewhere in the Kilimanjaro region, and thereby achieving a remarkable success.

It is a book well worth reading for its information no less than for the story it tells. We confess, however, to some irritation at the originality of the author's treatment in places—e.g. his abrupt changes of mood and tense, and the actual "staging" of some of his lengthy dialogues, as in a play. A. S. W.

*Artificial Light: Its Influence upon Civilization.*

By M. Luckiesh. (The Century Books of Useful Science.) Pp. xiv + 366. (London: University of London Press, Ltd., 1920.) 12s. 6d. net.

MR. LUCKIESH, who is well known as the author of a number of works upon illumination of a somewhat technical nature, has in this new volume written an interesting popular account of the development of artificial lighting. The influence of light upon civilisation is a fascinating subject. The author traces its early origins in the initial chapters of the book, which are illustrated by photographs of primitive pine-splinters, oil lamps, etc., and alludes particularly to its use as an element in religious ceremonial. Other chapters deal with early gas lighting, electric incandescent lamps and arcs, and the "light of the future." Later various applications of light—domestic, industrial, and spectacular—are discussed, and a chapter is devoted to artificial light in warfare. The type and paper are excellent, and there are insets of some remarkable photographs of lighting installations. The concealed lighting of the statue of Liberty in New York harbour forms an appropriate frontispiece, while several of the views of street lighting are striking; perhaps the most pleasing of all is a view of the Panama-Pacific Exposition at night. Generally speaking, the author has dealt with developments and applications of lighting in a popular manner rather than attempted a detailed analytical study of its effect upon civilisation, though the figures tracing the progressive diminution in the cost of light and its influence on health, safety, and efficiency are instructive. In the final chapter, entitled "Light—A Fine Art," the author writes with enthusiasm on the applications of light and colour for spectacular and decorative purposes. At the end of the volume a series of references to works on illumination and an adequate index are provided.