

So far as Great Britain is concerned, the raw material, coal-tar, from which the intermediates are produced is abundant, so that in respect of the source there is no need to anticipate trouble. Nevertheless, it is well known that prior to the War we relied mainly on Germany for the chemical knowledge and skill necessary to convert our raw material into finished intermediates. The eight years that have elapsed since the Armistice have seen a wonderful change, and at the present time only a very small percentage of the intermediates required for British dyestuffs industries and fine chemical industry is obtained from abroad. All honour, then, to those who have effected this wonderful transformation. We must not, however, rest content with this achievement. The chemistry of the intermediates is continually changing. New and improved processes for preparing old and familiar substances are always being discovered, and even the difference of a few pence in the cost of production may mean the loss or gain of a market. Moreover, the discovery of new intermediates often means the production of some new dye having, it may be, only a slight advantage over the old one but still enough to cause its replacement, owing to the appeal of the new dyed material to the fashion of the moment. There is also the possibility of the formation of new intermediates and their commercial utilisation. All these problems have to be met, and they can only be met, by keeping British research chemists, and those who intend to become research chemists, abreast of the times by imparting to them a thorough knowledge of this special branch of organic chemistry so that they may know not only what has been done already, but may also be in a position to advance knowledge on their own part.

It is therefore a pleasing picture to see a text-book of some 250 pages devoted entirely to a treatment of the chemistry of the intermediates. Mr. Davidson is to be congratulated on having produced a readable book on what must necessarily be a dull subject. In it an adequately full treatment is afforded to all the chief intermediates from the parent substances upwards. Especially noteworthy is the frequent use of tables to illustrate the manner in which the various derivatives are obtained from the parent substances, a treatment which the reader will find of the greatest assistance.

There can be no question that the book will be welcomed by all those who deal with the intermediates, and will also be of assistance to teachers who lecture in this branch of higher organic chemistry. As in all Messrs. Benn's chemical productions, the formulæ are clearly printed and the type free from errors. The absence of a bibliography is a detriment which might be removed in a future edition.

J. F. THORPE.

Our Bookshelf.

Prof. Dr. phil. Dr. jur. h.c. Ludwig Darmstaedter.
Ehrenmitglied des Staatsinstituts für experimentelle Therapie und des Georg Speyer Hauses in Frankfurt am Main zu seinem 80 Geburtstag am 9 August 1926.
(Berlin: Albert Frisch, 1926.)

UNDER the title "Naturforscher und Erfinder. Biographische Miniaturen" Prof. Darmstaedter published recently a collection of fifty most fascinating, short biographical notices of pioneer workers in various branches of science. I received it privately from the author, as a token of friendship on the approach of his eightieth birthday. We were fellow students under Kolbe at Leipzig in 1868. He is the one German student friend with whom I have remained in communication. I always connect him with Butlerow, as I vividly remember his bringing the celebrated Russian chemist to visit us in the laboratory.

The volume now before me is a collection of short biographical sketches of his activities, presented to Prof. Darmstaedter on his eightieth birthday, by his friends and admirers, more particularly by the managers of the George Speyer Haus in Frankfurt, who have instituted a Ludwig Darmstaedter Prize, to be given triennially, together with a Paul Ehrlich medallion, for distinguished work in biology or chemical therapeutics. They have done this in recognition of the part he has played, together with his deceased sister-in-law, Frau Franziska Speyer, in the establishment and management of the George Speyer Haus, in which Ehrlich's work was carried on from June 1902 onwards.

Trained as a chemist, Darmstaedter began his career as a member of the firm of Benno Jaffé and Darmstaedter, manufacturers of glycerin. In 1884, the firm acquired Oscar Liebreich's lanolin patent. He left this firm in 1906 to devote himself to his collections. He was long a noted collector of old china. He also built up a very valuable collection of autographs and letters of noted men from the Middle Ages upwards. These he presented to the Prussian State Library in 1907. The *Dokumenten Sammlung Darmstaedter zur Geschichte der Wissenschaften und der Technik* is now a distinct department of this library.

Darmstaedter's activity as an alpinist, as well as the part he has played in forwarding the creation of the first juvenile reformatory on the European continent, are both described, as well as his multiple other activities, in the monograph.

Darmstaedter has always been a man of remarkable vigour and an untiring worker throughout his life. A classical scholar and highly cultured, he is a typical, educated German. When the lanolin patent was in the Courts here, before Mr. Justice Romer, he made a remarkable impression by translating, in the witness-box, passages from the Greek bearing upon the use of wool-fat. The presence of such men in industry has had much to do with German success. He is probably best known to the world as author of his extraordinarily comprehensive "*Handbuch zur Geschichte der Naturwissenschaften und der Technik*," produced in co-operation with Prof. R. du Bois Reymond and Carl Schaefer.

H. E. ARMSTRONG.