

the factor correlating it with cancer. It must be admitted that the array of facts and figures produced by Mr. Green entirely favours his main proposition, and it is difficult to arrive at any other conclusion.

With considerable ingenuity Mr. Green applies his hypothesis to explain the incidence of cancer in certain occupations and in certain localities, and attempts to formulate an explanation as to how sulphur compounds may give rise to cancer. Here he is on much less sure ground, and this part of the subject may well be left for the present. The book is illustrated with maps and diagrams, and is very readable and interesting.

R. T. HEWLETT.

A German-English Dictionary for Chemists. By Dr. A. M. Patterson. Pp. xvi+316. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1917.) Price 9s. 6d. net.

DR. PATTERSON has filled what has long been an irritating lacuna in the average chemist's library. Certain scientific and technical terms are by no means easy to translate from the German, and recourse to the dictionary usually available is generally hopeless. The book under review should therefore be eagerly welcomed by the steadily increasing number of young chemists in England and America and by those who, even if they have already a good working knowledge of the language, are occasionally at fault. Not only is it a good general dictionary of the German language, but it contains also a very complete collection of chemical terms belonging both to the pure science and to technology.

The book is prefaced by a useful introduction explaining, for example, the new official German spelling, and giving a short but valuable account of the special points of German chemical nomenclature and how they should be rendered into English according to the rules of the London and American Chemical Societies. It does not seem at all unnecessary, also, that the author should point out the danger of confusing chemical endings and case-endings; thus the student is often apt to translate "ketone" by "ketone" instead of "ketones."

Past participles, preterites, and present third singulars of simple verbs are a very convenient inclusion.

The book is clearly printed, the German being in roman type.

Mathematical Papers for Admission into the Royal Military Academy and the Royal Military College, February-July, 1917. Edited by R. M. Milne. Pp. 32. (London: Macmillan and Co., Ltd., 1917.) Price 1s. 3d. net.

MATHEMATICAL masters who prepare Army candidates for their entrance examinations will be glad to be able to procure this year's questions in this handy form, before they are incorporated later in Mr. Milne's large volume of examination papers.

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LETTERS TO THE EDITOR.

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Transparency of the Atmosphere for Ultra-violet Radiation.

IT is well known that the solar spectrum, even when observed from a mountain-top, so that there are fewer than four miles of "homogeneous atmosphere" overhead, does not extend so far as $\lambda 2900$, however long an exposure is given. It has further been long suspected that absorption by ozone is the cause, as originally suggested by Hartley. Perhaps it may be claimed that the recent work of Prof. A. Fowler and myself (Proc. Roy. Soc., A, vol. xciii., p. 577, 1917) leaves little or no room for doubt that this is the true explanation.

As a sequel to the work just mentioned, I have photographed the spectrum of a mercury-vapour lamp four miles distant, and found that it extends as far as the line $\lambda 2536$, and perhaps farther. This line lies near the maximum intensity of the ozone absorption band, and therefore ozone can have nothing to do with the limit of the spectrum in this case. To reconcile the two results, it is necessary to assume that there is much less ozone near the earth's surface than at high levels, a conclusion in agreement with the published chemical determinations of atmospheric ozone by Hayhurst and Pring.

The distant mercury lamp spectrum showed a considerable falling off of intensity in the region of short wave-lengths, long exposures being required to bring out $\lambda 2536$, which is one of the brightest lines when atmospheric absorption does not intervene. Such a result is to be expected according to known data on atmospheric scattering of light, apart from the action of ozone.

In this connection I may mention that I have succeeded in observing the scattering of light by pure dust-free air in a laboratory experiment with artificial illumination. Details of these investigations will be published later.

R. J. STRUTT.

Imperial College of Science, October 22.

The Cure of the Isle of Wight Disease in the Honey Bee.

THE publication of Mr. S. H. Smith's advertisement on p. 324 of the *British Bee Journal* for October 11, in which he mentions "proflavine" and "acri-flavine" as being efficacious in the treatment of Isle of Wight disease, impels me to publish the following account, which I originally intended to keep back until further experiments had confirmed and extended the results.

On April 14 last I attended the annual meeting of the Leicestershire Beekeepers' Association, to offer my services in a full investigation of the Isle of Wight disease, which I proposed should be undertaken with the co-operation of the members. The meeting showed the greatest appreciation of my offer, and those present undertook to supply me with all the information and help they could.

Efforts were first directed to securing specimens of diseased bees for investigation, but, owing to the fact that I was unable to hear of any members who then possessed affected stocks, I did not come into contact with an actual case until July, 1917. In the meantime I had been discussing the general properties of the disinfectant flavine, which has been successfully used