

developments in physics, and, on the other, upon the vast accumulation of experimental facts of inorganic and organic chemistry, have led to great advances in pure and applied chemistry. But when the pure physics and the pure chemistry are removed, little is left of physical chemistry as an individual science. This border line subject, indeed, could not exist without its essential props of physics and chemistry.

Meanwhile, organic chemistry pours out, through its research workers, a stream of new facts far broader than that issuing from physical chemistry: its problems, particularly of biological significance, are becoming more fascinating and more profound, and its experimental technique is growing in intricacy and certainty. The Royal Society continues with fair regularity to elect annually one organic chemist and one from the inorganic or physical side to its fellowship; the great chemical societies, the world over, still publish many more papers on organic than on physical chemistry. It is becoming increasingly more difficult to find young organic chemists to meet the ever-growing needs of the research laboratories in our great industrial organisations.

Until the advent of the day when the mathematical physicist shall have rendered obsolete the experimental worker in inorganic, organic, and physical chemistry, and indeed also in physics and biology, the suppression of the chair of organic chemistry in so broad a science school as that of University College, London, will be an academic disaster.

W. J. POPE.

Cambridge, Feb. 8.

SIR WILLIAM POPE'S letter raises an issue of such importance to the future of chemistry in Great Britain that every effort should be made to place the position before the University authorities before any final and irrevocable step is taken.

During the last decades of the past century the condition of organic chemistry in Great Britain was such that many of our younger chemists had to go to one or other of the great continental universities to learn the science. At the present time all that is changed, and schools of organic chemical research are established in all our chief universities. From these, as Sir William Pope has said, there issues a steady stream of published research comparable in quality and quantity with that emanating from any other country. We must, therefore, be careful not to take any action which may set the clock back forty years and lead to a state of affairs which will again place us in the hands of the great research schools abroad.

Indeed, it is almost incredible that this could now happen, although a retrograde action, such as that mentioned in Sir William Pope's letter, would undoubtedly deal a serious blow to organic science by preventing the more brilliant of the younger men from adopting a branch of chemistry which was considered in some quarters to be moribund. Such a view is, moreover, so alarming that unless one had heard it expressed in conversation one would hesitate to trouble readers of NATURE by suggesting that any justification of organic chemistry is either necessary or desirable.

Nevertheless, the people who have to decide these grave issues are not necessarily chemists, and a short article in NATURE dealing with the present position and prospects of organic chemistry would certainly bring enlightenment to many. Advantage of the occasion might also be taken to refer to the admirable address given by the president of Section B at the recent South African meeting of the British Associa-

tion. I should add that I am writing this letter in my personal capacity and not as president of the Chemical Society.

JOCELYN THORPE.
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South Kensington,
London, S.W.7.

X-Ray Measurements with a Plane Diffraction Grating.

RECENTLY Prins¹ computed the Porter-correction² for Bearden's wave-length value,³ and found it amount to half the difference between Bearden's value and that obtained from crystal measurements, which is 0.23 per cent.

1. With some necessary assumptions I have computed the same correction to 0.0007 per cent for Bearden's and to 0.002 per cent for my own value,⁴ which was also mentioned.

2. It is to be noticed that this correction increases the difference, and that the function of the slits in these cases only is to screen off sufficiently narrow beams.

3. Effects as those calculated by Fagerberg⁵ also seems to have had little influence on my value. Variations in the wave-lengths which may depend upon such variations of the grating constant, could not be observed. As already indicated in my dissertation, the variations obtained were all explainable as accidental errors in the measurements of the plates.

ERIK BÄCKLIN.
Physics Laboratory,
Uppsala.

¹ J. A. Prins, NATURE, Sept. 7, 370; 1929.

² A. W. Porter, Phil. Mag., 5, 1067; 1928.

³ J. A. Bearden, Proc. U.S. Nat. Ac. Sci., 15, 528; 1929.

⁴ E. Bäcklin, Inaug. Diss. Uppsala Universitets Årsskrift, 1928.

⁵ S. Fagerberg, NATURE, Jan. 4, p. 13.

Dr. Sebastian Z. de Ferranti.

DR. FERRANTI was a valued member of the National Physical Laboratory Committee entrusted with the supervision of the experiments made possible by the use of the high tension equipment supplied by his firm. We shall miss his advice greatly. There is, however, a slip in the admirable account of his work in NATURE for Feb. 1, p. 172, which he would have been the first to wish to see corrected. According to the Report of the High Tension Committee, printed in the Report of the National Physical Laboratory for 1928, p. 163, "The high voltage transformers were supplied by Messrs. Ferranti, Ltd., to the design of Messrs. E. Haefly and Co., S.A. of Bâle, who constructed certain parts".

R. T. GLAZEBROOK.
Ballards Oak, Limpsfield,
Surrey, Feb. 3.

"Encyclopædia Britannica."

IN volume 22 of certain sets of the new edition of the "Encyclopædia Britannica" there is an article on Tides, beginning at the foot of page 193 and ending in the first column of page 204. In the list of authors this article is ascribed to me, and it is true that it is founded on a MS. prepared by me. But I am not responsible for the article as it is printed, and I should be very grateful to be allowed to use the columns of NATURE to say so.

I am informed by the publishers that other sets of the 'Encyclopædia' contain a very different article, of which I do acknowledge authorship.

J. PROUDMAN.
The University, Liverpool,
Feb. 3.