the complete absence of halogens. The formation of a volatile cuprous cyanide or rhodate has been assumed. Recently, it has been reported[6] that the test proved to be positive with substances which contain neither halogen nor nitrogen, as, for example, acetyl acetone, and the formation of an unknown volatile copper compound has been assumed. I feel that the findings reported here may give an explanation, and that they may be very relevant to the validity of the Beilstein test in general.

I am indebted to Prof. F. Körösy for his earlier collaboration.

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[1] Keller and Körösy, *Nature*, **162**, 580 (1948).
[2] Keller and Körösy, *Magyar Technika*, **12**, 83 (1948).
[3] Robinson and Stainthorpe, *Nature*, **153**, 24 (1944).
[4] Milrath, *Chem. Z.*, **33**, 1259 (1909).
[5] Stolle and Henke-Stark, *J. prakt. Chem.*, (2), **124**, 276 (1929).
[6] Jureček and Mužik, *Coll. Czecho. Chem. Comm.*, **15**, 236 (1950).

Angstrom (A) or Ångstrom (Å)?

Prof. E. A. Guggenheim's letter in *Nature* of April 14 on the above subject reveals a serious lack of correlation between international organizations. The International Union of Pure and Applied Physics in 1948 and the International Union of Pure and Applied Chemistry in 1949 appear to have adopted "Å as the abbreviation for the ångström", presumably ignoring the fact that the International Astronomical Union in 1938 had adopted the symbol "A" to represent "angstrom, the international wave-length unit"[1]. Both the definition of the unit itself and the standard tables of wave-lengths measured in terms of it are provided by the International Astronomical Union, and it would accordingly seem fitting that since universal use is made of these data, the name and symbol by which they are designated should not be violated.

The principle involved is very simple, and has nothing to do with the characteristics of the Swedish language. When it is desired to commemorate a famous man of science by naming a unit after him, it is customary to adopt a word which combines a reference to his name with considerations of convenience. Thus the unit of E.M.F. is called the volt (not the Volta), that of capacitance is called the farad (not the Faraday), and so on. The modification is, of course, particularly desirable when the name contains letters or signs which appear only in the languages of a minority of scientific workers, and the word 'angstrom' is thus the obvious choice for the unit of wave-length. It is noteworthy that the decision of 1938 of the International Astronomical Union was made at the Stockholm meeting, and no suggestion of dissent came from the many Swedish men of science present.

It is greatly to be hoped, therefore, that the two British bodies which are shortly to report on symbols will not be influenced by irrelevant considerations of language peculiarities, but will, as Prof. Guggenheim indicates, conform with internationally accepted usage. Mr. Twyman is certainly right in saying[2] that the recommendation of the International Astronomical Union is the one most widely followed. Dr. Harrison's practice, for example, is doubtless not determined, as Prof. Guggenheim suggests, by the recommendation of the British Committee of 1937 but by that of the Union in 1938, since he was chairman of the Commission of that body that made the recommendation.

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[1] *Trans. Inter. Astro. Union*, **6**, 100, 338, 378 (1939).
[2] *Nature*, **167**, 245 (1951).

Biologists in the Modern State

The leading article in *Nature* of April 28 on "Biologists in the Modern State" draws attention once more to the need for biologists with sound basic training in one of the physical sciences. The Agricultural Research Council is seriously concerned about the shortage of plant and animal physiologists with an adequate knowledge of chemistry and physics and of biochemists with biological experience. Posts in these subjects have remained unfilled for long periods owing to lack of suitable applicants. It is recognized by the Council that it is rarely possible in the course of study for a first degree to include adequate training in both biological and physical sciences; and hence applications for the Council's studentships from candidates wishing to study biology after graduating in a physical science, or to study a physical science more thoroughly after training in biology with a physical science as a subsidiary subject, are given very sympathetic consideration. The Council is at present examining the main batch of applications for 1951; but provision is made for the consideration of applications of special merit at any time, and those for training of the type set out above would most certainly fall into this class.

The need for the universities to be ahead of knowledge at present applied in agriculture cannot be over-stressed. We have to envisage, not the training required to meet our present needs, but that which will fit students to take their place in research work in five or six years.

From all the many sources available to the Council it is abundantly clear that the general trends in agricultural research will be such as to call for a steadily increasing proportion of workers with biological and physical training at the expense of those with the narrower background of biology alone.

There has been in the past two years an increase in the number of applications received for the Council's studentships from biologists with good degrees but without the necessary training in the physical sciences to fit them for research in, for example, physiology or biochemistry, which suggests that the supply of this type of worker wishing to enter a research career may be adequate. There is no corresponding increase in applications from biologists with the necessary preliminary training in the physical sciences, or of physical scientists wishing to take up biology, and it would be a great misfortune if the Ministry of Labour pamphlet caused any student with these qualifications to turn away from a career in biology.

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