

X-ray departments rather than, as in the case of some of the smaller hospitals, men without such specialised knowledge. The question of protection from the harmful effects of X-rays, high tension currents and vitiated atmosphere is carefully considered.

Speaking of the responsibilities and risks of the radiologists, the author says that "the radiologist's first object must be to make an efficient examination, and in order to attain it he must, if necessary, take some risk. The difficulty is where to strike a balance between the two factors of efficiency and risk. His first concern must be the patient". Speaking of protection, he says that "no protective devices will save the man who wantonly exposes himself". Speaking of the protection of the X-ray staff he says that "radiologists can take personal risks if they so desire, but neither they nor the governors of a hospital have any right to endanger the health of those who work for them".

Such statements as these should supply much food for thought to those laymen who sit on hospital committees, and are responsible for the health and safety of their X-ray workers. Thanks to the services rendered by the X-Ray and Radium Protection Committee, the recommendations of which are now accepted internationally, the lot of those working with the dangerous X-ray and with radium rays has been very appreciably improved. These recommendations are given in full in one of the appendices.

Taken as a whole the book, beautifully illustrated, is an exhaustive review of the subject. No scientific publication could be more completely informative and at the same time more delightful to read. It is a very worthy monument to the unremitting labours of its author.

### A Russian Treatise on Organic Chemistry

*Traité de chimie organique.* Par Prof. A. E. Tchitchibabine. Vol. 1. Pp. xxviii + 562. Vol. 2. Pp. x + xxix + xxxv + 563-1024. (Paris: Hermann et Cie, 1933.) Vol. 1, 120 francs; Vol. 2, 100 francs.

SINCE it has appeared hitherto only in the Russian language, Prof. Tchitchibabine's treatise on organic chemistry has remained almost unknown to British chemists, although it was originally published so long ago as 1924. The author, who formerly held a chair in the University of Moscow, is a member of the Academy of Sciences

of the U.S.S.R., and he has a distinguished record of research in organic chemistry.

In his preface to the first edition, Prof. Tchitchibabine writes: "Le but poursuivi était non seulement de présenter un manuel de chimie pour des étudiants des écoles supérieures de chimie, mais également de donner un ouvrage didactique capable de développer chez les futurs chimistes cette indépendance d'esprit, qui leur est nécessaire pour remplir leur mission de chercheurs et, en plus, servir de ferment pour le développement de la science et de l'industrie chimique." It is not difficult to agree with Prof. Grignard, who has written a short introduction to this translation, that the author has achieved his aim, and that his text offers a clear and logical account of present-day organic chemistry. He has provided a comprehensive exposition of the subject, which will prove attractive to honours students and advanced workers who may desire to use a French text. The work may, indeed, be ranked with some of the best treatises of the kind in other languages.

There is no outstanding novelty which calls for comment in the treatment or subject-matter. The first volume contains a general introduction (78 pp.) followed by a systematic survey (484 pp.) of aliphatic compounds, proteins and purines, together with a treatment at appropriate points of such subjects as co-ordination compounds, the relationships between physical properties and chemical constitution, and X-ray analysis in organic chemistry. The second volume treats of cyclic compounds, arranged under the headings of carbocyclic compounds (43 pp.), aromatic series (203 pp.), terpenes and their derivatives (35 pp.), and heterocyclic compounds (143 pp.).

The most striking feature of this work is the astonishing circulation which has been attained by its more recent Russian editions. The first edition, "malgré la défectuosité de sa présentation extérieure," was taken up in less than three years. The "unexpected success" of the second edition necessitated the immediate preparation of a third edition. The third Russian edition of 30,000 copies was absorbed in a few months! The author observes that this result testifies to a vigorous growth of chemical education in the U.S.S.R. Such a demand for an elementary school-text would be remarkable; but that it should exist for a work of this advanced and specialised character is more than remarkable—it is revolutionary.

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