CONVERSATIONS ON CHEMISTRY.

Conversations on Chemistry. First Steps in Chemistry. Part ii., Chemistry of the Most Important Elements and Compounds. By W. Ostwald. Authorised translation by Stuart K. Turnbull. Pp. viii+373. (New York: John Wiley and Sons; London: Chapman and Hall, Ltd., 1906.) Price 8*s.* 6*d.* net.

THE original German edition of this book has been already noticed in NATURE (March 9, 1905, vol. lxxi., p. 435). The translation into English will make it accessible to a wider range of teachers, and to them it is to be warmly commended. No one can fail to be interested in seeing how one of the most lucid of German expositors, and one of the most ardent of reformers, presents the material of ordinary inorganic chemistry to the elementary student, and there are probably few people engaged in the business of teaching chemistry who will not find Prof. Ostwald's book of chemical dialogue eminently interesting and suggestive.

A book by so trenchant a critic naturally invites a close scrutiny, and particular interest will be felt in the treatment of certain points of difficulty which in a peculiar way beset the teaching of elementary chemistry. We may cite, for example, the definition or characterisation of an acid. Prof. Ostwald meets the case in a very simple way. On p. 16 it is written, "Only those compounds are acids which give off hydrogen with magnesium," and this is re-affirmed as quite correct on p. 17. We appreciate the advantage of a touchstone, but it may fairly be asked if, in the first place, magnesium is such a touchstone, and, secondly, whether this is the right kind of basis for the characterisation of an acid. In regard to the first point we think there is doubt, for although it is explicitly stated that water gives off no hydrogen with magnesium, and is not an acid, it is admitted later on p. 247 that "the metal has only a very slight effect on water," and, of course, it might be urged that at higher temperatures magnesium will actually burn in steam and liberate hydrogen in torrents. We think that Prof. Ostwald's pupil, who in this book is invested with a degree of zeal and adroitness calculated to make other teachers envious, might have been allowed to persecute his master a little more on the subject, until he had elicited the confession that on this question of acids, as on so many others relating to chemistry, the relativity and transition of things altogether preclude absolute definitions.

It is, perhaps, almost captious to make these remarks, for the way in which the teacher is exhibited in this book, as anxious to be questioned is truly admirable, and most points are worked out with great ingenuity and address to an entirely logical conclusion. The allusion to things and phenomena of real human interest and the suppression of pedantry are also to be warmly commended.

The actual work of translation has, on the whole, been well done. The nationality of the translator is betrayed by occasional troubles with shall and will, and there are some positive mistakes in sense. Thus, "*Leimwasser in Fäulnis übergegangen*" is rendered "lime-water which has become foul," and on p. 49 the first two lines contain a mistranslation which makes a serious error both in fact and theory.

In conclusion, we may perhaps be permitted to regret that so useful a book has not been issued at a price which would make its wide dissemination among teachers more certain. A. S.

NENCKI'S COLLECTED WORKS.

Marceli Nencki Omnia Opera. Gesammelte Arbeiten von Prof. M. Nencki. Two vols. Erster Band. Pp. xlii+840. Zweiter Band. Pp. xiii+893. (Brunswick: F. Vieweg and Son, 1905.) Price 45 marks.

THE death of Prof. M. Nencki at the comparatively early age of fifty-four was a great blow to science. He attained a world-wide reputation as an investigator of the first order, and his laboratory at St. Petersburg became a busy hive of earnest workers, all fired with the enthusiasm and thoroughness of their master. The most fitting monument for such a man is the collection of his works presented to us in the two volumes which form the subject of this review. The labour of love in preparing this book for the press has fallen upon two of his most attached colleagues, namely, Nadine Sieber and Prof. J. Zaleski, and they have chosen the German language as that in which to publish his collected memoirs. They have written an account of his life in the introductory pages, but have wisely chosen to make this brief; his work was his real life, and this is allowed to speak for itself.

Nencki's name is best known, perhaps, for his researches that deal with the decomposition products of albumin, with the history of urea and its precursors in the body, and with the chemistry of hæmoglobin and other pigments. Probably few had any idea how varied were the investigations he undertook in other branches of biological chemistry, and how enormous was the output from his laboratory. The total number of papers now published amounts to three hundred and forty-six. They were issued from the year 1869 onwards, and include not only those written by Nencki himself, or in conjunction with his colleagues, but also those published by the workers in his laboratory.

It is interesting to note how with the advance in knowledge the subjects treated vary with the march of the years. An organic chemist at heart, Nencki best loved a research in which he could apply his chemical learning to obtain exact results. But he never lost sight of the application of chemical knowledge to the problems of medicine, pathology, and pharmacology, even although in many cases the results lacked that certainty and neatness which form the chemist's aim. As bacteriology, the giant daughter of physiology, became a specialised branch of study, we see how the resources of his laboratory were given over to the elucidation of its chemical relationships; and in more recent years the new