to every worker in nerve physiology and pathology. There is much need of a description of those convolutions, or, in other words, of an accepted organography of the brain, to enable observers to make their facts intelligible to others. Such a desideratum is supplied by the small treatise before us.

The prevailing sentiment of the present day is that the several convolutions have special functions, and Ecker accepts the notion as a fact, and, in no philosophic spirit, treats the opposite opinion as a myth. For certainly the doctrine of special localisation of intellectual actions is not established, but is opposed by many facts generally recognised. However, as Ecker, in the substance of his treatise, restricts himself to the duties of a descriptive anatomist, his physiological hypothesis will not embarrass the reader.

Mr. Galton has fairly performed his task of translation, although failing to suppress the German idiom of the original, which ever and anon displays itself to the obscuring of the meaning; moreover, we regard Ecker's attempt to reduce chaos to order in the matter of the convolutions to be only a forerunner of a simpler and clearer organography, and also of a simpler nomenclature than is yet arrived at.

In conclusion, we have to add that several diagrams are dispersed throughout the text in illustration of the descriptions, and without which, we greatly fear, the reader's mind would be in tedious mazes lost. The translator has likewise added a very valuable bibliography, noting all the principal treatises and essays on the anatomy and physiology, human and comparative, of the brain.

Recent Works on Medical Chemistry.¹—We have selected these two volumes for notice not because they present any similarity of object or treatment, but rather because they relate to two fields of chemistry, widely dissimilar, yet both of great importance to the physician. Dr. Ralfe's little book is intended to furnish students and practitioners with a concise laboratory guide to the qualitative and quantitative analysis of the tissues, fluids, and excretory products of the human body, and at the same time to form a handy manual of physiological chemistry; whilst Dr. Hoffman's work is intended to form a guide for the identification and determination of the quality of medicines and the substances used in their preparation, a knowledge of these matters being placed as a responsibility upon those who prepare, compound, and dispense them. The two works have this in common, but they are both manuals of analysis, and of analyses which fall within the province of the physician.

¹ Outlines of Physiological Chemistry. By Charles Henry Ralfe, M.A., M.B. London, 1873.
Manual of Chemical Analysis as applied to the Examination of Medicinal Chemicals. By Frederick Hoffman, Ph.D. New York, 1873.
Physiological chemistry has for long, we fear, been at a low ebb in this country, and it is to the continent of Europe that we have had to look of late years for fresh discoveries and for advances in that science. This is the more to be lamented, as our country has in past years produced worthy labourers in this field. But in recent years our most brilliant and accomplished chemists have devoted themselves to the discovery of new synthetical compounds of interest to the purely scientific chemist, rather than to the perhaps more difficult and laborious task of the examination and elucidation of the animal products. In saying this, we do not mean to deny that the physiological chemist has derived great benefit from synthetical researches, for light has undoubtedly been thrown on some of the more abstruse products of the animal body by the building up of these products from other and simpler substances.

On the continent, and especially in Germany, on the other hand, the study of physiological chemistry has earned the devotion of an ardent band of students, and it is to them that we have had to look, and still continue to look, for discoveries in this fruitful field of science.

It is not difficult to assign a cause for this our insular seeming apathy and neglect. In England physiological chemistry has almost perished from sheer starvation. Its pursuit is at once difficult, costly, and laborious, requiring the devotion of a life, and greater expense than all but the more wealthy can afford. No wonder then, that, unfostered by governmental aid, and looked upon coldly by our leading English chemists, unsupported too by endowments, this branch of science should have languished, and that scientists and physicians should alike have exerted their energies in fields more fertile in results, or more lucrative. In Germany physiological chemistry survives, but perhaps can scarcely be said to flourish, under the ægis of the endowed professorships which British chemists sigh for in vain. But even in Germany it is an evil sign that a periodical devoted to this branch of knowledge, and under the able editorship of Professor Hoppe-Seyler, has been abandoned because its circulation did not justify the heavy expense involved in its continuance.

We trust that the establishment of courses of practical physiology as an essential and obligatory part of the ordinary medical curriculum will have the effect of directing attention to the much neglected study of physiological chemistry. We fear, nevertheless, that the chemical portion of such a course of practical physiology has little existence except in name; and we know that some of the chemical teachers at our medical schools are apt to discourage the study of physiological chemistry on the ground that the science is wanting in definiteness and precision. Such an objection lies, however, only against its too early study, before the student has grasped the fundamental details of general chemistry.
The instinctive want felt by the more able among our junior students of medicine, physiology, and pathology, for a text-book adequately representing modern views respecting physiological chemistry has induced authors to publish a few manuals, among which the foremost ranks must be assigned to the section of Sanderson and Klein’s text-book of practical physiology which has proceeded from the pen of Dr. Lauder Brunton. Dr. Ralfe’s little volume has a less ambitious, though equally practical, object in view. It has been compiled, the author says,

“In the hope that it may furnish students and practitioners of medicine with a concise and trustworthy laboratory guide to the qualitative and quantitative analysis of the tissues, fluids, and excretory products of the human body. It has purposely been made as simple as possible. The best processes have been selected from the English, French, and more particularly German text-books and journals, and although these processes have been very succinctly described, care has been taken to omit nothing which is essential to success.”

A careful examination of the volume has convinced us that this statement in the preface is well borne out in the body of the work. After an introductory sketch of physiological chemistry, a description is given of the proximate principles of the human body; then of the products of decomposition. The inorganic constituents of the organism have then a short chapter devoted to them. Finally, a description of the tissues and fluids occupies about one half of the volume; and in this part, concise yet tolerably full analytical details are given. An appendix on weights, measures, and manipulation might well have been omitted, since the book is one adapted rather to the wants of the advanced student, already accustomed to ordinary chemical manipulations, to whom this appendix is hence unnecessary. Another appendix, containing a list of authors referred to, and from whose works extracts have been taken by Dr. Ralfe, is invaluable; it is not only a proper and graceful acknowledgment in a work which does not pretend to be more than a compilation; but it also is of real use to the student and practitioner, enabling him to refer to other works when fuller details are required than could fitly find a place in a handy manual.

Since the pith of a book is a good index, we the more regret the absence of one from Dr. Ralfe’s volume. In any future edition we should advise this defect to be remedied by the insertion of a full and copious index, besides the continuance of the present table of contents. We notice one other blemish. Although the proof-sheets have been revised by Mr. Heaton, the lecturer on chemistry at the Charing Cross Hospital Medical School, we have detected a goodly number of erroneous chemical formulæ, obvious misprints, yet puzzling enough to the tyro in chemistry.
Dr. Ralfe's little work, spite of its defects, forms an excellent and readable manual, and supplies a real want in our scientific literature.

Dr. Hoffman's manual supplies an entirely different want, and is a work more adapted to the use of the pharmaceutist than the physician, though it will form a valuable adjunct to the library of those general practitioners who dispense their own medicines. It has become now-a-days too much the fashion to trust in the reputation of the wholesale druggist for the purity of medicinal chemicals than to submit them to appropriate tests. This work will, however, form an indispensable portion of the library of the professed pharmaceutist. It gives plain and simple directions for ascertaining the purity of all the more ordinary, and some of the rarer medicinal chemicals, with fuller details than those described in the British Pharmacopœia.

Without pretending to have examined all the processes recommended, we may say that we have found the statements and descriptions contained in Dr. Hoffman's book, as a rule, reliable. The tests employed have also the advantage in many instances of novelty, and several happy methods of analysis are described. In any future edition of the work we should recommend a free use of the process of excision. It is surely superfluous to state the operations involved in simple tests are familiar to the pharmaceutist, and then to proceed to describe them in detail. At least three fourths of the woodcuts in the book might also be dispensed with, especially as most of them represent very simple apparatus. The same cuts are reproduced again and again ad nauseam, some of them so many as nine times.

Nevertheless, spite of these defects, and the somewhat puzzling employment of the old troy weights, we can highly recommend Dr. Hoffman's volume to the attention of the physician and pharmaceutist.

Thorpe's Chemical Analysis.¹—This volume belongs to Messrs. Longmans' series of 'Text-books of Science.' We consider it to be a very valuable addition to chemical literature, although we are told that the work is "adapted for the use of artisans and students in public and other schools." There is no doubt that every working analyst will appreciate it as a guide in his own laboratory investigations as much as in the instruction of his pupils. The work contains a vast amount of information as to all the more trustworthy methods of determining the quantitative composition of many useful and important products. The newest and best processes are described with accuracy and minuteness, and illustrated by means of numerous well-drawn figures of apparatus. Here and

¹ Quantitative Chemical Analysis. By T. E. Thorpe, pp. xii and 387. London, 1873.