1 plate; 109 figures in text. Price, 8 Marks.

During the last fifteen years the older rather tedious and somewhat intricate methods for the calculation and drawing of crystals have been greatly simplified by the contributions of Goldschmidt, Penfield, Wulff and Hutchinson especially. The purpose of the present text is to bring together these various methods in a clear and concise form in a single treatise.

The general part of the book comprises sixty-six pages and includes a discussion of the stereographic, gnomonic and linear projections and the development of general formulas for the calculation of crystals. The use of the protractors of Hutchinson and Penfield are described at length, as is also the stereographic net of Wulff. All possible cases of crystal-calculation are then taken up fully in a discussion extending over twenty pages.

The special part of the text, consisting of sixty-one pages, is devoted (*a*) to the application of the methods of crystal-calculation, examples being introduced for each system; and (*b*) to crystal-drawing. Here the methods for the drawing of crystals directly from stereographic and gnomonic projections are given first. These are followed by those involving the use of the axial cross for the projection of simple and twinned crystals.

The treatment throughout the book is concise but clear, and illustrated with 109 diagrams. There is also a bibliography of the most important texts and papers on the subject. The book is a valuable contribution and all advanced students of geometrical crystallography should have access to it.

EDWARD H. KRAUS

MINERALOGICAL LABORATORY,
UNIVERSITY OF MICHIGAN

The Electrical Conductivity and Ionization Constants of Organic Compounds. By HEYWARD SCUDDER, B.A., B.S., M.D. New York, D. Van Nostrand Co. 1914. Pp. 568. Price $3.00.

In the words of the author, "the object of this book is to present as far as lies in my power a bibliography of all the measurements of the ionization constants and the electrical conductivity literature between the years 1889 and 1910 inclusive, together with the values of the ionization constants, and certain values of the electrical conductivity measurements. Qualitative work is also included. . . . From 1910 to the beginning of 1913, important corrections that have come to my notice have been inserted."

As to arrangement: "The book is divided into a set of tables arranged according to the names of the compounds, containing all the data that may be given with a bibliography of all references to each compound; a formula index to the compounds; a bibliography arranged according to the names of authors; a subject index to certain subjects; and a journal list giving the names of all journals examined with the number and date of the last volume examined."

The first set of tables will show the values, if known, of the specific conductivity of the pure substance; the ionization constant; the conductivity in aqueous solution; the conductivity in solvents other than water; the conductivity under various conditions as to temperature and pressure and in various mixtures; the conductivity of the salts at many different temperatures and in many different solvents.

The vast amount of labor that the author must have expended upon this compilation will be greatly appreciated by workers in this field of physical chemistry. As the variation in the expression for the dilution law lately suggested by Kraus and Bray is likely to awaken a new interest in conductivity values and ionization constants, the book should prove to be of much service.

The list of errata is wonderfully small considering the nature of the work.

E. H. ARCHIBALD

NOTES ON METEOROLOGY AND CLIMATOLOGY

"THE Rainfall of California," by Professor Alexander McAdie (Univ. Calif. Geogr. Pub., Vol. 1, No. 4, pp. 127–240, Pls. 21–28). This