

**A COURSE IN
SCIENTIFIC
GERMAN**

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A Course in Scientific German by H. B. Hodges

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IN
SCIENTIFIC GERMAN.

PREPARED BY

H. B. HODGES

WHILE INSTRUCTOR IN CHEMISTRY AND GERMAN IN
HARVARD UNIVERSITY

REVISED AND ENLARGED EDITION

BOSTON, U.S.A.,
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PREFACE.

IN preparing this book my object has been to supply the want, long felt by English and American students of science, of some aid in the acquirement of a knowledge of the German language of a sufficiently practical nature to enable them to read with ease the scientific literature of Germany.

The great difference between the words, phrases, and general style of the German of polite literature, — usually the only kind taught in our schools and colleges, — and that of scientific writers, will, I think, justify me in the use of the phrase "Scientific German," and in making a special course of this branch of the language.

How inadequate the knowledge of German acquired through the aid of the text-books commonly used in this country is to the wants of the student of science I know from my own experience, as well as from that of the many American and English students whom I met during my three years' residence in Germany; and since my return I have been struck by the difficulty which students who have studied German two years at this University find in reading German scientific journals.

The book begins with exercises in German and English, the sentences being carefully selected and arranged from standard text-books on Physics, Chemistry, Mineralogy, and Botany; each subject is treated by itself, and the

whole is divided into twenty-one lessons, each lesson being followed by a series of questions in German on its subject-matter, the object of this being to drill the ear of the student, and give him practice in framing the answers for himself from the context, and in committing them to memory; for, while I do not believe it possible for a student to learn to converse in German *with facility* without residing in Germany, or at least in a German family, still I see no reason why he should not be taught to understand the spoken language, and to express himself briefly and to the point, by means of some such method as I have adopted.

Great care has been taken to select only such sentences as represent the more general and important facts in each science, and such as can be easily understood without the aid of diagrams and figures; these have been arranged with reference to the gradual development of the subject, in order to impart to the whole a certain degree of completeness. A student can begin this book, therefore, without having had any scientific training, and — although this is not the purpose of the book — he will become more or less familiar with the main principles of the natural sciences, at the same time that he is mastering the difficulties of the language.

It is assumed, however, that the student has some knowledge of the general principles of the language, and has had some practice in reading easy German prose and in translating simple English sentences into German; the book is therefore to be used by classes in colleges and scientific schools in their second year's course in German, or during the latter part of their first.

All scientific words and phrases the student will find in the vocabulary at the end of the book; the meanings of

other words and phrases, excepting those most commonly occurring, which the student is supposed to know already, are given at the head of the exercises in which they first occur.

The second part consists of a collection of articles on scientific subjects of general interest, adapted from the writings of the first scientific men of Germany. Following the custom now observed almost universally in Germany in printing scientific works, ordinary Roman type has been used throughout this book.

In writing the vocabulary I have endeavored to meet the needs of the student of science by limiting it to the *purely scientific* terms occurring in works on physical, chemical, mineralogical, and botanical subjects, together with the more important geological, mathematical, and astronomical terms, omitting the greater number of the mechanical and commercial phrases to which so much space is devoted in "Dictionaries of Technical Terms." In spite of the labor and care expended on this part of my work, I am conscious that, in my endeavor to condense my material as much as possible, I have omitted some words which ought to have been given; in the *German-English* part I have left out a few physical terms, such as *achromatisch*, *achromatic*, *Cohäsion*, *cohesion*, and *convex*, *convex*, the meanings of which are evident from their great similarity to their English equivalents. In both parts of the vocabulary the German words have been printed in *full-faced* type and their English equivalents in *italics*, for the sake of uniformity and preventing confusion in looking out words.

The German-English vocabulary contains the meanings of about twenty-five hundred words and phrases.

The principal sources consulted in the preparation of the vocabulary are, Lucas' German and English Dictionary,

Bischoff's Deutsch-lateinisches Verzeichniss der botanischen Kunstaendrucke, and the glossaries in Gray's Botany and Dana's Mineralogy.

The instructor will, of course, use his own judgment in regard to the omissions and changes which may seem to him necessary in using this book, to adapt it to the capacity of his classes; and I would only suggest the advisability of illustrating the text practically from time to time by means of drawings, models, specimens, etc., with verbal explanations in German, for the threefold purpose of elucidating the subject, of impressing the German names more firmly on the memory of the students, and of sustaining their interest in the recitation.

I would finally express my gratitude to President Eliot, and Professors Cooke, Jackson, and Goodale of this University, and also to my former German teacher, Mr. Carl Siedhof, of Boston, for their kind encouragement and suggestions during the progress of my work.

H. B. H.

HARVARD UNIVERSITY, CAMBRIDGE,
July, 1877.

NOTE TO REVISED EDITION. — Since the first appearance of this book, the practical applications of electricity have grown to such importance, that it seemed advisable to add to the text articles on some of the most important uses of electricity in daily life, and with this object in view, I have increased Part II. by twenty one pages, devoted to the following subjects: The Dynamo Machine, Electrical Transference of Energy — Railways, Telferage, &c. — The Electric Light, Telephone and Microphone, with a list of electrical units.

This new material made it necessary to add many electrical terms to the vocabulary, and while doing this, I subjected the whole to a thorough revision, and by eliminating a number of obsolete or unimportant terms not occurring in the text of the book, and by condensing the meanings of others, I was able to introduce about two hundred new scientific terms. I also added to the special lists of terms a number of the more difficult words occurring in the Exercises, so that now the student who is sufficiently familiar with elementary German to begin this book, will find all the help he needs without the necessity of referring to any dictionary.

H. B. H.

BALTIMORE, MD.,
September, 1893.

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