### **Dorota Horowska**

# ENGLISH IN CHEMISTRY

Technical vocabulary textbook for students and PhD students

GDAŃSK UNIVERSITY OF TECHNOLOGY PUBLISHERS CHAIRMAN OF EDITORIAL BOARD Dariusz Mikielewicz

REVIEWER Christian Jungnickel

COVER DESIGN Wioleta Lipska-Kamińska

First edition - 2010

Published under the permission of the Rector of Gdańsk University of Technology

The audio recordings are available online – https://cjo.pg.edu.pl/horowska

Gdańsk University of Technology publications may be purchased at https://sklep.pg.edu.pl/

No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any human or computer language in any form by any means without permission in writing of the copyright holder.

© Copyright by Gdańsk University of Technology Publishing House, Gdańsk 2025

ISBN 978-83-7348-787-1

Gdańsk University of Technology Publishing House

Second edition revised and expanded. Ark. ed. 22,0, ark. print 20,25, 1273/1203

Printing and binding: Volumina.pl sp. z o. o. ul. Księcia Witolda 7-9, 71-063 Szczecin, tel. 91 812 09 08

## **CONTENTS**

INTRODUCTION	5
Unit 1. SCIENCE	7
Unit 2. CHEMISTRY	20
Unit 3. ELEMENTS	35
Unit 4. ATOM	43
Unit 5. PHYSICAL AND CHEMICAL PROPERTIES OF MATTER	51
Unit 6. CHEMICAL REACTIONS	57
Unit 7. CHEMICAL NOMENCLATURE IN INORGANIC CHEMISTRY	67
Unit 8. LABORATORY GLASSWARE	75
Unit 9. ENVIRONMENT	87
Unit 10. CARBOHYDRATES	100
Unit 11. ESTERS	110
Unit 12. LIPIDS	124
Unit 13. ANTIBIOTICS	137
Unit 14. ATMOSPHERE	149
Unit 15. HYDROSPHERE	163
Unit 16. WATER TREATMENT AND AIR CONTROL	185
Unit 17. GREEN CHEMISTRY	201
Unit 18. NANOTECHNOLOGY	216
AUDIO SCRIPTS	233
APPENDIX 1	248
APPENDIX 2	249
ANSWER KEY	252
TASKS FOR STUDENT A	302
TASKS FOR STUDENT B	305
TASKS FOR STUDENT C	316
GLOSSARY	317
GLOSSARY OF CHEMICAL TERMS AND COMPOUNDS	327
VISUALS	335
BIBLIOGRAPHY	339

#### INTRODUCTION

**English in Chemistry** is a professional English coursebook for everybody studying, working or interested in the field of Chemistry. The aim of the book is to help the users extend, revise and consolidate their range of vocabulary in the subject, and improve their language skills through a variety of reading and listening comprehension, vocabulary, and communicative exercises and tasks. This practice is believed to help the users be more linguistically efficient in their work or study environments. The reading and listening texts included in the book were adapted from or based on several sources: specialist publications; msn.encarta.com/encyclopedia; en.wikipedia.org; Encyclopaedia Britannica; and dictionaries: of Chemistry, and Science.

The book is divided into two main parts.

- Chapters 1 through 9 are shorter and concentrate on basic terms used in general chemistry.
- Chapters 10 through 18 develop several topics of general chemistry, chemical technology, and environmental protection.

Each unit consists of four sections.

contains short exercises that refer to students' expertise in the subject and introduce the main topic of each unit.

offers texts to read and listen to which present essential knowledge about the topic. They are followed with exercises designed to improve students' reading and listening comprehension skills and help them master the correct pronunciation of challenging chemical terms.

is an extension of the main topic. It provides further practice in key topic areas through a variety of vocabulary exercises and pair work tasks.

provides a revision list of specialist and non-specialist words and terms that

The textbook is intended for students at **B2** and **C1** levels.

The audio files (in MP3 format) are free and available for download from the websites of the Foreign Language Centre (CJO) and https://cjo.pg.edu.pl/horowska.

students will be familiar with at the end of each unit.

#### **ACKNOWLEDGEMENTS**

I would like to express my immense gratitude to Professor Waldemar Wardencki for his invaluable advice and help offered to me while supervising, coordinating and consulting my project.

I am especially grateful to Ms Ewa Jurkiewicz-Sękiewicz for her absolute trust and deeply held belief that this book will see the light one day.

I would also like to sincerely thank Lara Kalenik for sharing her voice in the audiofiles, Ewa Paluszkiewicz for her practical help with chemical terms and reactions, and Marek Łukasik for the pictures of the Moose, which he created especially for this book.

Finally, I want to say a big thank-you to my closest relatives for their instruction, advice and great encouragement that helped me to progress with and complete this challenging work.