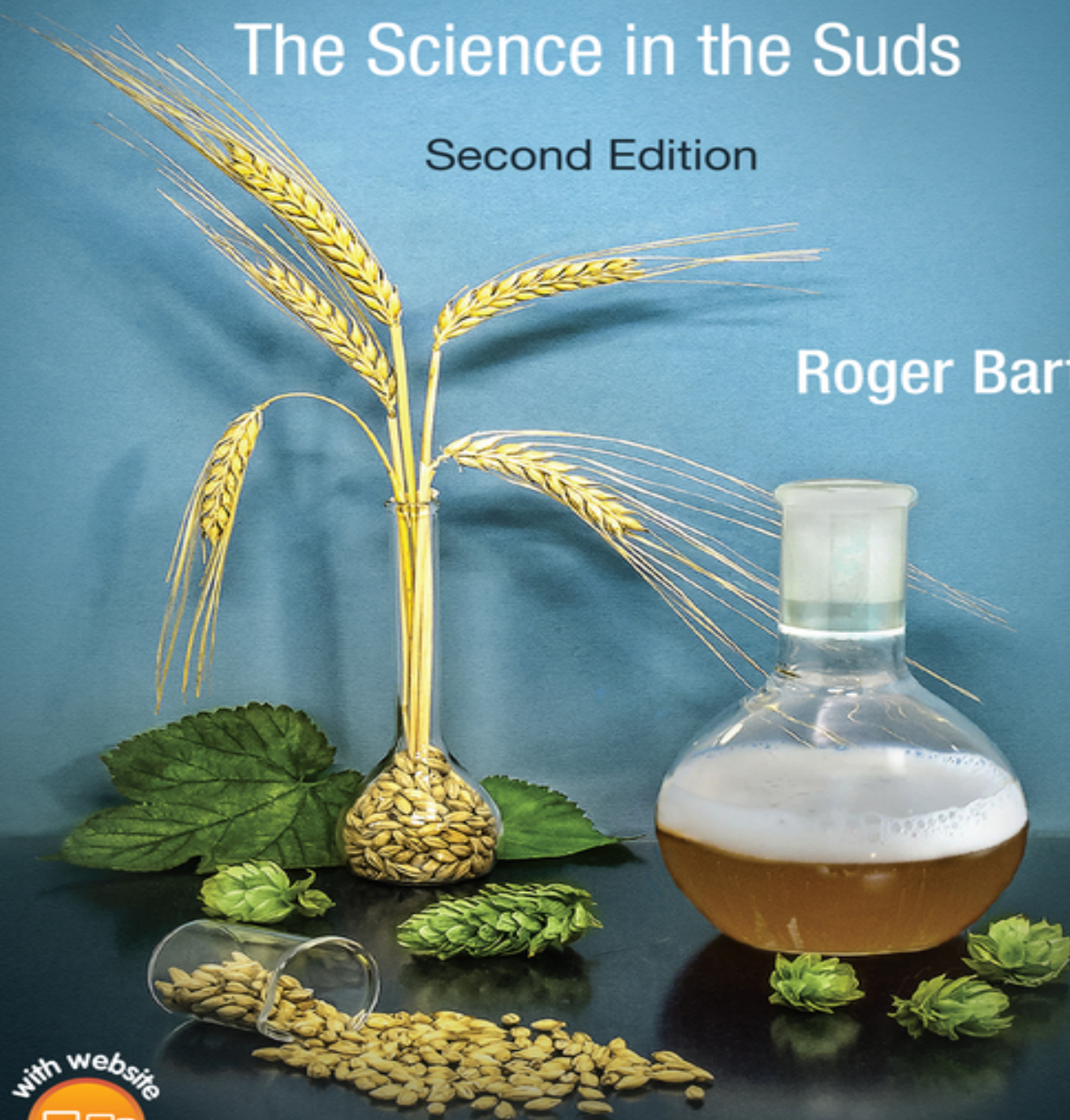


The Chemistry of **BEEER**

The Science in the Suds

Second Edition

Roger Barth



WILEY

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THE CHEMISTRY OF BEER

The Science in the Suds

Second Edition

ROGER BARTH, PhD

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PREFACE TO THE SECOND EDITION

Whether you are a serious brewer or a person who is just interested in beer, the more you know about the scientific basis of beer, its preparation, and its flavors, the more you will appreciate and enjoy the depth and diversity of the world of beer. Although this book is written largely for the general reader, there is material that will be useful to brewers or people who are considering taking up brewing as homebrewers or as professionals.

Commercial brewing and homebrewing are discussed to help give context to the material, but this is not intended to be a complete textbook on brewing, several of which, including *Mastering Brewing Science* by biologist Dr. Matthew Farber and me, are mentioned in the chapter sources. Nonetheless, it will be very helpful to read this book before reading one of the brewing textbooks.

Much has happened since the first edition of *The Chemistry of Beer: The Science in the Suds* was published in 2013. The craft brewing industry was hit hard by the Covid-19 pandemic at a time of increased competition and increasing demand for new products. Generational changes in the drinking public have brought several previously marginal products into the mainstream. These include low and no-alcohol beer, flavored malt beverages, and hard seltzer. Many brewers have responded by adding some of these products to their line-up. The preparation of these and other beer-related products are discussed in a new chapter.

Other changes were introduced to make the book clearer and more appealing to readers, and to respond to helpful suggestions. These include full color throughout, expanded coverage of beer history, with particular attention to the

role of beer in development of technology and the contributions of the brewing industry to science and technology. The chapters on packaging and beer stability and those on flavor and beer styles have been combined to highlight the chemistry. The chapter on homebrewing now includes a section on careers in brewing. The recipes have been removed, but many recipes are available in books referenced in the Sources and on the Web. Each chapter now begins with a brief overview and ends with chapter highlights.

Many readers will be college students, some of whom are in the process of developing attitudes and practices regarding the use of alcohol. Alcohol is what it is. It has enriched many lives and ruined many lives, making it much like every other aspect of the human experience. It should not be taken lightly. I hope this book will help its readers attain a thoughtful approach to alcohol. Those who are experiencing difficulties with alcohol or other psychoactive substances should seek assistance from college, pastoral, or health counselors.

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READING NOTES

Several typographic conventions are used throughout this book to signal the level of the material or the availability of additional information.

The first mention of a word that is defined in the glossary is in **boldface** type.

Supplementary material that may be glossed over or skipped altogether, as the requirements of the reader dictate, are highlighted in shaded boxes.

Questions marked with a bullet (■) are advanced and may depend on supplementary material (in shaded boxes).

These conventions are intended to help you to focus on the main points, while keeping the book useful for those with a need or desire to know more.

Each chapter has references to some of the key primary and secondary literature. Each chapter has a set of questions intended to help you study the material. There is an extensive glossary and a full index to help you navigate the book.

Thank you for reading!

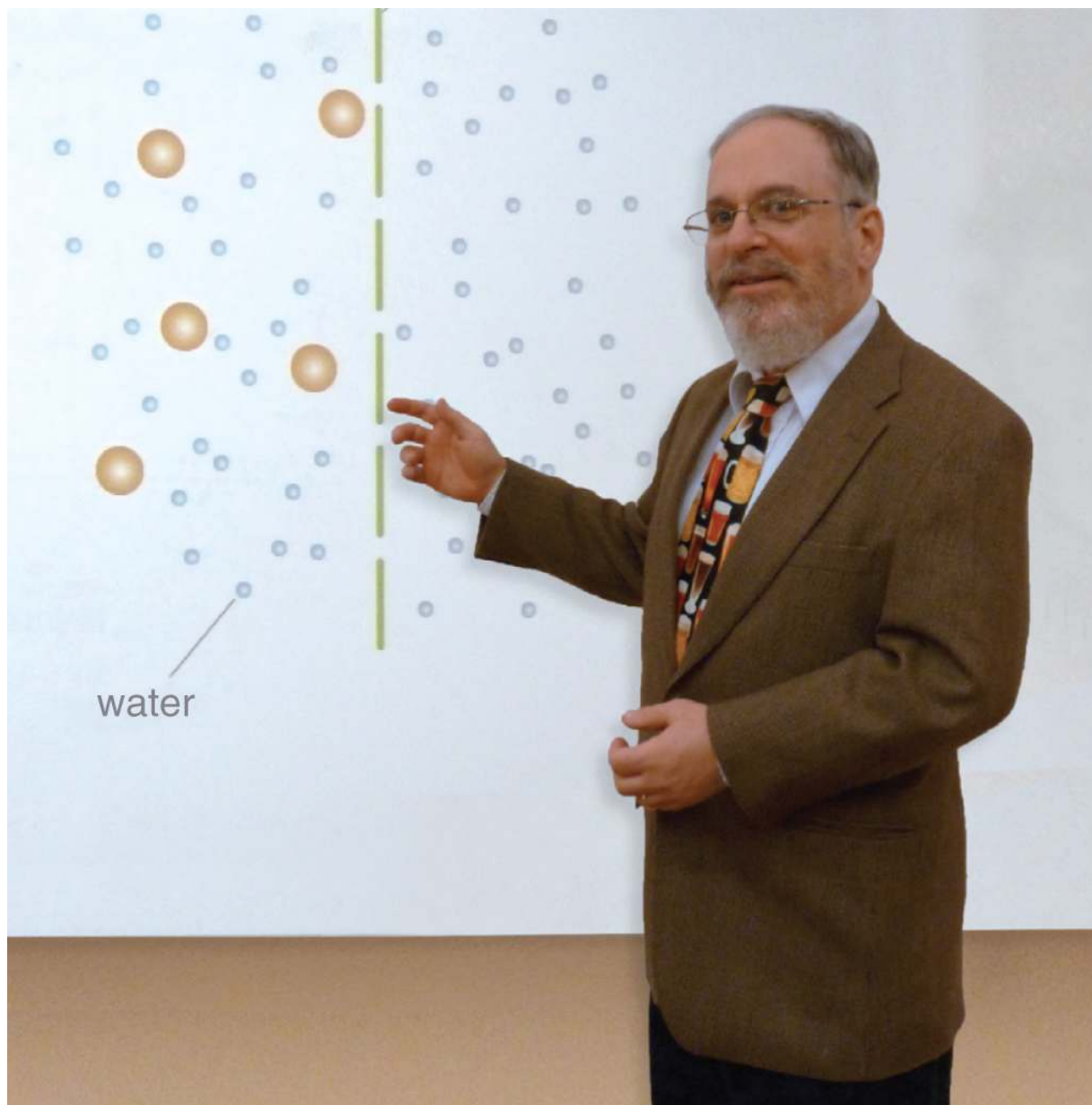
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ABOUT THE AUTHOR



Source: Roger Barth.

Roger Barth was born in New York City. He attended public schools in Levittown, Pennsylvania and received his bachelor's degree from La Salle College in Philadelphia. He was awarded a doctorate in Physical Chemistry at the Johns Hopkins University in Baltimore. After working on

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Dr. Barth is an accomplished home brewer. He and his wife, Marcy, a graphic designer, and their two cats live in West Goshen, Pennsylvania. They have three grown children and three grandchildren.

ABOUT THE COMPANION WEBSITE

This book is accompanied by a companion website:

<https://www.wiley.com/go/Barth/beer>

The website includes:

- Answers