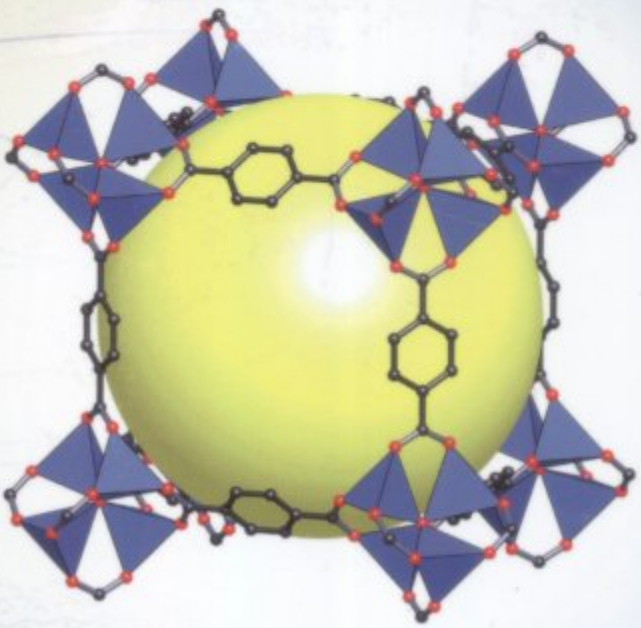
CAMBRIDGE SERIES IN CHEMICAL ENGINEERING

CHEMICAL ENGINEERING DESIGN AND ANALYSIS

An Introduction

Second Edition



T. Michael Duncan | Jeffrey A. Reimer

Brief Contents

This textbook puts design at the center of introducing students to the course in mass and energy balances in chemical engineering. Employers and accreditations increasingly stress the importance of design in the engineering curriculum, and design-driven analysis will motivate students to dig deeply into the key concepts of the field. The authors use stories to show students how to design chemical processes. They follow up these stories with end-of-chapter exercises that offer students the opportunity to practice design skills that will be important in their future careers as chemical engineers.

Features:

- Focuses on process design substantiated by analysis. Students gain a deeper and more satisfying understanding of their chosen discipline, and develop a strong set of skills in the contexts of contemporary chemical processes such as the hydrogen economy, petrochemical and biochemical processes, polymers, semiconductors, and pharmaceuticals.
- Avoids an encyclopedic presentation of chemical engineering information by organizing skills in a "just-in-time" fashion, where each skill is presented to answer a pending design question.
- Pedagogical features include: a "context, concepts, defining question" introduction for each section, which establishes for the student a framework for thinking about chemical engineering; numerous and well-explained examples; and almost 800 illustrations to support the concepts explained in the book.

New in this edition:

- The content has been extensively updated and revised throughout.
- The number of end-of-chapter exercises has been doubled to more than 350, and the number of open-ended exercises tripled to 70.

Online resources:

An abundance of online resources is available for instructors and students at **duncan.cbe.cornell.edu/Graphs**. Materials for students include worksheets for various exercises. A detailed solutions manual, additional exercises, and many other teaching resources are provided for instructors.

T. Michael Duncan joined the School of Chemical Engineering at Cornell University in 1990, where he holds the Thorpe Chair in Chemical Engineering and has served as Associate Director for the undergraduate program since 1993.

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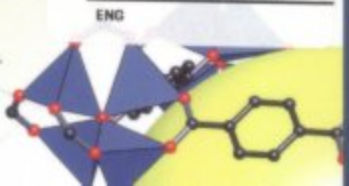

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