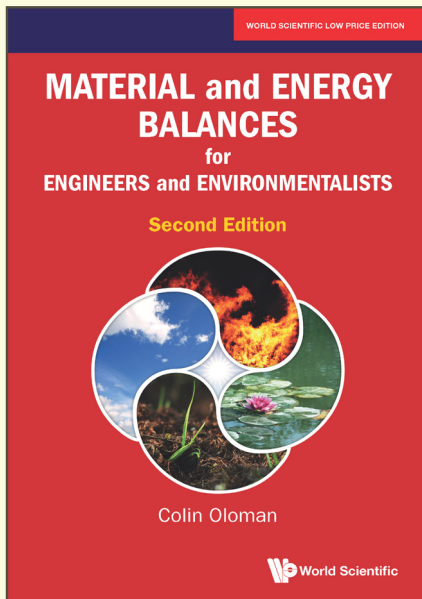


Material and Energy Balances for Engineers and Environmentalists, 2nd Edition



By **Colin Oloman**
(University of British Columbia, Canada)

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ABOUT THE BOOK

Material and energy (M&E) balances are fundamental to biological, chemical, electrochemical, photochemical and environmental engineering disciplines and important in many fields related to sustainable development.

This comprehensive compendium presents the basic M&E balance concepts and calculations in a format easily digested by students, engineering professionals and those concerned with related environmental issues.

The useful reference text includes worked examples for each chapter and demonstrates process balances in the framework of M&E concerns of the 21st century. The additional problems and solutions in the Appendix embrace a wide range of subjects, from fossil fuels to fuel cells, solar energy, space stations, carbon dioxide capture and sodium-ion batteries.

READERSHIP

Researchers, professionals, academics, undergraduate and graduate students in chemical engineering, environmental engineering and industrial chemistry.

CONTENTS

- An Introduction
- The General Balance Equation
- Process Variables and Their Relationships
- Material and Energy Balances in Process Engineering
- Material Balances
- Energy Balances
- Simultaneous Material and Energy Balances
- Unsteady-State Material and Energy Balances