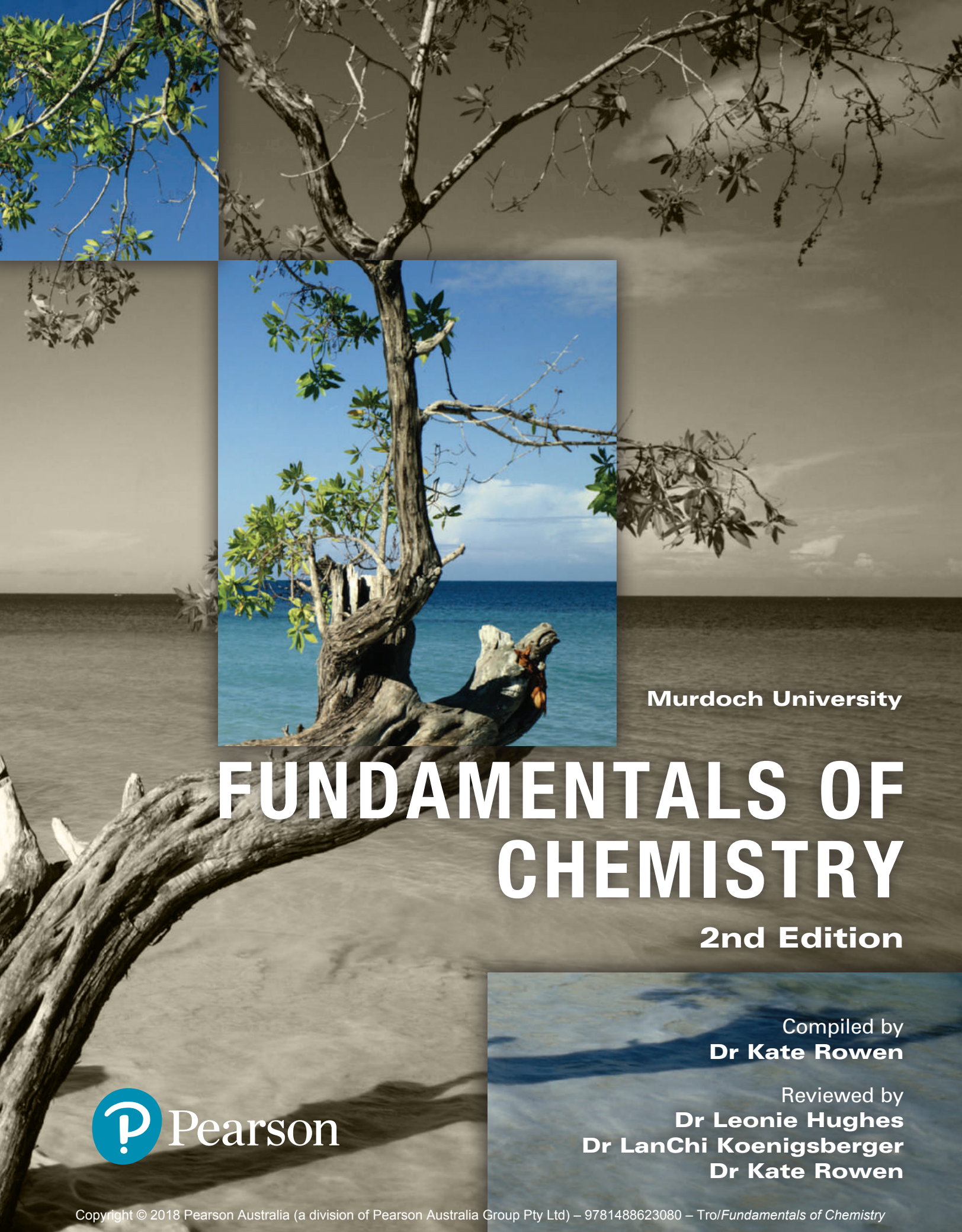

Murdoch University

FUNDAMENTALS OF CHEMISTRY

2nd Edition

Compiled by
Dr Kate Rowen

Reviewed by
Dr Leonie Hughes
Dr LanChi Koenigsberger
Dr Kate Rowen

Pearson

A PEARSON AUSTRALIA CUSTOM BOOK

Fundamentals of Chemistry

Second Edition

Compiled by Dr Kate Rowen
Reviewed by Dr Leonie Hughes, Dr LanChi Koenigsberger and Dr Kate Rowen

This custom book is compiled for Murdoch University from:

INTRODUCTORY CHEMISTRY
5TH EDITION
N. J. TRO

MODULE 12 ORGANIC COMPOUNDS
WRITTEN BY KATE ROWEN FOR THIS CUSTOM EDITION

TABLE OF CONTENTS

PREFACE

This custom textbook has been specially prepared for students studying Fundamentals of Chemistry at Murdoch University. All the content you need for the unit is in this book, every Module is relevant. In developing this textbook we have applied our extensive involvement in teaching this level of chemistry. Collectively we have over four decades of experience and a thorough understanding of your learning needs.

Modules 1 – 11 were sourced from an American book, Introductory Chemistry by Tro, but we have adapted them extensively to the way this level of chemistry is taught in Australia. Textbooks for this kind of chemistry unit typically use a particular style of problem solving, but in our lectures we show what we believe to be better methods using equations and other types of reasoning. The demonstration of different problem solving approaches between lectures and the textbook naturally causes confusion for students who may already be anxious about studying chemistry for the first time. We have adapted the sourcebook material for Modules 1 – 11 so the textbook and lectures show the same problem solving techniques.

Fundamentals of Chemistry also provides an introduction to the diverse and amazing world of organic compounds, which is covered in Module 12. Despite our best efforts, we have never been able to source textbook material that succinctly covers the curriculum topics for this module to the depth required. Students would have to rely on lecture material and other disparate resources that we brought together to support learning about organic compounds. We decided the only thing to do was to write Module 12 specifically for this book. Now all the content you need for Fundamentals of Chemistry is in one tailored source.

The source textbook is American, so there are many references to everyday life in America and less commonly used units of measurement. Therefore we have endeavoured to ensure that most of the units of measurement referred to in the book are the metric units that are used in Australia and the international scientific community.

We want your first experience with chemistry to be a positive one, where you will learn much about the world around you in addition to the basic chemistry you need to support your further study. This is what has motivated us to work towards providing you with the best textbook possible for Fundamentals of Chemistry.

Dr Kate Rowen, Dr Leonie Hughes, Dr LanChi Koenigsberger.