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INTRODUCTION TO

Chemistry

Fifth
Edition

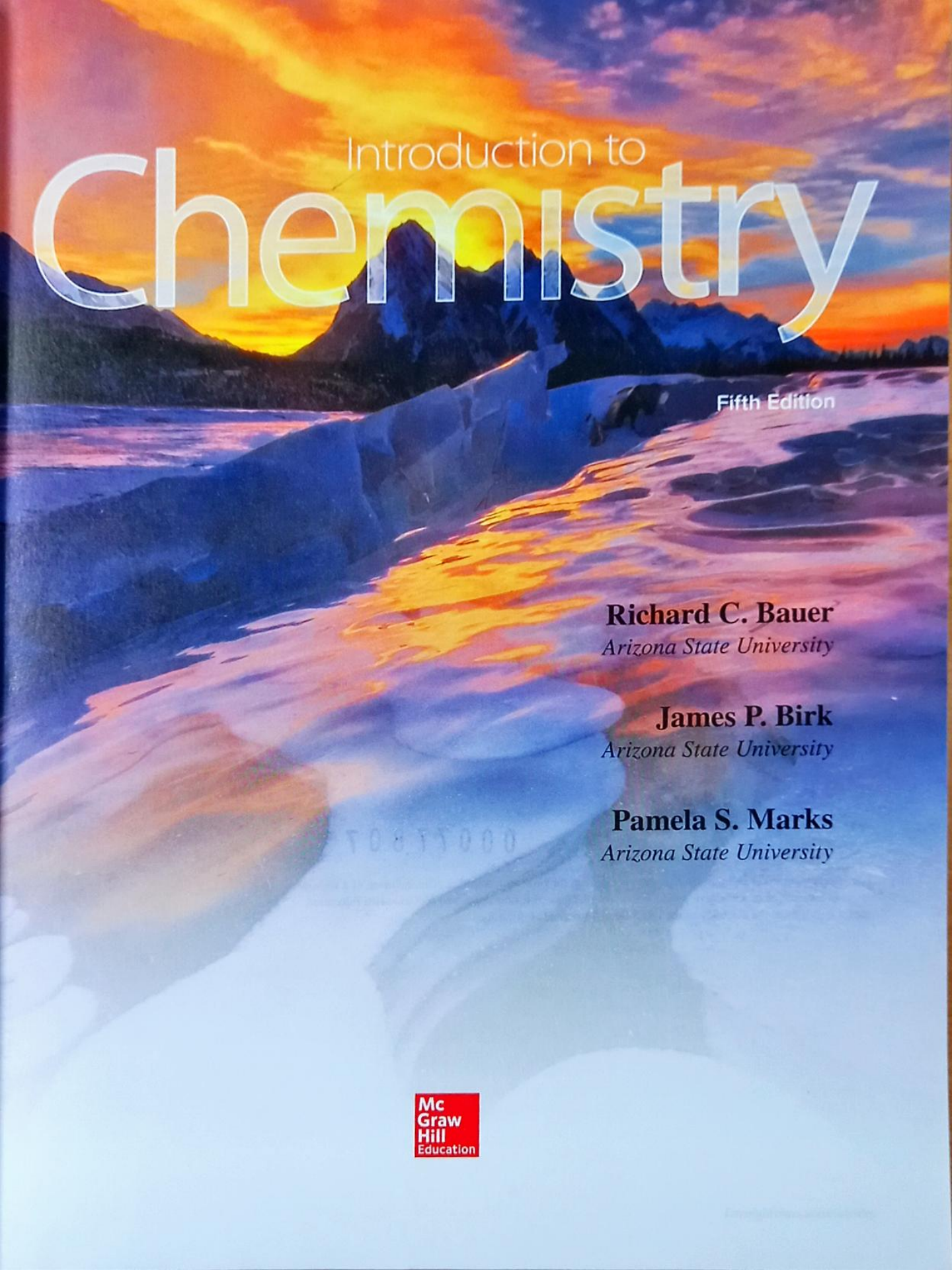


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Introduction to Chemistry

Fifth Edition

Richard C. Bauer
Arizona State University

James P. Birk
Arizona State University

Pamela S. Marks
Arizona State University

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INTRODUCTION TO CHEMISTRY

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ABOUT THE COVER: Methane is widely used as a fuel in the form of natural gas. Compared to carbon dioxide, methane has 20 times the potential to cause climate warming. In addition to being associated with petroleum deposits, methane can be produced by the bacterial decomposition of organic matter on the bottom of lakes. Abraham Lake in Alberta, Canada is an artificial lake formed in 1972 by the construction of the Bighorn Dam on the North Saskatchewan River. Methane that forms by the decay of plant material on the lake bottom becomes trapped on the bottom as a solid white substance known as methane hydrate. When the lake starts to warm up the methane hydrate melts. The methane is released as a gas, rises, and becomes trapped in the frozen surface. When the ice melts, the flammable methane gas escapes into the atmosphere. This phenomenon happens in numerous bodies of water throughout the Arctic region. Chemists examine such processes and wonder why they occur; study what happens to atoms, molecules, and ions; and probe how energy is involved. In this text, we emphasize how and why phenomena occur, not only in unusual events, such as the formation of frozen gas bubbles, but also in common events that happen in our environment every day.



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