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Sommario/riassunto This advanced textbook on theoretical chemistry includes all the

> fundamental concepts and theoretical approaches to be used when modelling a chemical system (i.e., a molecular system). Starting from the basic principles of quantum mechanics and specifically addressing the concepts and methods to treat quantum-classical systems, the authors derive from first principles the fundamental relations of statistical mechanics and then describe their application to chemical thermodynamics and kinetics. This book provides a rigorous description of the fundamental theoretical principles and derivations

addressing sophisticated physical-mathematical issues of special interest in chemistry, thus bridging the gap between basic textbooks and up-to-date specialized publications in both quantum mechanics

and statistical mechanics of molecular systems. This is a useful resource for all researchers and/or graduate students interested in the field of theoretical chemistry.