

1. Record Nr.	UNINA9910484812403321
Autore	Keszei Erno
Titolo	Reaction Kinetics : An Introduction // by Ern Keszei
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-68574-8
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (X, 188 p. 49 illus., 42 illus. in color.)
Disciplina	541.394
Soggetti	Chemical kinetics Chemistry, Physical and theoretical Catalysis Materials Reaction Kinetics Physical Chemistry Catalytic Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Theories of elementary reactions -- Formal kinetic description of simple reactions -- Kinetics of complex reactions -- Activation processes and unimolecular gas phase reactions -- Catalysts and catalytic reactions -- Experimental methods in reaction kinetics.
Sommario/riassunto	This book covers all basic topics of reaction kinetics, thus students do not need to refer to other resources to prepare for an undergraduate exam. It leads the reader into the topic starting from molecular level concepts and working towards the more macroscopic descriptions of kinetics, introducing the subject according to the state-of-the-art 21st century chemistry. A thorough treatment of formal kinetics of both elementary and complex reactions is based on actual practice, omitting many obsolete treatments of the subject. Mathematical operations are explained in enough detail so that even students that are less trained in calculus can easily follow and understand. Data treatment and statistical inference include modern - mostly numerical - methods widely used in applications. Experimental methods are described using basic technical details, however as techniques quickly change

sophisticated devices are not the focus of this book. The emphasis lies on providing the basic concepts which are important for students to understand. This book is suitable as essential reading for courses in bachelor and master chemistry programs and is also valuable as a reference or textbook for students of physics, biochemistry and environmental science.
