Homogeneous catalysis by soluble metal complexes has gained considerable attention due to its unique applications and features such as high activity and selectivity. Catalysis of this type has demonstrated impressive achievements in synthetic organic chemistry and commercial chemical technology.

*Homogeneous Catalysis with Metal Complexes: Kinetic Aspects and Mechanisms* presents a comprehensive summary of the results obtained over the last sixty years in the field of the kinetics and mechanisms of organic and inorganic reactions catalyzed with metal complexes.

Topics covered include:

- Specific features of catalytic reaction kinetics in the presence of various mono- and polynuclear metal complexes and nanoclusters
- Multi-route mechanisms and the methods of their identification, as well as approaches to the kinetics of polyfunctional catalytic systems
- Principles and features of the dynamic behavior of nonlinear kinetic models
- The potential, achievements, and limitations of applying the kinetic approach to the identification of complex reaction mechanisms
- The development of a rational strategy for designing kinetic models
- The kinetic models and mechanisms of many homogeneous catalytic processes employed in synthetic and commercial chemistry
Written for specialists in the field of kinetics and catalysis, this book is also relevant for post-graduates engaged in the study

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