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Descrizione fisica	1 online resource (X, 159 p. 113 illus., 81 illus. in color.)
Disciplina	541.39
Soggetti	Microwave heating Chemical reactions - Mathematics Dielectric measurements
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Characterization and Measurement for the Chemical Reaction's Dielectric Properties -- Dynamic Analysis of Microwave Heating on Chemical Reactions -- Interaction Between Microwave and Molecules -- Industrial Application.
Sommario/riassunto	This book addresses microwave chemistry at both the physical and molecular level. Its main goal is to elaborate the highly complex scientific issues involved in the fundamental theory of microwave chemistry, and in industrialized applications in the near future. The book provides detailed insights into the characterization and measurement of dielectric properties under complex conditions, such as chemical reactions, high-temperature environments, etc. Considerable attention is paid to the theory of dynamics in microwave chemistry, from the view of both physical level and molecular level. Microwave-Material Interactions simulation is used for physical dynamical analysis, while a Microwave-Molecules Interactions methodology is proposed for molecular dynamical analysis. In turn, calculational examples are introduced for better description and validation, respectively. Lastly, the book proposes design strategies and calculational examples for large-scale application. Richly illustrated and including a wealth of worked-out examples, this book is ideal for all

researchers, students and engineers who are just getting started in the dynamics of microwave chemistry.
