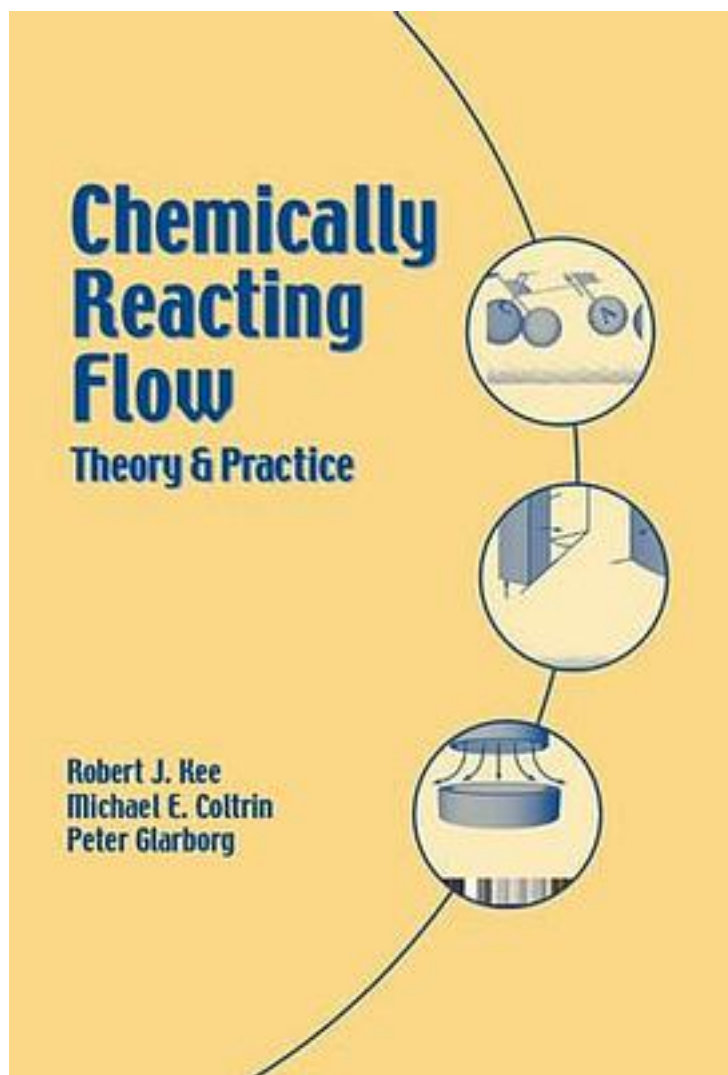


Chemically Reacting Flow



[Chemically Reacting Flow 下载链接1](#)

著者:Kee, Robert J./ Coltrin, Michael Elliott/ Glarborg, Peter

出版者:John Wiley & Sons Inc

出版时间:2003-3

装帧:HRD

isbn:9780471261797

Complex chemically reacting flow simulations are commonly employed to develop quantitative understanding and to optimize reaction conditions in systems such as combustion, catalysis, chemical vapor deposition, and other chemical processes. Although reaction conditions, geometries, and fluid flow can vary widely among the applications of chemically reacting flows, all applications share a need for accurate, detailed descriptions of the chemical kinetics occurring in the gas-phase or on reactive surfaces. Chemically Reacting Flow: Theory and Practice combines fundamental concepts in fluid mechanics and physical chemistry, assisting the student and practicing researcher in developing analytical and simulation skills that are useful and extendable for solving real-world engineering problems. The first several chapters introduce transport processes, primarily from a fluid-mechanics point of view, incorporating computational simulation from the outset. The middle section targets physical chemistry topics that are required to develop chemically reacting flow simulations, such as chemical thermodynamics, molecular transport, chemical rate theories, and reaction mechanisms. The final chapters deal with complex chemically reacting flow simulations, emphasizing combustion and materials processing. Among other features, Chemically Reacting Flow: Theory and Practice: -Advances a comprehensive approach to interweaving the fundamentals of chemical kinetics and fluid mechanics

-Embraces computational simulation, equipping the reader with effective, practical tools for solving real-world problems

-Emphasizes physical fundamentals, enabling the analyst to understand how reacting flow simulations achieve their results

-Provides a valuable resource for scientists and engineers who use Chemkin or similar software Computer simulation of reactive systems is highly effective in the development, enhancement, and optimization of chemical processes. Chemically Reacting Flow helps prepare both students and professionals to take practical advantage of this powerful capability.

作者介绍:

目录:

[Chemically Reacting Flow_下载链接1](#)

标签

评论

[Chemically Reacting Flow_ 下载链接1](#)

书评

[Chemically Reacting Flow_ 下载链接1](#)