

1. Record Nr.	UNINA9911019720603321
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Titolo	Chemistry in motion : reaction-diffusion systems for micro- and nanotechnology / / Bartosz A. Grzybowski
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, 2009
ISBN	9786612138140 9781282138148 1282138146 9780470741627 0470741627 9780470741634 0470741635
Descrizione fisica	1 online resource (304 p.)
Disciplina	541.39
Soggetti	Reaction mechanism Reaction-diffusion equations Microtechnology - Mathematics Nanotechnology - Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
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Change and motion define and constantly reshape the world around us, on scales from the molecular to the global. In particular, the subtle interplay between chemical reactions and molecular transport gives rise to an astounding richness of natural phenomena, and often manifests itself in the emergence of intricate spatial or temporal patterns. The underlying theme of this book is that by "setting chemistry in motion" in a proper way, it is not only possible to discover a variety of new phenomena, in which chemical reactions are coupled with diffusion, but also to build micro-/nanoarchitectures