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Titolo	Mesoporous Ordered Silica Films : From Self-Assembly to Order // by Plinio Innocenzi
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ISBN	3-030-89536-X
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Descrizione fisica	1 online resource (122 pages)
Collana	Advances in Sol-Gel Derived Materials and Technologies, , 2364-0049
Disciplina	530.4275
Soggetti	Colloids Self-assembly (Chemistry) Surfaces (Technology) Thin films Materials Chemistry Condensed matter Gels and Hydrogels Self-assembly Surfaces, Interfaces and Thin Film Materials Chemistry Phase Transitions and Multiphase Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Understanding sol-gel chemistry for self-assembly -- Colloidal chemistry for self-assembly -- Evaporation driven self-assembly in silica films -- Getting order from self-assembly: what kind of order -- Controlling the mesoporous phases through processing -- Order-disorder in mesoporous ordered silica-films -- Conclusions.
Sommario/riassunto	This book introduces the fascinating world of self-assembly in mesoporous ordered silica films. Beginning from a single droplet, it guides the reader, in a step-by-step learning process, how to obtain and control ordered porous mesophases in thin films by varying only the precursor chemistry and the process. It explains, in great detail,

how order control is achieved through chemical design and post-deposition processing, the latter of which is a unique property in materials science. The book places a special focus on silica, whose particularly complex chemistry enables order control over a range of different length scales. This book is suitable for students and researchers in the fields of sol-gel or colloidal chemistry and interested in the topics of self-assembly and mesoporous phases.
