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Nota di contenuto	Chapter 1: The Carbon Problem; Chapter 2: Single-Phase Flow in Porous Media; Chapter 3: Two-Phase Flow in Porous Media; Chapter 4: Large-Scale Models; Chapter 5: Solution Approaches; Chapter 6: Models for CO2 Storage and Leakage; Epilogue; Appendix; Index.
Sommario/riassunto	Despite the large research effort in both public and commercial companies, no textbook has yet been written on this subject. This book aims to provide an overview to the topic of Carbon Capture and Storage (CSS), while at the same time focusing on the dominant processes and the mathematical and numerical methods that need to be employed in order to analyze the relevant systems. The book clearly states the carbon problem and the role of CCS and carbon storage. Thereafter, it provides an introduction to single phase and multi-phase flow in porous media, including some of the most common mathematical analysis and an overview of numerical methods for the equations. A considerable part of the book discusses the appropriate scales of modeling, and how to formulate consistent governing equations at these scales. The book also illustrates real world data sets and how the ideas in the book can be exploited through combinations of analytical

and numerical approaches.