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Sommario/riassunto	Thermochemical gas-solid reactions, as well as adsorption processes, are currently of significant interest for the design of heat storage systems. This book provides detailed models of these reactions and processes that account for heat and mass transport, chemical and physical reactions, and possible local thermal non-equilibrium. The underlying scientific theory behind the models is explained, laboratory tests are simulated, and methods for high-performance computing are discussed. Applications ranging from seasonal domestic heat storage to diurnally operating systems in concentrating solar power facilities are considered in these models, which are not available through any other sources. Finally, an outlook on future developments highlights emerging technologies.