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Sommario/riassunto	This book presents the current carbonaceous fuel conversion technologies based on chemical looping concepts in the context of traditional or conventional technologies. The key features of the chemical looping processes, their ability to generate a sequestration-ready CO2 stream, are thoroughly discussed. Chapter 2 is devoted entirely to the performance of particles in chemical looping technology and covers the subjects of solid particle design, synthesis, properties, and reactive characteristics. The looping processes can be applied for combustion and/or gasification of carbon-based material s