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Nota di contenuto	Introduction / De-en Jiang, Shannon M. Mahurin, and Sheng Dai -- CO capture and separation of metal-organic frameworks / Xueying Ge and Shengqian Ma -- Porous carbon materials : designed synthesis and CO capture / Xiang-Qian Zhang and An-Hui Lu -- Porous aromatic frameworks for carbon dioxide capture / Teng Ben and Shilun Qiu -- Virtual screening of materials for carbon capture / Aman Jain, Ravichandar Babarao, and Aaron W. Thornton -- Ultrathin membranes for gas separation / Ziqi Tian, Song Wang, Sheng Dai, and De-en Jiang -- Polymeric membranes / Jason E. Bara and W. Jeffrey Horne -- Carbon membranes for CO separation / Kuan Huang and Sheng Dai -- Composite materials for carbon captures / Sunee Wongchitphimon, Siew Siang Lee, Chong Yang Chuah, Rong Wang, and Tae-Hyun Bae -- Poly(amidoamine) dendrimers for carbon capture / Ikuo Taniguchi -- Ionic liquids for chemisorption of CO / Mingguang Pan and Congmin Wang -- Ionic liquid-based membranes / Chi-Linh Do-Thanh, Jennifer Schott, Sheng Dai, and Shannon M. Mahurin.
Sommario/riassunto	"As a frontier research area, carbon capture has been a major driving force behind many materials technologies. Development of advanced materials and processes for CO2 capture has a significant impact on

the energy industry, society and our quality of life. Materials for Carbon Capture will cover a wide range of advanced materials and technologies for CO₂ capture, reviewing the present status of the field and recent advances so that readers can better understand the challenges and opportunities. The book will discuss materials synthesis, gas separations, membrane fabrication, and CO₂ removal to highlight recent progress in materials and chemistry aspects of carbon capture"

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