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Autore	Akaogi Masaki
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Nota di contenuto	Introduction -- Crystal chemistry and thermodynamics of high-pressure phase transition -- High-pressure and high-temperature experiments with large-volume apparatus -- Calorimetric experiments and thermodynamic calculation of high-pressure phase relations -- Olivine - modified spinel - spinel transitions -- Phase transitions of pyroxene and garnet, and post-spinel transition forming perovskite -- Crystal chemistry, phase relations, and energetics of high-pressure ABO3 perovskites -- Post-perovskite transition in ABX3 and phase transitions in AO2 -- Post-spinel transition in AB2O4 -- Phase transitions in mantle rocks -- High-pressure minerals from the Earth’s mantle and in shocked meteorites. .
Sommario/riassunto	This book presents a summary of high-pressure phase transitions of minerals and related inorganic compounds. The first part reviews the methods to investigate phase transitions by direct high-pressure and high-temperature experiments together with thermodynamic approaches that consist of calorimetric measurements and thermodynamic calculation. In the second part, phase relations and thermodynamic properties of olivine, pyroxene, garnet, spinel,

perovskite, rutile, and related inorganic compounds with A2BO4, ABO3, AB2O4, and AO2 stoichiometries are described. Particular emphasis is placed on spinel- and perovskite-structured phases and their high-pressure polymorphs called post-spinel and post-perovskite phases. The last part of the book focuses on phase relations of mantle rocks and on natural high-pressure minerals from the Earth’s deep mantle and in shocked meteorites. .