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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The first generation Rare Earth permanent-magnet alloys-SmCo <sub>5</sub> -- The second generation Rare Earth permanent-magnet alloys-Sm(Co, Cu, Fe, Zr) <sub>7.4</sub> -- The third generation Rare Earth permanent-magnet alloys-NdFeB -- Development and prospect of Rare Earth permanent-magnet alloys.
Sommario/riassunto	The process of high temperature phase transition of rare earth permanent-magnet alloys is revealed by photographs taken by high voltage TEM. The relationship between the formation of nanocrystal and magnetic properties is discussed in detail, which effects alloys composition and preparation process. The experiment results verified some presumptions, and were valuable for subsequent scientific research and creating new permanent-magnet alloys. The publication is intended for researchers, engineers and managers in the field of material science, metallurgy, and physics. Prof. Shuming Pan is senior engineer of Beijing General Research Institute of Non-ferrous Metal.