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Sommario/riassunto	This book offers background material, reviews, and researched findings into the realms of minerals, mining, metallurgy, and engineering. Firstly, it elucidates fundamental mineral concepts, mining techniques, and mineral processing methods; secondly, it unveils cutting-edge insights on fine and coarse particle flotation, unveiling breakthrough technologies for enhanced efficiency; and thirdly, it explores the innovative applications of ultrasound and thermoluminescence in mineral processing, offering a holistic view of the latest advancements. This book sheds light on the versatile uses of silicones, the intricacies of bentonite clay, and the production pathways, properties, and applications of hydroxyapatite. Furthermore, the book provides invaluable insights into biomimetic biomineralization, the synthesis of low-carbon bio-cements, and the pioneering strides in mineral-based phase change materials. .

