1. Record Nr. UNINA9910800114203321 Autore Ikhmayies Shadia Jamil Titolo Advances in Minerals Research / / edited by Shadia Jamil Ikhmayies Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 3-031-49175-0 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (321 pages) Advances in Material Research and Technology, , 2662-477X Collana 620.11 Disciplina Materials science Soggetti Mineralogy Chemical engineering Materials Science Chemical Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia 1 Introduction to Mineral Research -- 2. Use of Ultrasound in Physical Nota di contenuto and Chemical Mineral Processing Operations -- 3. Advanced techniques on fine and coarse particle flotation -- 4. Differentiation between natural quartz based on thermoluminescence properties -- 5. Silicones and their Applications. This book offers background material, reviews, and researched findings Sommario/riassunto 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. .