1. Record Nr. UNINA9910364951203321 Innovations and Breakthroughs in the Gold and Silver Industries: Titolo Concepts, Applications and Future Trends / / edited by Vaikuntam Iver Lakshmanan, Barun Gorain Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-030-32549-0 Edizione [1st ed. 2019.] 1 online resource (293 pages) Descrizione fisica Disciplina 338.23 338.2741 Soggetti Metals Mineral resources Natural resources Materials science Engineering—Materials Waste management Metallic Materials Mineral Resources Natural Resource and Energy Economics Characterization and Evaluation of Materials Materials Engineering Waste Management/Waste Technology

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Note generali Includes index.

Nota di contenuto Chapter 1. Key Challenges & Opportunities in the gold & silver industry

-- Chapter 2. Ore body knowledge -- Chapter 3. Emerging trends in mining -- Chapter 4. Beneficiation of gold and silver ores -- Chapter 5. Gold & Silver Extraction -- Chapter 6. Waste Management in the gold and silver industry -- Chapter 7. Financing and new projects development -- Chapter 8. The economics of gold and silver --

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Sommario/riassunto

The book describes all aspects of technical innovation related to the gold and silver industries, from ore identification through to processing. It includes details of comminution, pre-concentration and beneficiation, commercially available and recently developed innovative pyro and hydrometallurgical processes, including leaching processes, separation and purification, and recovery and refining. The book focuses on capital and operating cost estimation, process simulation, waste remediation and minimization. Sustainable gold and silver processes are examined with the use of clean technologies and efficient use of energy and water. Topics such as supply and demand of gold and silver, their exchange in major global markets, and the factors that influence gold and silver prices and major economic indices are discussed. Presents emerging trends and innovations in the areas of ore body knowledge, mining, processing, waste management, economics, finance and automation; Describes emerging enablers for the gold and silver industries such as digitization, automation and remote operations; Promotes breakthroughs in mining, processing, waste management, energy and water from an integrated operations perspective.