About the Book
The book deals with the methodologies used in processing/separation of minerals from their ores, including pre-processing, dressing and separation techniques. Diverse types and grades of ore require diverse machinery, tools and techniques: the book amply addresses this need for variety of treatment. Besides these, background reading on occurrence of ores, mineralogy, properties of minerals and ores; all the important aspects of machinery used in practice; experimental methods; and numerical calculations involving extractive metallurgy have been given at appropriate depth.

Salient Features
Integrated coverage of theory, practical methods, and derivation of formulae and numerical problem solving. Dedicated section on machinery used in mineral processing including numerical calculations, construction and principle of working. In-depth treatment of processes including crushing, grinding, sizing, flotation, etc. Step by step treatment of processes and ample exercises for practice and experiments for lab courses. Reference to various industry standards, as applicable.

Table of Contents
PART I MINERAL PROCESSING
Chapter 1: Introduction
Chapter 2: Characteristics/properties of minerals for processing
Chapter 3: Comminution
Chapter 4: Crushing
Chapter 5: Grinding
Chapter 6: Sizing
Chapter 7: Classification & the movement of solids in fluids
Chapter 8: Gravity-concentration / separation
Chapter 9: Flotation
Chapter 10: Magnetic separation processes
Chapter 11: Separation of solids from fluids
Chapter 12: Typical flow sheets of mineral processing
Chapter 13: Pre treatment of ore/mineral/concentrate
Chapter 14: Chemical method of beneficiation
Chapter 15: Application of computer in mineral processing/dressing

PART II EXPERIMENTS & NUMERICALS IN MINERAL PROCESSING
A. Experiments in mineral processing
B. Numerical

Appendix I Metallic ore minerals
Appendix II Selected physical properties of metals
Appendix III Minerals used in large amounts
About the Author

**Vandana Rao** - M. E. (Ind. Met.), Ph.D. in process metallurgy from The M. S. University of Baroda. Presently, Associate Professor in metallurgical and materials engineering department in The M. S. University of Baroda. In a career span of 23 years she has guided more than 30 post graduate students and many under graduate students as well. She has published more than forty technical papers in reputed national and international journals and has authored a book on "Development of magnesium alloys for automobiles" jointly with Miss. Sonam Patel. Her areas of interest include mineral dressing, ceramic & composite materials, powder metallurgy, iron making, materials characterization, failure analysis and materials science.

**Avinash Lele** - M. Tech. (Ext. Met.) from IIT, Bombay has 39 years of teaching experience in metallurgical and materials engineering department in The M. S. University of Baroda. Presently he is visiting professor in the said department. He has published forty plus technical papers in reputed journals and has co-authored a book on "Metallurgical thermodynamics, kinetics and numericals". His areas of interest are process metallurgy including principles of extractive metallurgy, ferrous and non-ferrous metal extraction, mineral processing, and analytical techniques in metallurgy, powder metallurgy, ceramics and materials science.

**Sonam Patel** - M. E. (Mat. Tech.), presently doing Ph.D. in metallurgical and materials engineering department in The M. S. University of Baroda. Currently, she is working as a Lecturer in Metallurgy Department, Dr. S. & S. Ghandhy College of Engg. & Tech., Surat. She has published ten papers in reputed journals and co-authored above stated book with Dr. Vandana Rao. Her areas of interest include materials science, ceramic & composite materials, non-ferrous metals, mineral dressing and powder metallurgy.