

## **About the Book**

*This book covers the entire spectrum of mineralogy and consolidates its applications in various fields. It starts (Part I) with the very basic concept of mineralogy describing in detail implications of various aspects of mineral chemistry, crystallographic structures and their effects producing different mineral properties.*

*Part II of the book describes different mineral of mineralogy used to extend the studies of geothermobarometry , mineral thermodynamics and phase diagrams, mineral exploration analysis, some aspects of marine minerals etc.*

*The book finally (Part III) handles the applications in industrial, medical and environmental mineralogy along with precious and semiprecious stone studies. The various analytical techniques, their significance in handling specific type of mineralogical problems are also well accounted to complete the document.*

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#### ***Part I: Essentials of mineralogy***

- 1. Minerals and their chemical classification*
- 2. Mineral crystals and structural classification*
- 3. Mineral chemistry*
- 4. Physical properties*
- 5. Optical Mineralogy and its uses*
- 6. Special mineral properties and related structures*
- 7. Descriptive mineralogy*

#### ***Part II: Mineral transformation and their effects***

- 8. Energetics, thermodynamics and stability of minerals*
- 9. Origin of minerals and their transformations in mature under various environmental conditions*
- 10. Mineral deposits and their characteristics*
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- 12. Minerals and mineral associations as geothermometers and geobarometers*

#### ***Part III: Mineral analysis, industry and environment***

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