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## Section 1
### Fundamental Concepts and Theories

This section begins with several introductory chapters on Nanotechnology and its associated areas of research. Nanotechnology is one of the fastest growing fields in engineering and materials science, making it an important area of study for a variety of disciplines. Primarily, this section will introduce topics ranging from biotechnology and chemistry to renewable energies and synthetic materials. In the opening 13 chapters of this extensive reference source, readers will obtain a clear understanding of the fundamental concepts and theories integral to the field of Nanotechnology.

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Section 3
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This section bridges the gap between the fundamentals of Nanotechnology and its application in a variety of environments and situations. Understanding how nanomaterials and nanomachines work is imperative to their successful utilization in the engineering and medical fields. In addition, Nanotechnology plays a critical role in nanomanipulation, solar energy systems, and quantum computing, among other areas. The 11 chapters that make up this section explore the development and design methodologies that bridge the gap between fundamental concepts and real-world applications in Nanotechnology.

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This section continues with an in-depth look at some practical applications in the field of Nanotechnology. Because Nanotechnology has grown into an ubiquitous aspect of many important scientific fields, its applications can be found in almost any professional or research endeavor. The topics in this section are diverse, including, notably, nanomaterials, nanorobotics, biomedicine, nanoart, and particle synthesis. The 14 chapters in this section provide an in-depth examination of the utilization and application of the fundamental principles of Nanotechnology.

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Critical Issues

This section examines Nanotechnology applications to evaluate their effectiveness and explore methodologies and best practices for their implementation in real-world scenarios. With so many fields making use of Nanotechnologies in so many different ways, it can often be a challenge to determine the best application or method for every situation. That is why this section explores some of the more common Nanotechnology applications, including renewable energy collection, particle science, medical and surgical technologies, and robotics. In this section, 10 chapters explore some of the critical issues driving advances in Nanotechnology.

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Section 6
Emerging Trends

This section concludes this multi-volume reference with some of the latest advances in the field of Nanotechnology. Even though Nanotechnology is a relatively young discipline, it continues to expand quickly, challenging researchers to stay abreast of the latest developments and trends. This section discusses some of those trends, including microcomputing, medical diagnostics, biological modeling, quantum cryptology, and supercomputing. The final 13 chapters of this extensive three-volume reference conclude with a detailed look at emerging trends in the field of Nanotechnology.

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