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Pharmaceutical Nanotechnology

Fundamentals and Practical Applications

- ▶ Provides a novel approach to understanding bio-inspired nanotechnological systems for pharmaceutical applications by correlating their physicochemical, biophysical and thermodynamic behaviours with those of a living organism
- ▶ Appendices and detailed descriptions of techniques for practical applications act as an easy reference for the reader
- ▶ Chapters on nanotoxicity, safety and regulation inform the reader on the approval process for nanotechnological systems as pharmaceuticals

This textbook explains the fundamental aspects of nanotechnology and fills the gap between bio-inspired nanotechnological systems and functionality of living organisms, introducing new insights to their physicochemical, biophysical and thermodynamic behaviour.

Addressed to all those involved in recent advances in pharmaceuticals, this book is divided in three major parts: Part A refers to the physicochemical and thermodynamics aspects of nanosystems, wherein their biophysical behaviour is correlated with that of the cells of living organisms; Part B refers to the application of nanotechnology in imaging, diagnostics and therapeutics; Part C is focused on issues regarding safety and nanotoxicity of nanosystems, and the regulatory framework that surrounds these. The text promotes the concept that biophysics, thermodynamics and nanotechnology are considered to be emerging tools that, when approached within regulatory boundaries, provide new and integrated knowledge for the production of new medicines.



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