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Nota di contenuto	Chapter 1. Introduction to complex brain disorders, currently available therapies, and their limitations -- Chapter 2. Challenges of brain targeting and mechanism of drug transfer across BBB -- Chapter 3. Introduction to nanoparticles as a potential carrier for brain targeting -- Chapter 4. Application of polymeric nanoparticles in brain targeting -- Chapter 5. Recent advancements in lipid nanocarriers for brain delivery of bioactive -- Chapter 6. Liposomes as a potential carrier for brain delivery -- Chapter 7. Inorganic nanoparticles for brain targeting: scope and limitations -- Chapter 8. Potential of dendrimers as a nanocarrier for brain delivery -- Chapter 9. Surface active ligands for enhanced brain targeting of nanoparticles -- Chapter 10. Stimuli-responsive polymers for brain delivery -- Chapter 11. In vitro cell line development and their limitations for brain research -- Chapter 12. In vivo Animal model development and their limitation for brain research -- Chapter 13. Safety, stability concerns, and regulatory aspects of Nanocarriers for brain delivery -- Chapter 14. Current clinical advancements of nanocarriers for brain targeting and limitations in clinical translation.
Sommario/riassunto	This book presents nanoparticles as potential drug delivery carriers for overcoming the blood-brain barrier. The initial chapter of the book discusses complex brain disorders, the currently available therapies,

and their limitations. The book discusses the potential applications of polymeric nanoparticles, lipid nanocarriers, liposomes, inorganic nanoparticles, dendrimers, and stimuli-responsive polymers for targeted brain drug delivery. Further, it evaluates the development and role of different cell lines and animal models in brain research. Towards the end, the book reviews challenges, safety, toxicity, regulatory aspects, future possibilities, and constraints in the clinical translation of nanocarrier systems to treat neurological disorders. The book as such provides valuable information to neuroscientists, and researchers working in pharmaceuticals, nanomedicine, drug delivery research, and nanotechnology.