

1. Record Nr.	UNINA9910986133403321
Autore	Granata Carmine
Titolo	A Journey into Modern Physics : From Relativity to Quantum Technologies / / by Carmine Granata
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031777752 9783031777745
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (161 pages)
Disciplina	530.1
Soggetti	Mathematical physics Quantum computers Quantum theory Theoretical, Mathematical and Computational Physics Quantum Computing Quantum Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Chapter 1. Albert Einstein's theory of Relativity : a new vision of the world -- Chapter 2. Quantum Mechanics: the bizarre atomic and subatomic world -- Chapter 3. Condensed matter and the technological impact of the first quantum revolution -- Chapter 4. The second quantum revolution and quantum technologies.
Sommario/riassunto	This book offers a short journey into the surprising and spectacular world of modern physics characterized by disruptive ideas and theory from both a conceptual and applicative point of view. Starting from Einstein's theory of relativity in which the concepts of space, time, and gravity are completely revised, before arriving at the bizarre and fascinating universe of quantum physics which with its applications has completely changed our way of life. Particular attention is also paid to the conceptual foundations and paradoxes of quantum mechanics thanks to which the so-called second quantum revolution has developed in more recent times, destined to introduce a new generation of quantum technologies such as computers, cryptography, and teleportation into our lives. In addition to new quantum

technologies, the operating principles of the most important applications of quantum mechanics which have become widespread in everyday life are illustrated simply and concisely. The book has an essentially informative character, without making use of complicated formulas or technicalities, therefore it does not require in-depth knowledge of physics or mathematics; the knowledge acquired in high school is sufficient to understand the topics covered.
