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Sommario/riassunto

This book highlights quantum optics technologies that can revolutionize the way we encode, store, transmit, and handle information. These technologies can help us overcome bottlenecks in classical physics-based information technology in information transmission capacity, computing speed, and information security. The book provides readers with new perspectives on potential applications of the quantum theory. Besides, the book summaries the research advances in quantum optics and atom optics, including manipulation and construction of the quantum states of photons and even atoms, molecules, and matter at the quantum level, and new phenomena and technologies brought about by the interactions between photons and the quantum states of matter. The book provides extensive and thoroughly exhaustive coverage of quantum optics. It is suitable for researchers and graduate students of optical physics and quantum optics.