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	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Introduction and Preliminaries -- Quantum Information: Basic Relevant Concepts and Applications -- Theory -- Part I: Atomic Processes -- Part II: Molecular Processes.
	Sommario/riassunto	This monograph forms an interdisciplinary study in atomic, molecular, and quantum information (QI) science. Here a reader will find that applications of the tools developed in QI provide new physical insights into electron optics as well as properties of atoms & molecules which, in turn, are useful in studying QI both at fundamental and applied levels. In particular, this book investigates entanglement properties of flying electronic qubits generated in some of the well known processes capable of taking place in an atom or a molecule following the absorption of a photon. Here, one can generate Coulombic or fine-structure entanglement of electronic qubits. The properties of these entanglements differ not only from each other, but also from those

when spin of an inner-shell photoelectron is entangled with the polarization of the subsequent fluorescence. Spins of an outer-shell electron and of a residual photoion can have free or bound entanglement in a laboratory.