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Nota di contenuto	Elements of Quantum Information; Contents; Preface to the Book Edition; Preface to the Journal Edition; List of Contributors; 1 The Deterministic Generation of Photons by Cavity Quantum Electrodynamics; 1.1 Introduction; 1.2 Oscillatory Exchange of Photons Between an Atom and a Cavity Field (Strong Coupling) - the One-atom Maser or Micromaser; 1.2.1 Experimental Set-up of the One-atom Maser; 1.2.2 One-atom Maser as a Source of Non-classical Light; 1.2.3 Review of Experiments on Basic Properties of the One-atom Maser; 1.2.4 Statistics of Detector Clicks; 1.2.5 Trapping States 1.2.6 Trapping State Stabilization 1.2.7 Fock States on Demand; 1.2.8 Dynamical Preparation of n-photon States in a Cavity; 1.2.9 The One-atom Maser Spectrum; 1.3 Other Microwave Cavity Experiments; 1.3.1 Collapse-and-revival of the Rabi Oscillations in an Injected Coherent Field; 1.3.2 Atom-photon and Atom-atom Entanglement; 1.3.3 Atom-photon Phase Gate; 1.3.4 Quantum Nondestructive-measurement of a Photon; 1.3.5 Wigner-function of a One-photon State; 1.3.6 Multiparticle Entanglement; 1.3.7 Schrodinger Cats and Decoherence;

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 1.4.2 Atoms Pushed by a Few Photons;  
 1.4.3 Single-photon Sources;  
 1.4.4 Single-atom Laser Using an Ion Trap;  
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## Sommario/riassunto

'Elements of Quantum Information' introduces the reader to the fascinating field of quantum information processing, which lives on the interface between computer science, physics, mathematics, and engineering. This interdisciplinary branch of science thrives on the use of quantum mechanics as a resource for high potential modern applications. With its wide coverage of experiments, applications, and specialized topics - all written by renowned experts - 'Elements of Quantum Information' provides an indispensable up-to-date account of the state of the art of this rapidly advancing field and take