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Autore	Dutra S. M (Sergio M.)
Titolo	Cavity quantum electrodynamics : the strange theory of light in a box / / Sergio M. Dutra
Pubbl/distr/stampa	New York, : J. Wiley, c2005
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Edizione	[1st edition]
Descrizione fisica	1 online resource (407 p.)
Collana	Wiley series in lasers and applications
Disciplina	535/.15
Soggetti	Quantum optics Quantum electrodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 335-380) and index.
Nota di contenuto	Cavity Quantum Electrodynamics; Contents; Preface; Acknowledgments; 1 Introduction; 1.1 What is light?; 1.1.1 Geometrical optics; 1.1.2 Wave optics; 1.1.3 Classical electrodynamics and relativity; 1.1.4 Quantum mechanics and quantum electrodynamics; 1.2 A brief history of cavity QED; 1.3 A map of the book; 1.4 How to read this book; 2 Fiat Lux!; 2.1 How to quantize a theory; 2.2 Why the radiation field is special; 2.3 What is a cavity?; 2.3.1 What is resonance?; 2.3.2 Confinement is the key; 2.4 Canonical quantization of the radiation field; 2.4.1 Quantization in a cavity 2.4.2 Quantization in free space2.5 The Casimir force; 2.5.1 Zero-point potential energy; 2.5.2 Maxwell stress tensor; 2.5.3 The vacuum catastrophe; Recommended reading; Problems; 3 The photon's wavefunction; 3.1 Position in relativistic quantum mechanics; 3.2 Extreme quantum theory of light with a twist; 3.3 The configuration

Sommario/riassunto

What happens to light when it is trapped in a box?Cavity Quantum Electrodynamics addresses a fascinating question in physics: what happens to light, and in particular to its interaction with matter, when it is trapped inside a box? With the aid of a model-building approach, readers discover the answer to this question and come to appreciate its important applications in computing, cryptography, quantum teleportation, and opto-electronics. Instead of taking a traditional approach that requires readers to first master a series of seemingly unconnected mathematical techniques, this book engag

2.	Record Nr.	UNINA9910557436603321
	Autore	Tolnai Domonkos
	Titolo	Processing and Characterization of Magnesium-Based Materials
	Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
	Descrizione fisica	1 online resource (118 p.)
	Soggetti	Technology: general issues
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Sommario/riassunto	Due to their lightweight and high specific strength, Mg-based alloys are considered as substitutes to their heavier counterparts in applications in which corrosion is non-relevant and weight saving is of importance. Furthermore, due to the biocompatibility of Mg, some alloys with controlled corrosion rates are used as degradable implant materials in the medical sector. The typical processing route of Mg parts incorporates a casting step and, subsequently, a thermo-mechanical treatment. In order to achieve the desired macroscopic properties and thus fulfill the service requirements, thorough knowledge of the relationship between the microstructure, the processing steps, and the resulting property profile is necessary. This Special Issue covers in situ and ex situ experimental and computational investigations of the behavior under thermo-mechanical load of Mg-based alloys utilizing modern characterization and simulation techniques. The papers cover investigations on the effect of rare earth additions on the mechanical properties of different Mg alloys, including the effect of long-period stacking-ordered (LPSO) structures, and the experimental and computational investigation of the effect of different processing routes.