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Titolo	Strong light-matter coupling : from atoms to solid-state systems / / editors, Alexia Auffeves, Institut Neel-CNRS, France [and six others]
Pubbl/distr/stampa	New Jersey : , : World Scientific, , [2014] ©2014
ISBN	981-4460-35-4
Descrizione fisica	1 online resource (303 p.)
Altri autori (Persone)	AuffevesAlexia
Disciplina	535/.15
Soggetti	Quantum optics Quantum electrodynamics Electronic books.
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.
Nota di contenuto	Cavity QED in atomic physics / Serge Haroche and Jean-Michel Raimond -- Exciton-polaritons in bulk semiconductors and in confined electron and photon systems / Lucio Claudio Andreani -- Experimental circuit QED / Patrice Bertet -- Quantum open systems / H.J. Carmichael -- Basic concepts in quantum information / Steven M. Girvin -- Cavity polaritons : crossroad between non-linear optics and atomic condensates / Alberto Amo and Jacqueline Bloch -- Quantum plasmonics / Darrick Chang -- Quantum polaritonics / S. Portolan, O. Di Stefano and S. Savasta -- Optical signal processing with enhanced nonlinearity in photonic crystals / A. De Rossi and S. Combri.
Sommario/riassunto	The physics of strong light-matter coupling has been addressed in different scientific communities over the last three decades. Since the early eighties, atoms coupled to optical and microwave cavities have led to pioneering demonstrations of cavity quantum electrodynamics, Gedanken experiments, and building blocks for quantum information processing, for which the Nobel Prize in Physics was awarded in 2012. In the framework of semiconducting devices, strong coupling has allowed investigations into the physics of Bose gases in solid-state environments, and the latter holds promise for exploitin

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Autore	Ganiev Rivner Fazylovich
Titolo	Wave technology in mechanical engineering : industrial applications of wave and oscillation phenomena / / R. F. Ganiev [and three others]
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ISBN	1-119-11786-0 1-119-11787-9 1-119-11785-2
Descrizione fisica	1 online resource (158 p.)
Disciplina	620.1 620.1064
Soggetti	Waves Fluid dynamics Oscillations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover; Half Title page; Title page; Copyright page; Preface; Chapter 1: Introduction: Capabilities and Perspectives of Wave Technologies in Industries and in Nanotechnologies; Chapter 2: Fragmentation and Activation of Dry Solid Components: Wave Turbulization of the Medium and Increasing Process Efficiency; 2.1 Calcium Carbonate (limestone) Fragmentation; 2.2 Wave Activation of Cements and Cement-limestone Compositions; 2.3 Grinding Blast-furnace Sullage; 2.4 Production of Coloring Pigment Based on Titanium Dioxide and Dolomitic Marble; 2.5 Wave Treatment of Aluminium Oxide Chapter 3: Wave Stirring (actuation) of Multicomponent Materials (dry mixes)3.1 Technologic Experiments with Installations of Wave Mixing; Chapter 4: Wave Metering Devices and Dosage Metering of Loose Components; Chapter 5: Creating Automated Wave Treatment Trains of Dry Solid Components: High Efficiency in a Restricted Manufacturing Room; Chapter 6: Manufacturing and Wave Treatment Technologies of Emulsions, Suspensions and Foam/Skim; 6.1 Stirring (actuation) Wave Technologies of Various Liquids, Including High-viscosity Media; 6.2

Hydrodynamic Running (through-flowing) Wave Installations
6.3 Wave Technology for Stirring (actuation) of High-viscosity Media6.4 Production of Cosmetic Cream; 6.6 Production of Finely-dispersed, Chemically Precipitated Barium Sulphate With the Assigned Particle Size; 6.7 Accelerating Fermentation of Sponge Wheat Dough After Wave Treatment; Chapter 7: Wave Mixing of Epoxy Resin with Nanocarbon Micro-additives: Production of Composite Materials; 7.1 Experimental Studies of Mixing the Epoxy Resin with Fullerenes; 7.2 Experimental Studies Mixing Epoxy Resin Technical Carbon; 7.3 Experimental Studies of Mixing Epoxy Resin with Carbon Nanotubes
7.4 Production of Highly-filled Composite Materials with Wave Technologies7.5 Using the Installation of Wave Mixing for the Preparation of Polymer-cement and Cement Composite Materials Reinforced by Polymer and Inorganic Fibers; 7.6 Production of Organoclay; Chapter 8: Wave Technologies for Food, Including Bread Baking and Confectionary Industries; Chapter 9: Wave Technologies in Oil Production: Improving Oil, Gas and Condensate Yield; Chapter 10: Wave Technologies in Ecology and Energetics; 10.1 Production of Mixed Fuels and Improvement in Combustion Efficiency
Chapter 11: Stabilizing Wave Regimes, Damping Noise, Vibration and Hydraulic Shocks Pipeline SystemsChapter 12: Wave Technologies in Engineering; Chapter 13: Wave Technologies in Oil Refining, Chemical and Petrochemical Industries; Chapter 14: Conclusions: On Wave Engineering; Literature (the Russian-language original is at the end); Index

Sommario/riassunto

This groundbreaking volume covers the significant advantages of wave technologies in the development of innovative machine building where high technologies with appreciable economic effect are applied. These technologies cover many industries, including the oil-and-gas industry, refining and other chemical processing, petrochemical industry, production of new materials, composite and nano-composites including, construction equipment, environmental protection, pharmacology, power generation, and many others. The technological problem of grinding, fine-scale grinding and activation of solid p