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Output Coupling in Optical Cavities and Lasers; Contents; Preface; Acknowledgments; 1 A One-Dimensional Optical Cavity with Output Coupling: Classical Analysis; 1.1 Boundary Conditions at Perfect Conductor and Dielectric Surfaces; 1.2 Classical Cavity Analysis; 1.2.1 One-Sided Cavity; 1.2.2 Symmetric Two-Sided Cavity; 1.3 Normal Mode Analysis: Orthogonal Modes; 1.3.1 One-Sided Cavity; 1.3.2 Symmetric Two-Sided Cavity; 1.4 Discrete versus Continuous Mode Distribution; 1.5 Expansions of the Normalization Factor; 1.6 Completeness of the Modes of the "Universe"

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8.2 Homogeneously Broadened Atoms and Uniform Pumping

Authored by one of the founders and major players in this field of research, this is a thorough and comprehensive approach to the quantum mechanical output coupling theory of lasers -- an important area of optical physics that has so far been neglected in the scientific literature. Clearly structured, the various sections cover one-dimensional optical cavity, laser, and microcavity laser with output coupling, atom-field interaction in a free-dimensional space, 3D analysis of spontaneous emission in a planar microcavity with output coupling, plus two-atom spontaneous emission. With numer

