DESCRIPTION

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 numerous end-of-chapter problems, this is vital reading for theoretical physicists, laser specialists, and physicists in industry, as well as students and lecturers in physics.

ABOUT THE AUTHOR

Kikuo Ujihara studied laser engineering at the University of Tokyo, where he received his Ph.D. degree in 1969. After teaching first as a lecturer and later as an associate professor at the University of Electro-Communications in Tokyo, he was appointed to a full professorship by the same university in 1986. He worked as a visiting scholar with other distinguished scientists such as Les Allen, Marlan O. Scully, and Herbert Walther. Professor Ujihara wrote one textbook on lasers in Japanese, translated another textbook on quantum optics into the Japanese language, participated as a contributor in writing two English and four Japanese books and
handbooks, and co-edited a book on microcavities in English. He authored and coauthored numerous journal articles and review papers.

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