

LASER AND PHOTONIC SYSTEMS

Design and Integration

Edited by
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Manufacturing and Industrial Engineering

"The book offers a wide range of interesting topics. Many of the chapters offer modern and fresh perspectives that should stimulate new advances in the field.

—Duncan MacFarlane, The University of Texas at Dallas

"Looking to the future, one can expect additional transformative developments in how research and education in laser and photonics will be conducted, as discussed in this book. This vision provides hope that as the world distances continue to shrink, and virtual engagement is further facilitated, scientists and engineers will collaboratively find solutions to the daunting global challenges confronting the world today and lead us to better quality of life for humanity."

—From the foreword by Arden L. Bement, Jr.

New, significant scientific discoveries in laser and photonic technologies, systems perspectives, and integrated design approaches can improve even further the impact in critical areas of challenge. Yet this knowledge is dispersed across several disciplines and research arenas. **Laser and Photonic Systems: Design and Integration** brings together a multidisciplinary group of experts to increase understanding of the ways in which systems perspectives may influence laser and photonic innovations and application integration.

By bringing together chapters from leading scientists and technologists, industrial and systems engineers, and managers, the book stimulates new thinking that would bring a systems, network, and system-of-systems perspective to bear on laser and photonic systems applications. The chapters challenge you to explore opportunities for revolutionary and broader advancements. The authors emphasize the identification of emerging research and application frontiers where there are promising contributions to lasers, optics, and photonics applications in fields such as manufacturing, healthcare, security, and communications.

The book contains insights from leading researchers, inventors, implementers, and innovators. It explains a variety of techniques, models, and technologies proven to work with laser and photonic systems, their development, design, and integration. Such systems are of growing interest to many organizations, given their promise and potential solutions of grand societal challenges. Lastly, the book helps you leverage the knowledge into exciting new frontiers of successful solutions.



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