



# Laser-Tissue Interactions: Fundamentals and Applications (Biological and Medical Physics, Biomedical Engineering)

By Markolf H. Niemz

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"... the author has provided a comprehensive background with examples describing the basics of laser-tissue interaction ... an extremely useful reference companion." *Lasers in Surgery and Medicine*

From the reviews of the third edition:

"This book has become a standard reference and textbook . . . . It provides a thorough description of the fundamentals and applications of modern laser medicine. . . . Numerous research photographs, illustrations, tables, and comprehensive summaries make this book a useful guide for graduate students, scientists, and medical practitioners. . . . There is no doubt that this book will fulfill a need for all of us working in the field of lasers in medicine, and I expect that it will be received very well." (Yvon Renotte, *Physicalia*, Vol. 57 (3), 2005)

From the Back Cover

*Laser-Tissue Interactions* by M.H.Niemz has become a standard reference and textbook in this rapidly growing field. It provides a thorough description of the fundamentals and applications of modern laser medicine. Basic concepts, such as optical and thermal properties of tissue, the various types of tissue ablation, and optical breakdown and its related effects, are treated in detail. Special attention is given to mathematical tools (Monte Carlo simulations, the Kubelka–Munk theory etc.) and well-proven techniques (photodynamic therapy, laser–induced interstitial thermotherapy, etc.). The part on applications reviews clinically-relevant methods in laser treatment using the latest references. The last chapter covers today's standards of laser safety with a careful selection of essential guidelines published by the Laser Institute of America. Numerous research photographs, illustrations, tables, and comprehensive summaries make this book a useful guide for graduate students, scientists, and medical practitioners.

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