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Nota di contenuto	Introduction; Evolution of Laser Material Processing; Lasers; Systems for Material Processing; Engineering Materials; Laser Processing Diagrams; Athermal Processing; Structural Change; Surface Hardening; Deformation and Fracture; Surface Melting; Cladding; Conduction Joining; Cutting; Marking; Keyhole Welding; Thermal Machining; Opportunities; Glossary; Appendices
Sommario/riassunto	The complete guide to understanding and using lasers in material processing! Lasers are now an integral part of modern society, providing extraordinary opportunities for innovation in an ever-widening range of material processing and manufacturing applications. The study of laser material processing is a core element of many materials and manufacturing courses at undergraduate and postgraduate level. As a consequence, there is now a vast amount of research on the theory and application of lasers to be absorbed by students, industrial researchers, practising engineers and production managers. Written by an acknowledged expert in the field with over twenty years' experience in laser processing, John Ion distils cutting-edge information and research into a single key text. Essential for anyone studying or working with lasers, Laser Processing of Engineering Materials provides a clear explanation of the underlying

principles, including physics, chemistry and materials science, along with a framework of available laser processes and their distinguishing features and variables. This book delivers the knowledge needed to understand and apply lasers to the processing of engineering materials, and is highly recommended as a valuable guide to this revolutionary manufacturing technology. \* The first single volume text that treats this core engineering subject in a systematic manner \* Covers the principles, practice and application of lasers in all contemporary industrial processes; packed with examples, materials data and analysis, and modelling techniques \* Accompanied by extensive examination questions plus a companion website with instructor's solutions manual

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