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Altri autori (Persone)	FanChunhai
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Nota di contenuto	Part I Elements of DNA Nanotechnology -- Brief History of DNA Nanotechnology -- Functional Nucleic Acids for DNA Nanotechnology -- Selenium Atom-Specific Mutagenesis (SAM) for Crystallography, DNA Nanostructure Design, and Other Applications -- Liposomes for DNA Nanotechnology: Preparation, Properties and Applications -- Manipulation and Isolation Individual DNA Molecules with Atomic Force Microscope -- Single Molecule Mechanics of DNA -- Microfluidic Tools for DNA Analysis -- Part II Static and Dynamic DNA Nanotechnology -- DNA-Directed Assembly of Nanophase Materials: An Updated Review -- Self-Assembled DNA-Inorganic Nanoparticle Structures -- DNA Origami Nanostructures -- Design, Fabrication and Applications of DNA Nanomachines -- DNA Walking Devices -- Part III Applications of DNA Nanotechnology -- Functional DNA Integrated Nanomaterials for Biosensing -- Nucleic Acid Enzymes-Based DNA Nanomachine for Biosensing -- DNA Nanotechnology and Drug Delivery -- DNA-Nanotube-Enabled NMR Structure Determination of Membrane Proteins -- Deoxyribozyme-Based Molecular Computation.
Sommario/riassunto	DNA nanotechnology: From structure to function presents an overview of various facets of DNA nanotechnology, with a particular focus on their promising applications. This book is composed of three parts. Part I, Elements of DNA Nanotechnology, provides extensive basic information on DNA nanotechnology. Part II, Static and Dynamic DNA

Nanotechnology, describes the design and fabrication of static and dynamic DNA nanostructures. Recent advances in DNA origami, DNA walkers and DNA nanodevices are all covered in this part. Part III, Applications of DNA Nanotechnology, introduces a variety of applications of DNA nanotechnology, including biosensing, computation, drug delivery, etc. Together these provide a comprehensive overview of this emerging area and its broad impact on biological and medical sciences. This book is intended for post-graduates, post-doctoral researchers and research scientists who are interested in expanding their knowledge of DNA nanotechnology. It provides readers an impression of the latest developments in this exciting filed.