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Nota di contenuto	Filter Position in Networks of Evolutionary Processors Does Not Matter: A Direct Proof -- Strand Algebras for DNA Computing -- A Domain-Specific Language for Programming in the Tile Assembly Model -- Limitations of Self-assembly at Temperature One -- Advancing the Deoxyribozyme-Based Logic Gate Design Process -- DNA Chips for Species Identification and Biological Phylogenies -- Renewable, Time-Responsive DNA Logic Gates for Scalable Digital Circuits -- Self-assembly of the Discrete Sierpinski Carpet and Related Fractals -- Automatic Design of DNA Logic Gates Based on Kinetic Simulation -- Design of a Biomolecular Device That Executes Process Algebra -- NP-Completeness of the Direct Energy Barrier Problem without Pseudoknots -- The Effect of Malformed Tiles on Tile Assemblies within

	kTAM -- Positional State Representation and Its Transition Control for Photonic DNA Automaton -- Construction of AND Gate for RTRACS with the Capacity of Extension to NAND Gate -- Time-Complexity of Multilayered DNA Strand Displacement Circuits -- Distributed Agreement in Tile Self-assembly.
Sommario/riassunto	This book constitutes the thoroughly refereed post-conference proceedings of the 15th International Meeting on DNA Computing, DNA15, held in Fayetteville, AR, USA, in June 2009. The 16 revised full papers presented were carefully selected during two rounds of reviewing and improvement from 38 submissions. The papers feature current interdisciplinary research in molecular-scale manipulation of matter - in particular, implementation of nanoscale computation and programmed assembly of materials are of interest, thus reflecting a broader scope beyond DNA-based nanotechnology and computation.