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Sommario/riassunto	Aptamers are in vitro selected oligonucleotides capable of specific, high-affinity binding to a wide variety of target molecules. These features enable their application in diagnostics, therapeutics, targeted delivery, fluorescence imaging, and biosensing. Aptamers are isolated via the systematic evolution of ligands by exponential enrichment (SELEX), an iterative cycle of selection and amplification steps that enriches a randomly synthesised oligonucleotide library to a pool of specific, high-affinity aptamers. Since the inception of aptamers in 1990, the methods by which aptamers are selected have been improved, yielding a robust system capable of producing aptamers rapidly and at low cost. Recently, there has been an explosion in the field of aptamers including innovations in enhanced selection strategies, bioinformatics approaches, riboswitches, unnatural base pairs, nucleic acid nanostructures, and DNAzymes. This book combines excellent reviews with primary research articles to provide multidisciplinary perspectives on the frontiers of aptamer science in 2018.