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Autore	Ghafar-Zadeh Ebrahim
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Nota di contenuto	Promises of CMOS technology for biological applications -- Fundamental of Chemo-and bio-interfaces -- Electro-Microfluidics -- Integrated front-end devices -- Biochip circuit designs -- Micro-and nanofabrication post-processing methods -- Current and Emerging CMOS Technologies.
Sommario/riassunto	Biochips incorporate a verity of means including electronic, photonic and microfluidic devices; biological materials (living cells, tissue, enzymes, nucleic acid and etc.) and chemical analysis to produce the detectable signals for identification of biological phenomena. Among several competing biochip technologies, Complementary Metal Oxide Semiconductor (CMOS) process offers the advantages of low cost, integrated, high precision and portable techniques suitable for point-of-care diagnostics. Advanced CMOS Biochip takes multi-path approach: microelectronic design and implementation of bio-interfaces offering a vital contemporary view of a wide range of integrated circuits

and system for electrical, magnetic, optical and mechanical sensing and actuating blocks and much more; classical knowledge of biology, biochemistry as well as microfluidics. The coverage is both practical and in depth integrating experimental, theoretical and simulation examples. By using AdvancedCMOS Biochip, readers will have the fundamentals and design techniques to grasp the situation which arise typically in CMOS biochip devices.
