Special Issue

CMOS Biosensor and Bioelectronic

Message from the Guest Editors

The rapid advancements in complementary metal–oxide–semiconductor (CMOS) processes have facilitated the integration of the analog sensing front end into an IC chip, making it a viable option. It has emerged as the predominant choice for manufacturing next-generation custom microdevices. The advancement of CMOS high-density microelectrode arrays has significantly streamlined the closed-loop System-on-Chip (SoC) recording of electrical signals from larger areas and entire cell populations. In this configuration, multiple electrodes are strategically distributed across a substantial area, enabling simultaneous recording of functions from thousands of cells. This versatile capability finds utility in both in vivo implantation and in vitro cell cultures and tissue preparations, broadening its potential applications in both academic research and industrial domains.For this Special Issue, our primary objective is to comprehensively cover the latest advances and progress in CMOS bioelectronics and its various applications. High-quality research articles, communications, and reviews are welcome for submission.

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Editor-in-Chief

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