

可撓式基板上整合微陣列生物探針及薄膜電晶體放大器設計

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摘要

This research provides a microarray bioprobe device integrated with an amplifier formed of bottom-gate thin film transistors, which utilizes a micro-electro-mechanical process as well as a semi-conductor process to integrate microarray bioprobes and an amplifier formed of bottom-gate thin film transistors on a flexible substrate. As such, the signal obtained by the microarray bioprobes can be amplified nearby to improve the signal-to-noise ratio and impedance matching. The microarray bioprobes are formed on the flexible substrate such that the present microarray bioprobe device can be disposed to conform to the profile of a living body's portion so as to improve the electrical contact property between the bioprobes and the living body's portion.

關鍵字：Microarray Bioprobe, Thin Film Transistor, Flexible Substrate