

SEMICONDUCTOR BIOSENSOR AND CONTROL METHOD

THEREOF

ABSTRACT OF THE DISCLOSURE

A semiconductor biosensor and a control method thereof are disclosed
5 for enhancing performance of semiconductor biosensor and the reducing
price of medical healthcare chip. An embodiment of the semiconductor
biosensor includes a central reaction unit. The central reaction unit comprises
a plurality of semiconductor conducting wires; a common source, wherein
one end of each conducting wire is connected to the common source; a
10 plurality of non-volatile memory type transistors respectively connected to
another end of each conducting wire; a plurality of sense-amplifiers
respectively connected to the said non-volatile memory type transistors; a bit
line controller analyzing signals sensed by the said sense-amplifiers and
managing the operation of the said non-volatile memory type transistors; an
15 oxide film wrapping or covering the said conducting wires, and a plurality of
receptors fixed on a surface of the said oxide film.

FIG. 14