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(54) **Device to stimulate or record a signal to or from a living tissue**

(57) The invention concerns a device to stimulate or record a signal to or from a living tissue, comprising at least one electrically conductive first electrode comprising a zone for application to the living tissue and a conductor for sending or receiving a signal voltage to or from the zone.

According to the invention, the zone for application to the living tissue has a first geometric surface formed of an external porous layer consisting in a second material (M2por) being porous and arranged in such a manner that the first electrode has a standard deviation of intrinsic recording voltage noise $N_{M2por} \leq 0.9 N_{M2}$, wherein N_{M2} is the standard deviation of the intrinsic recording voltage noise measured with another second comparison electrode being the same as the first electrode but having its zone having the same first geometric surface formed of said second material (M2) being non porous.

FIG. 8

