ISTITUTO ITALIANO
DI TECNOLOGIA

TITLE

Nano-probes for the electric brain stimulation

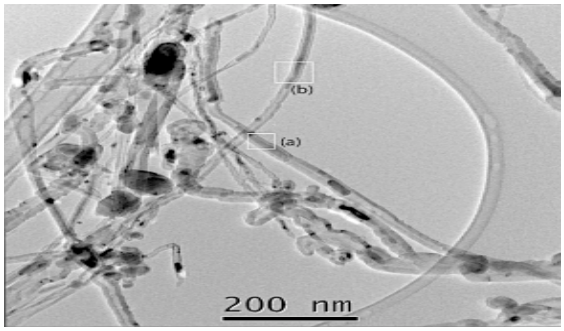
INVENTORS

Gianni Ciofani, Vittoria Raffa, Serena Danti, Arianna Menciassi, Paolo Dario, Mario Petrini, Alfred Cuschieri

DESCRIPTION

From this research, a new family of nano probes have been developed. These probes can be put in contact directly with brain cells and, thanks to their piezoelectric effect, they can perform an electrical stimulation at a single-cell scale.

This invention has the outstanding advantage of non-invasiveness, by which all the risks of infection, contamination, hemorrhage, tissue and organ damage, as well as the stress of surgery are avoided for the patient subjected to the electric stimulation treatment.



APPLICATIONS

In the field of brain neurosciences, this invention can be successfully applied to

- Biomedical applications
- Cancer treatment
- Clinical tests
- Research

KEYWORDS

nano-probes, brain electric stimulation, carbon nano-tubes

BIBLIOGRAPHIC DATA FI2009A000076

Stimolazione elettrica cellulare mediata da nanotubi piezoelettrici

Application Number	FI2009A000076, WO/2010/119403
Priority Date	April 14, 2009
Applicants	Fondazione Istituto Italiano di Tecnologia

CONTACTS

Technology Transfer Office	Lorenzo De Michieli	+39 010 71781 569
		lorenzo.demichieli@iit.it