

Title (en)
APPARATUS AND METHOD UTILIZING MAGNETIC FIELD

Title (de)
VORRICHTUNG UND VERFAHREN UNTER VERWENDUNG EINES MAGNETFELDES

Title (fr)
APPAREIL ET PROCEDE UTILISANT UN CHAMP MAGNETIQUE

Publication
EP 2011165 A1 20090107 (EN)

Application
EP 07760511 A 20070411

Priority

- US 2007066463 W 20070411
- US 79100406 P 20060411
- US 79092106 P 20060411
- US 65227207 A 20070111

Abstract (en)
[origin: WO2007121265A1] Apparatus and method for harvesting energy from the environment and/or other external sources and converting it to useful electrical energy. The harvester does not contain a permanent magnet or other local field source but instead relies on the earth's magnetic field of another source of a magnetic field that is external to the sensing device. One advantage of these new harvesters is that they can be made smaller and lighter than energy harvesters that contain a magnet and/or an inertial mass. A small implantable stimulator(s) includes at least one passive magnetostrictive/electro- active (PME) magnetic-field sensor for delivering electrical stimulation to surrounding tissue. The PME is charged utilizing a changing magnetic field from an external alternating magnetic field source at a frequency particular to the PME. The small stimulator provides means of stimulating a nerve, tissue or internal organ with direct electrical current, such as relatively low-level direct current for temporary or as needed therapy. The field source may be a hand-held device or a small antenna affixed to the wearer's skin, clothing or accessories. The stimulator may be configured to be small enough to be implanted through a surgical needle. Open- and closed-loop systems are disclosed with measurement of current flow and therapy through PME sensor function.

IPC 8 full level
H01L 41/00 (2006.01); **A61F 2/02** (2006.01); **A61N 1/378** (2006.01)

CPC (source: EP)
A61N 1/37205 (2013.01); **A61N 1/3787** (2013.01); **H10N 35/00** (2023.02); **A61N 1/37223** (2013.01)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
WO 2007121265 A1 20071025; EP 2011165 A1 20090107

DOCDB simple family (application)
US 2007066463 W 20070411; EP 07760511 A 20070411