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(71) Applicants (for all designated States except US): **THE JOHNS HOPKINS UNIVERSITY** [US/US]; 3400 N. Charles Street, Baltimore, MD 21218 (US). **MICHIGAN TECHNOLOGICAL UNIVERSITY** [US/US]; 1400 Townsend Drive, Houghton, MI 49931 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HURTADO, Andres** [CO/US]; 2247 Rogene Dr. Apt. #3, Baltimore, MD 21209 (US). **GILBERT, Ryan, James** [US/US]; 1110 College Avenue, Apt. E, Houghton, MI 49931 (US).

**WANG, Han, Bing** [CN/US]; 1807 Woodmar Dr., Apt. B, Houghton, MI 49931 (US). **CREGG, Jared, M.** [US/US]; 47731 Mill Rd., Houghton, MI 49931 (US). **MULLINS, Michael, E.** [US/US]; 47685 Pine Circle, Houghton, MI 49931 (US). **OUDEGA, Martin** [NL/US]; 623 Waterfront Drive E, Munhall, PA 15120 (US).

(74) Agents: **CORLESS, Peter, F.** et al.; Edwards Angell Palmer & Dodge LLP, P.O. Box 55874, Boston, MA 02205 (US).

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[Continued on next page]

(54) Title: THREE-DIMENSIONAL SCAFFOLDS, METHODS FOR FABRICATING THE SAME, AND METHODS OF TREATING A PERIPHERAL NERVE OR SPINAL OR SPINAL CORD INJURY

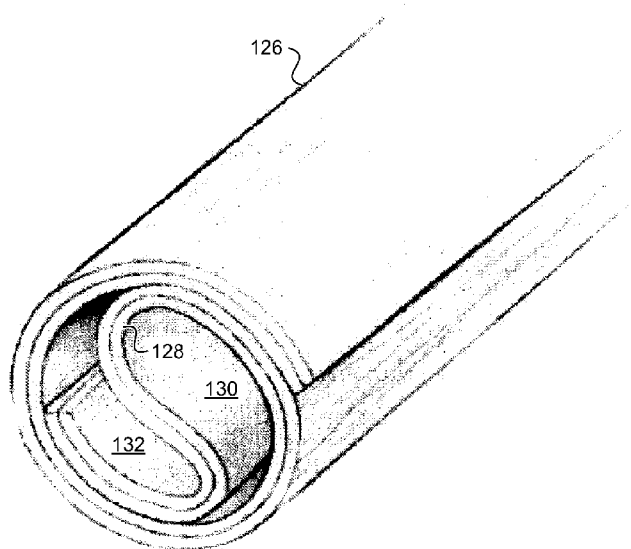


FIG. 1F

(57) Abstract: One aspect of the invention provides a three-dimensional scaffold including at least one layer of highly- aligned fibers. The at least one layer of highly- aligned fibers is curved in a direction substantially perpendicular to a general direction of the fibers. Another aspect of the invention provides a method for fabricating a three-dimensional scaffold. The method includes: electro spinning a plurality of fibers to produce at least one layer of highly- aligned fibers and forming the at least one layer of highly-aligned fibers into a three-dimensional scaffold without disturbing the alignment of the highly- aligned polymer fibers. A further aspect of the invention provides methods for using a three-dimensional scaffold to treat nerve or spinal cord injury.



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**A. CLASSIFICATION OF SUBJECT MATTER**

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According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: scaffold, fiber, align

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009-0018643 A1 (HASHI et al.) 15 January 2009 See see abstracts, paragraph [092]-[143], figures 1-22, and claims 1-32.	1-45, 54
A	US 2003-0203003 A1 (NELSON et al.) 30 October 2003 See the whole document.	1-45, 54
A	US 2008-0147199 A1 (YOST et al.) 19 June 2008 See the whole document.	1-45, 54
A	US 2008-0220042 A1 (HASHI et al.) 11 September 2008 See the whole document.	1-45, 54

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

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"E" earlier application or patent but published on or after the international filing date

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Information on patent family members

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