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(54) Title: IMPLANTABLE MECHANICAL PRESSURE SENSOR AND METHOD OF MANUFACTURING THE SAME

(57) Abstract: A biocompatible, mechanical, micromachined pressure sensor and methods of manufacturing such a pressure sensor are provided. The pressure sensor of the current invention comprises a high-aspect-ratio curved-tube structure fabricated through a one-layer parylene process. The pressure sensor of the current invention requires zero power consumption and indicates the pressure variation by changes of the *in situ* in-plane motion of the sensor, which can be gauged externally by a direct and convenient optical observation. In one embodiment, the pressure sensor of the current invention has been shown to work as an IOP sensor for eye implantation where the intraocular in-plane motion of the sensor can be recorded from outside of the eye, such that the intraocular pressure in glaucoma patients can be constantly monitored.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: G01L 7/00(2006.01);A61B 5/00(2006.01)

USPC: 73/700;600/561
 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)
 U.S. : 73/700;600/561

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005/0288604 (Eigler et al) 12 December 2005 (12.12.2205), whole document	1-41

Further documents are listed in the continuation of Box C. See patent family annex.

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