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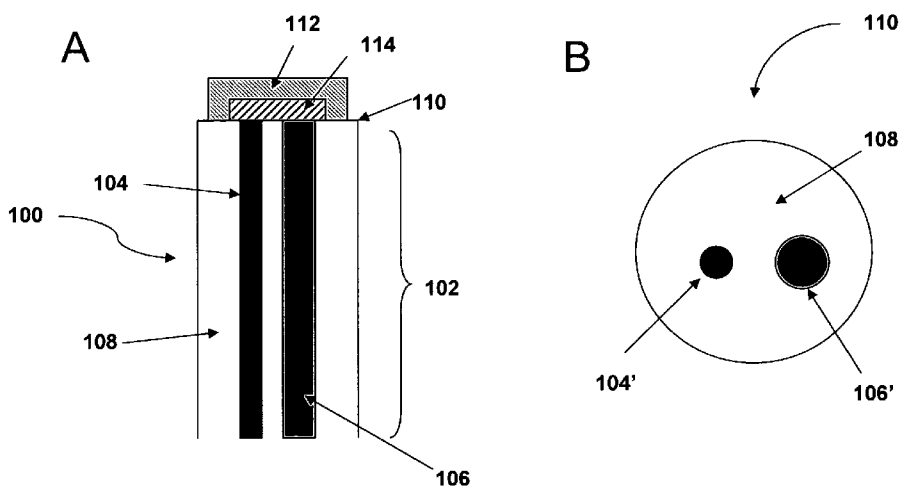
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(54) Title: NITRIC OXIDE MICROSENSORS VIA FLUOROSILANE-BASED XEROGEL MEMBRANES



(57) Abstract: The presently disclosed subject matter relates to sensors for measuring an amount of a gaseous species in a sample. The sensors comprise a gas permeable polysiloxane network membrane, comprising both alkyl and fluorinated alkyl groups. In some embodiments, the polysiloxane network can be formed from the co-condensation of a mixture of an alkylalkoxysilane and a fluorosilane. The presently disclosed subject matter also relates to methods of making the sensors, methods of selectively measuring an amount of a gaseous species, such as nitric oxide, in a sample, and to compositions comprising the polysiloxane networks.

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(8) - B32B 17/06; G01F 1/64 (2008.04)
 USPC - 428/429; 205/781
 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)
 USPC - 428/429; 205/781

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 USPC - 428/429, 421, 447; 205/781, 784.5; 204/425, 426

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 PubWEST(USPT,PGPB,EPAB,JPAB); Google Patent; Google
 Search Terms Used: polysiloxane network gas permeable silane mixture detector biological sample platinum silver electrode oxygen sensor gaseous species measure fluorosilane alkylalkoxysilane "polysiloxane network"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 5,964,794 A (BOLZ et al.) 12 October 1999 (12.10.1999); entire document, especially col 8, ln 4-16,	54, 55 ----- 1-53, 56-69
Y	US 4,900,405 A (OTAGAWA et al.) 13 February 1990 (13.02.1990); col 2, ln 5-11, col 6, ln 43-50, col 12, ln 29-35, col 12, ln 45-58, col 14, ln 50-63, col 16, ln 20-25	1-17, 18-53, 56, 57
Y	US 2002/0011408 A1 (LEE et al.) 31 January 2002 (31.01.2002); para [0017]	16, 17
Y	US 6,383,642 B1 (LE BELLAC et al.) 07 May 2002 (07.05.2002); col 3, ln 15-29	7-14, 18-53, 58-69
Y	US 6,589,644 B1 (YAMADA et al.) 08 July 2003 (08.07.2003); col 11, ln 57-61	7-14, 18-53, 58-69
Y	US 6,165,336 A (MAKI et al.) 26 December 2000 (26.12.2000); col 19, ln 46-55	29, 30, 67-69
Y	US 2002/0001744 A1 (TSUSAKA et al.) 03 January 2002 (03.01.2002); paras [0073], [0117], [0174]	9, 10, 20, 21, 60 and 61
Y	US 2004/0211242 A1 (HOLMUHAMEDOV) 28 October 2004 (28.10.2004); para [0023]	47-51

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