

Title (en)

HIGH DENSITY NANOWIRE ARRAYS IN A GLASSY MATRIX, AND METHODS FOR DRAWING THE SAME

Title (de)

HOCHDICHTE NANODRAHT-ARRAYS IN EINER GLÄSERNEN MATRIX UND VERFAHREN ZUR ZEICHNUNG DERSELBEN

Title (fr)

TABEAU DE NANOCIRCUITS A HAUTE DENSITE DANS UNE MATRICE VITREUSE, ET LEUR PROCEDE D' ETIREMENT

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2007070299A2] The present invention provides a method of drawing a thermoelectrically active material (22) in a glass cladding (14), comprising sealing off one end of a glass tube (14) such that the tube (14) has an open end and a closed end, introducing the thermoelectrically active material (22) inside the glass tube (14) and evacuating the tube (14) by attaching the open end to a vacuum pump, heating a portion of the glass tube (14) such that the glass partially melts and collapses under the vacuum such that the partially melted glass tube (14) provides an ampoule (54) containing the thermoelectric material (22) to be used in a first drawing operation, introducing the ampoule (54) containing the thermoelectric material (22) into a heating device (10), increasing the temperature within the heating device (10) such that the glass tube (14) melts just enough for it to be drawn and drawing fibers (24) of the glass clad thermoelectrically active material (22).

IPC 8 full level

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Citation (search report)

- [XA] US 6670539 B2 20031230 - HEREMANS JOSEPH PIERRE [US], et al
- [XA] US 6231744 B1 20010515 - YING JACKIE Y [US], et al
- [XA] US 2003079770 A1 20030501 - BELL LON E [US]
- [X] DE 2454620 B1 19760212 - KRAFTWERK UNION AG [DE]
- [XA] US 6898357 B2 20050524 - HAN WON-TAEK [KR], et al
- [A] US 4652288 A 19870324 - SAITO MITSUNORI [JP]
- [A] US 6772611 B2 20040810 - KLINER DAHV A V [US], et al
- [A] US 5215565 A 19930601 - URANO AKIRA [JP], et al
- [XA] ABRAMSON A R ET AL: "FABRICATION AND CHARACTERIZATION OF A NANOWIRE/POLYMER-BASED NANOCOMPOSITE FOR A PROTOTYPE THERMOELECTRIC DEVICE", JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 13, no. 3, 1 June 2004 (2004-06-01), pages 505 - 513, XP011113573, ISSN: 1057-7157, DOI: 10.1109/JMEMS.2004.828742

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