

Title (en)

APPARATUS AND METHOD FOR FORMING A MEMBRANE WITH NANOMETER SCALE PORES

Title (de)

APPARAT UND VERFAHREN FÜR DIE HERSTELLUNG EINER MEMBRAN MIT POREN IM NANOMETERBEREICH

Title (fr)

APPAREIL ET PROCEDE DE FORMATION D'UNE MEMBRANE A PORES A L'ECHELLE NANOMETRIQUE

Publication

EP 1233927 A4 20030108 (EN)

Application

EP 00980528 A 20001117

Priority

- US 0031749 W 20001117
- US 16604999 P 19991117

Abstract (en)

[origin: WO0136321A1] A method of forming a membrane with nanometer scale pores includes forming a sacrificial etch stop layer on a substrate. A base layer is constructed on the sacrificial etch stop layer. Micrometer scale pores are formed within the base layer. A sacrificial base layer is built on the base layer. The sacrificial base layer is removed from selected regions of the base layer to define nanometer scale pores within the base layer. The resultant membrane has sub-fifty nanometer pores formed within it.

IPC 1-7

B81C 1/00; **B82B 1/00**; **B82B 3/00**; **B01D 63/00**; **B01D 71/02**; **B01J 29/06**; **C01B 37/00**; **B01D 67/00**

IPC 8 full level

B82B 3/00 (2006.01); **B01D 67/00** (2006.01); **B01D 69/02** (2006.01); **B01D 71/02** (2006.01); **B81B 3/00** (2006.01)

CPC (source: EP US)

B01D 67/0058 (2013.01 - EP); **B01D 67/0062** (2013.01 - EP); **B01D 67/0072** (2013.01 - EP); **B01D 69/02** (2013.01 - EP); **B01D 71/02** (2013.01 - EP); **B01D 71/0215** (2022.08 - US); **B01D 71/022** (2013.01 - EP); **B01D 71/0221** (2022.08 - US); **B81C 1/00158** (2013.01 - EP); **B01D 2325/02** (2013.01 - EP); **B01D 2325/0283** (2022.08 - US); **B01D 2325/04** (2013.01 - EP); **B01D 2325/08** (2013.01 - EP); **B81B 2201/06** (2013.01 - EP); **B81B 2201/10** (2013.01 - EP); **B81C 2201/0109** (2013.01 - EP); **B81C 2201/014** (2013.01 - EP); **B81C 2201/053** (2013.01 - EP)

Citation (search report)

- [XY] US 5770076 A 19980623 - CHU WEN-HWA [US], et al
- [XY] US 5753014 A 19980519 - VAN RIJN CORNELIS JOHANNES MAR [NL]
- [X] US 5919364 A 19990706 - LEBOWITZ KYLE S [US], et al
- [X] US 5948255 A 19990907 - KELLER CHRISTOPHER G [US], et al
- [A] US 4801380 A 19890131 - PARKER DONALD L [US], et al
- [A] US 5798042 A 19980825 - CHU WEN-HWA [US], et al
- [A] US 6405066 B1 20020611 - ESSENPREIS MATTHIAS [US], et al
- [Y] "PROCESS FOR PRODUCING A PRECISION FILTER", IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 32, no. 4A, 1 September 1989 (1989-09-01), pages 126 - 127, XP000040003, ISSN: 0018-8689
- [A] DESAI T A ET AL: "Characterization of micromachined silicon membranes for immunoisolation and bioseparation applications", JOURNAL OF MEMBRANE SCIENCE, ELSEVIER SCIENCE, AMSTERDAM, NL, vol. 159, no. 1-2, 1 July 1999 (1999-07-01), pages 221 - 231, XP004169176, ISSN: 0376-7388
- [A] DESAI T A ET AL: "Micromachined interfaces: new approaches in cell immunoisolation and biomolecular separation", BIOMOLECULAR ENGINEERING, ELSEVIER, NEW YORK, NY, US, vol. 17, no. 1, October 2000 (2000-10-01), pages 23 - 36, XP004257822, ISSN: 1389-0344
- See also references of WO 0136321A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0136321 A1 20010525; **WO 0136321 A9 20020704**; AU 1778101 A 20010530; EP 1233927 A1 20020828; EP 1233927 A4 20030108; JP 2003514677 A 20030422

DOCDB simple family (application)

US 0031749 W 20001117; AU 1778101 A 20001117; EP 00980528 A 20001117; JP 2001538280 A 20001117