

Title (en)

METHOD FOR FORMING A FUNCTIONALISED GUIDE PATTERN FOR A GRAPHOEPI TAXY METHOD

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES FUNKTIONALISIERTEN FÜHRUNGSMUSTERS FÜR EIN GRAPHOEPI TAXIEVERFAHREN

Title (fr)

PROCÉDÉ DE FORMATION D'UN MOTIF DE GUIDAGE FONCTIONNALISÉ POUR UN PROCÉDÉ DE GRAPHO-ÉPI TAXIE

Publication

**EP 3465740 A1 20190410 (FR)**

Application

**EP 17726601 A 20170523**

Priority

- FR 1654791 A 20160527
- EP 2017062455 W 20170523

Abstract (en)

[origin: WO2017202860A1] A method for forming a functionalised guide pattern (4) for the self-assembly of a block copolymer by graphoeptaxy, comprising the following steps: forming, on a substrate (1), a guide pattern (4) made of a first material having a first chemical affinity for the block copolymer, the guide pattern (4) having a cavity (7) with a bottom (6) and side walls (5); grafting a functionalisation layer made of a second polymeric material having a second chemical affinity for the block copolymer, the functionalisation layer having a first portion (11) grafted onto the bottom (6) of the cavity (7) and a second portion grafted onto the side walls (5) of the cavity (7); selectively etching the second portion of the functionalisation layer relative to the first portion (11) of the functionalisation layer, said etching comprising a step of exposure to an ion beam following a direction that intersects the second portion of the functionalisation layer, such that the ion beam does not reach the first portion of the functionalisation layer.

IPC 8 full level

**H01L 21/033** (2006.01); **B81C 1/00** (2006.01); **G03F 7/00** (2006.01); **H01L 21/311** (2006.01); **H01L 21/3115** (2006.01)

CPC (source: EP KR US)

**B81C 1/00031** (2013.01 - EP KR); **G03F 7/0002** (2013.01 - EP KR US); **G03F 7/0035** (2013.01 - US); **G03F 7/0041** (2013.01 - US); **G03F 7/0048** (2013.01 - US); **G03F 7/0752** (2013.01 - US); **G03F 7/11** (2013.01 - US); **H01L 21/0337** (2013.01 - EP KR US); **H01L 21/31105** (2013.01 - EP US); **H01L 21/31111** (2013.01 - EP US); **H01L 21/31116** (2013.01 - EP KR US); **H01L 21/31127** (2013.01 - EP US); **H01L 21/31133** (2013.01 - EP KR US); **H01L 21/31155** (2013.01 - KR); **B81C 1/00031** (2013.01 - US); **H01L 21/31155** (2013.01 - EP US)

Citation (search report)

See references of WO 2017202860A1

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2017202860 A1 20171130**; EP 3465740 A1 20190410; FR 3051965 A1 20171201; JP 2019519106 A 20190704; KR 20190013808 A 20190211; US 10795257 B2 20201006; US 2019278171 A1 20190912

DOCDB simple family (application)

**EP 2017062455 W 20170523**; EP 17726601 A 20170523; FR 1654791 A 20160527; JP 2018562093 A 20170523; KR 20187035305 A 20170523; US 201716304933 A 20170523