Title (en)

UNIFORM ASPECT RATIO SILVER NANOWIRES PREPARATION METHOD

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SILBER-NANODRÄHTEN MIT EINHEITLICHEM ASPEKTVERHÄLTNIS

Title (fr)

PROCÉDÉ DE PRÉPARATION DE NANOFILS D'ARGENT À RAPPORT D'ASPECT UNIFORME

Publication

EP 3360628 B1 20220209 (EN)

Application

EP 16852969 A 20160314

Priority

- CN 201510645800 A 20151009
- CN 2016076284 W 20160314

Abstract (en)

[origin: EP3360628A1] A preparation method for silver nanowires with a uniform aspect ratio, including: dissolving at a certain temperature silver nitrate in glycerol to get a solution A; dissolving at a certain temperature polyvinylpyrrolidone (PVP) in glycerol to get a solution B; mixing uniformly the solution A and the solution B to form a solution C; then, adding a certain amount of a medium into the solution C and mixing uniformly to form a solution D, finally, transferring the solution D into a reaction kettle, putting the reaction kettle into an oven with a set temperature, and ending the reaction after a certain time of reaction. The reactants are centrifuged twice to obtain precipitated silver nanowires. With the addition of the medium, the method can improve the moving speed of ions in a reaction solution, and obtain the silver nanowires with a uniform aspect ratio and nodes. The preparation method is simple and easy to operate, experimentally stable, and suitable for industrial production.

IPC 8 full level

B22F 9/24 (2006.01); **B22F 1/00** (2022.01)

CPC (source: EP KR US)

B22F 1/0547 (2022.01 - EP KR US); **B22F 1/07** (2022.01 - KR US); **B22F 9/24** (2013.01 - EP KR US); B22F 2301/255 (2013.01 - KR US); B22F 2304/054 (2013.01 - US)

Cited by

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DOCDB simple family (publication)

EP 3360628 A1 20180815; **EP 3360628 A4 20190724**; **EP 3360628 B1 20220209**; CN 105081351 A 20151125; CN 105081351 B 20170926; JP 2018532048 A 20181101; JP 6732897 B2 20200729; KR 102071814 B1 20200130; KR 20180049011 A 20180510; US 2019054540 A1 20190221; WO 2017059658 A1 20170413

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