

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 A4 20190724 (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
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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)

Citation (search report)
• [I] CN 104785794 A 20150722 - UNIV CHONGQING ARTS & SCIENCES
• [A] CN 104607653 A 20150513 - JINING LEADERNANO TECH LLC
• [A] US 2015047468 A1 20150219 - KOO HYUN-WOO [KR], et al
• [A] US 2012247275 A1 20121004 - YANG CHENG [CN], et al
• See references of WO 2017059658A1

Cited by
US10687269B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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