

Title (en)
METALLIC COPPER PARTICLES, AND PRODUCTION METHOD THEREFOR

Title (de)
METALLISCHE KUPFERPARTIKEL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
PARTICULES DE CUIVRE MÉTALLIQUE ET LEUR PROCÉDÉ DE PRODUCTION

Publication
EP 3187288 A1 20170705 (EN)

Application
EP 15835228 A 20150826

Priority

- JP 2014174251 A 20140828
- JP 2015081081 A 20150410
- JP 2015074025 W 20150826

Abstract (en)
Provided are: metallic copper particles exhibiting excellent low-temperature sintering properties at temperatures equal to or lower than 300 °C; and a production method therefor. In these metallic copper particles, metallic copper fine particles are adhered to the surfaces of large-diameter metallic copper particles. With regard to the metallic copper particles to be produced, copper oxide and hypophosphoric acid and/or a salt thereof are mixed and reduced, preferably in the presence of 1-500 mass% of gelatin and/or collagen peptide. The reduction reaction temperature is preferably in the range of 20-100 °C. The produced metallic copper particles have a volume resistivity value when heated to a temperature of 300 °C under a nitrogen atmosphere of $1 \times 10^{-2} \text{ } \Omega \cdot \text{cm}$ or less.

IPC 8 full level
B22F 1/00 (2006.01); **B22F 1/052** (2022.01); **B22F 1/102** (2022.01); **B22F 1/105** (2022.01); **B22F 1/17** (2022.01); **B22F 9/20** (2006.01); **H01B 1/00** (2006.01); **H01B 1/22** (2006.01); **H01B 5/00** (2006.01); **H01B 13/00** (2006.01); **B22F 1/06** (2022.01); **B22F 1/068** (2022.01)

CPC (source: EP KR US)
B22F 1/052 (2022.01 - EP KR US); **B22F 1/09** (2022.01 - EP KR US); **B22F 1/102** (2022.01 - EP KR US); **B22F 1/105** (2022.01 - EP KR US); **B22F 1/17** (2022.01 - EP KR US); **B22F 9/20** (2013.01 - KR); **B22F 9/24** (2013.01 - EP US); **H01B 1/22** (2013.01 - KR); **H01B 5/00** (2013.01 - EP KR US); **H01B 13/00** (2013.01 - EP KR US); **B22F 1/06** (2022.01 - EP KR US); **B22F 1/068** (2022.01 - EP KR US); **B22F 2009/245** (2013.01 - US); **B22F 2301/10** (2013.01 - KR US); **B22F 2998/10** (2013.01 - US)

Cited by
US10981799B2; EP3903966A4

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3187288 A1 20170705; **EP 3187288 A4 20180411**; CA 2959294 A1 20160303; CN 106715009 A 20170524; JP WO2016031860 A1 20170615; KR 20170046164 A 20170428; TW 201623639 A 20160701; TW I658156 B 20190501; US 2017252801 A1 20170907; WO 2016031860 A1 20160303

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