

Title (en)

COPPER MATERIAL AND HEAT-DISSIPATING MEMBER

Title (de)

KUPFERMATERIAL UND WÄRMEABLEITENDES ELEMENT

Title (fr)

MATÉRIAU DE CUIVRE ET ÉLÉMENT DE DISSIPATION DE CHALEUR

Publication

**EP 3950981 A4 20230426 (EN)**

Application

**EP 20783133 A 20200309**

Priority

- JP 2019068349 A 20190329
- JP 2020010018 W 20200309

Abstract (en)

[origin: EP3950981A1] Provided are a copper material capable of suppressing coarsening and non-uniformity of crystal grains even after heating, and a heat-dissipating member made of the copper material. A copper material has a composition in which a amount of Ca is in a range of 3 mass ppm or more and 400 mass ppm or less with the remainder being Cu and inevitable impurities, in a case in which the amount of Ca is defined as X (mass ppm) and the total amount of O, S, Se, and Te contained as inevitable impurities is defined as Y (mass ppm),  $X/Y > 2$  is satisfied, and after heat treatment of holding the copper material at 800°C for 1 hour, the average crystal grain size is 200 μm or less and the area ratio of crystal grains having a grain size in a range of 50 μm or more and 300 μm or less is 60% or more.

IPC 8 full level

**C22C 9/00** (2006.01); **C22F 1/00** (2006.01); **C22F 1/08** (2006.01)

CPC (source: EP)

**C22C 9/00** (2013.01); **C22F 1/08** (2013.01)

Citation (search report)

- [X] EP 3441486 A1 20190213 - MITSUBISHI MATERIALS CORP [JP]
- [X] EP 3243916 A1 20171115 - MITSUBISHI MATERIALS CORP [JP]
- [A] US 2008223728 A1 20080918 - SHINDO YUICHIRO [JP], et al
- See references of WO 2020203071A1

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

DOCDB simple family (publication)

**EP 3950981 A1 20220209; EP 3950981 A4 20230426**; CN 113631742 A 20211109; JP 7248104 B2 20230329; JP WO2020203071 A1 20201008; TW 202104604 A 20210201; WO 2020203071 A1 20201008

DOCDB simple family (application)

**EP 20783133 A 20200309**; CN 202080024700 A 20200309; JP 2020010018 W 20200309; JP 2021511309 A 20200309; TW 109108172 A 20200312