

Title (en)
METAL MATERIAL, AND SURFACE TREATMENT METHOD AND DEVICE

Title (de)
METALLMATERIAL UND OBERFLÄCHENBEHANDLUNGSVERFAHREN SOWIE VORRICHTUNG

Title (fr)
MATÉRIAU EN MÉTAL, PROCÉDÉ ET DISPOSITIF DE TRAITEMENT DE SURFACE

Publication
EP 2818579 A4 20151111 (EN)

Application
EP 13752521 A 20130221

Priority

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- JP 2012038557 A 20120224
- JP 2013054413 W 20130221

Abstract (en)
[origin: EP2818579A1] A metallic material includes a metal substrate 2 and a modified layer formed on the surface of the metal substrate 2. The modified layer includes three or more protrusions in an area of 10 μm^2 on average protruding from the surface of the metal substrate 2. The protrusions have an average diameter of 1 μm or less when viewed in a direction perpendicular to the surface of the metal substrate. The modified layer may include one or more protrusions in an area of 10 μm^2 on average including a base part protruding from the surface of the metal substrate 2 and a tip part formed on the end of the base part, the protrusions having an average diameter of 1 μm or less when viewed in a direction perpendicular to the surface of the metal substrate 2 and a constricted structure with the outer diameter of the base part being smaller than the outer diameter of the tip part, thereby providing a metallic material having new functions such as hydrophilic properties and luminescence properties.

IPC 8 full level
C23C 26/00 (2006.01); **B23H 1/00** (2006.01); **C25D 3/02** (2006.01); **C25D 5/02** (2006.01)

CPC (source: EP)
C25F 3/06 (2013.01)

Citation (search report)

- [XAY] JP H09241865 A 19970916 - KAWASAKI STEEL CO
- [X] EP 2133448 A1 20091216 - FURUKAWA ELECTRIC CO LTD [JP]
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- [A] WO 0238827 A1 20020516 - CHANG CHAK MAN THOMAS [AU], et al
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Designated contracting state (EPC)
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