Title (en)

ELECTRODEPOSITION OF SILVER WITH FLUOROPOLYMER NANOPARTICLES

Title (de)

ELEKTROLYTISCHE ABSCHEIDUNG VON SILBER MIT FLUORPOLYMERNANOPARTIKELN

Title (fr)

DÉPÔT ÉLECTROLYTIQUE D'ARGENT COMPRENANT DES NANOPARTICULES DE POLYMÈRE FLUORÉ

Publication

EP 2971263 A1 20160120 (EN)

Application

EP 14721119 A 20140314

Priority

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- US 2014028479 W 20140314

Abstract (en)

[origin: WO2014144180A1] Electrolytic plating compositions and electrolytic plating processes for the co-deposition of silver or silver alloy with fluoropolymer nanoparticles are provided. The silver or silver alloy composite coating containing fluoropolymer nanoparticles has enhanced functional properties such as a reduced coefficient of friction. The electrolytic plating composition comprises: (a) a silver ion source comprising silver methane sulfonate (Ag-MSA); (b) a complexing agent comprising a compound comprising a nitrogen-containing heterocyclic ring; (c) a pre-mix dispersion comprising fluoropolymer nanoparticles particles having a mean particle size of from about 10 nm and about 500 nm and a surfactant; and (d) an auxiliary surfactant comprising a cationic fluorosurfactant, wherein the composition has a pH of from about 8 to about 14.

IPC 8 full level

C25D 3/46 (2006.01); **C25D 3/64** (2006.01); **C25D 7/00** (2006.01); **C25D 15/00** (2006.01); **H01L 23/495** (2006.01)

CPC (source: EP US)

C25D 3/46 (2013.01 - EP US); **C25D 3/64** (2013.01 - EP US); **C25D 7/00** (2013.01 - EP US); **C25D 15/00** (2013.01 - EP US); H01R 13/03 (2013.01 - EP US)

Citation (search report)

See references of WO 2014144180A1

Citation (examination)

US 2012067733 A1 20120322 - ZHANG-BEGLINGER WAN [CH], et al

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