

Title (en)  
METALLIC COATING AND METHOD OF APPLICATION

Title (de)  
METALLISCHE BESCHICHTUNG UND ANWENDUNGSVERFAHREN

Title (fr)  
REVÊTEMENT MÉTALLIQUE ET PROCÉDÉ D'APPLICATION

Publication  
**EP 3825444 A1 20210526 (EN)**

Application  
**EP 20208879 A 20201120**

Priority  
US 201916691917 A 20191122

Abstract (en)  
A method of depositing a high entropy metal alloy coating onto a substrate includes mixing metallic salts of one or more elements with a solvent to form a mixture, heating the mixture to form a liquid, such that constituents of the liquid are in a mobile ionic state, and electroplating the metallic salts onto a substrate from the ionic liquid. A solution for electroplating is also disclosed. Preferably, the mixture has a eutectic point that is lower than about 100°C, preferably wherein the eutectic point is between about 10°C and 100°C and the one or more elements includes at least one of zirconium, niobium, titanium, tantalum, molybdenum, tungsten, rhenium, and hafnium, and combinations thereof.

IPC 8 full level  
**C25D 3/56** (2006.01); **C25D 3/66** (2006.01)

CPC (source: EP US)  
**C25D 3/56** (2013.01 - EP US); **C25D 3/665** (2013.01 - EP US)

Citation (search report)

- [X] EP 2465977 A1 20120620 - HONEYWELL INT INC [US]
- [X] US 2018087175 A1 20180329 - MCGEEHIN PETER KEVIN [IE], et al
- [X] US 2012052324 A1 20120301 - INOUE MANABU [JP], et al
- [X] EP 2130949 A1 20091209 - DIPSOL CHEM [JP], et al
- [X] US 2010252446 A1 20101007 - KUZMANOVIC BORIS [NL], et al
- [X] COSTOVICI STEFANIA ET AL: "Investigation of Ni-Mo and Co-Mo alloys electrodeposition involving choline chloride based ionic liquids", ELECTROCHIMICA ACTA, ELSEVIER, AMSTERDAM, NL, vol. 207, 2 May 2016 (2016-05-02), pages 97 - 111, XP029566340, ISSN: 0013-4686, DOI: 10.1016/J.ELECTACTA.2016.04.173

Cited by  
CN114411125A; CN115925423A; WO2024016268A1

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 3825444 A1 20210526**; US 2021156041 A1 20210527

DOCDB simple family (application)  
**EP 20208879 A 20201120**; US 201916691917 A 20191122