

Title (en)

SULFATE BASED, AMMONIUM FREE TRIVALENT CHROMIUM DECORATIVE PLATING PROCESS

Title (de)

VERFAHREN ZUR DEKORATIVEN PLATTIERUNG MIT SULFATBASIERTEM, AMMONIUMFREIEM TRIVALENTEM CHROM

Title (fr)

PROCÉDÉ DE PLACAGE DÉCORATIF DE CHROME TRIVALENT EXEMPT D'AMMONIUM À BASE DE SULFATE

Publication

**EP 3859053 A1 20210804 (EN)**

Application

**EP 20154909 A 20200131**

Priority

EP 20154909 A 20200131

Abstract (en)

The present invention refers to an electroplating bath for electroplating a chromium or chromium alloy layer, the bath comprising trivalent chromium ions, organic carboxylic acid, sulfate ions, sodium conductive ions, and additives in the form of inorganic sulfur compound and boric acid as well as a process using such an electroplating bath.

IPC 8 full level

**C25D 3/06** (2006.01)

CPC (source: EP)

**C25D 3/06** (2013.01)

Citation (applicant)

- JP 2009035806 A 20090219 - OKUNO CHEM IND CO
- JP 2010189673 A 20100902 - OKUNO CHEM IND CO
- WO 2019117178 A1 20190620 - JCU CORP [JP]
- EP 2411567 A1 20120201 - MACDERMID ACUMEN INC [US]

Citation (search report)

- [XDI] WO 2019117178 A1 20190620 - JCU CORP [JP]
- [Y] US 5196109 A 19930323 - SCOTT GEOFFREY [US]
- [Y] JP S61235592 A 19861020 - KIYANINGU MATERIAL LTD W
- [X] US 2019203360 A1 20190704 - PFIRRMANN CHRISTINA [DE], et al
- [A] EP 1845176 A1 20071017 - YAMAHA MOTOR CO LTD [JP]

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)

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