

Title (en)

INDIUM ELECTROPLATING COMPOSITIONS AND METHODS FOR ELECTROPLATING INDIUM ON NICKEL

Title (de)

INDIUM-ELEKTROPLATTIERUNGSZUSAMMENSETZUNGEN UND INDIUM-ELEKTROPLATTIERUNGSVERFAHREN AUF NICKEL

Title (fr)

COMPOSITIONS ET PROCÉDÉS D'ÉLECTRODÉPOSITION D'INDIUM SUR DU NICKEL

Publication

EP 3686319 A1 20200729 (EN)

Application

EP 20153749 A 20200124

Priority

US 201916257132 A 20190125

Abstract (en)

Indium electroplating compositions electroplate substantially defect-free, whisker-free, uniform indium layers which have a smooth surface morphology on nickel. The indium electroplating compositions are environmentally friendly and include select amino acids to provide for the smooth, uniform and defect-free indium deposits.

IPC 8 full level

C25D 3/54 (2006.01); **C25D 3/56** (2006.01); **C25D 5/12** (2006.01); **C25D 5/50** (2006.01)

CPC (source: CN EP KR US)

C25D 3/54 (2013.01 - CN EP KR US); **C25D 3/56** (2013.01 - EP KR US); **C25D 5/12** (2013.01 - EP KR US); **C25D 5/50** (2013.01 - EP); **C25D 5/611** (2020.08 - EP KR US); **C25D 5/627** (2020.08 - EP KR US); **C25D 5/50** (2013.01 - KR)

Citation (search report)

- [A] US 2018298511 A1 20181018 - VAZHENIN GRIGORY [DE], et al
- [A] US 9809892 B1 20171107 - QIN YI [US], et al
- [A] US 2018016689 A1 20180118 - QIN YI [US], et al
- [A] US 1935630 A 19331121 - DANIEL GRAY
- [XAI] T. S. DOBROVOLSKA ET AL: "Electrodeposition of gold-indium alloys", TRANSACTIONS OF THE INSTITUTE OF METAL FINISHING., vol. 93, no. 6, 2 November 2015 (2015-11-02), GB, pages 321 - 325, XP055704843, ISSN: 0020-2967, DOI: 10.1080/00202967.2015.1117260

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 3686319 A1 20200729; CN 111485262 A 20200804; JP 2020117803 A 20200806; KR 20200092882 A 20200804; TW 202028541 A 20200801; US 2020240029 A1 20200730

DOCDB simple family (application)

EP 20153749 A 20200124; CN 202010056803 A 20200117; JP 2020006900 A 20200120; KR 20200007127 A 20200120; TW 109101639 A 20200117; US 201916257132 A 20190125