

Title (en)

METHOD FOR ALUMINUM ELECTROLESS DEPOSITION

Title (de)

VERFAHREN ZUR STROMLOSEN ABSCHIEDUNG VON ALUMINIUM

Title (fr)

PROCÉDÉ DE DÉPÔT AUTOCATALYTIQUE D'ALUMINIUM

Publication

EP 3874075 A2 20210908 (EN)

Application

EP 19880829 A 20191030

Priority

- US 201862752769 P 20181030
- IB 2019001180 W 20191030

Abstract (en)

[origin: WO2020089690A2] A method for electroless deposition of aluminum or an aluminum alloy on a substrate surface is provided. The method includes the operations of activating the surface of the substrate to be coated by applying a coating of a catalyst metal; preparing a mixture of urea (NH₂CONH₂) and anhydrous aluminum chloride (AlCl₃) wherein a molar ratio of AlCl₃: NH₂CONH₂ is greater than 1:1 to obtain a Lewis acid room temperature ionic liquid (RTIL) optionally containing an alloy metal salt; dissolving a hydride reducing agent in an aprotic anhydrous solvent to obtain a hydride solution; mixing the hydride solution and the AlCl₃: NH₂CONH₂ RTIL to obtain an electroless Al solution; exposing the activated surface of the substrate to the electroless Al solution; and removing the electroless Al solution from the substrate surface; wherein upon exposure of the activated substrate surface to the electroless Al solution, an Al or Al alloy coating is obtained on the activated substrate surface.

IPC 8 full level

C23C 18/16 (2006.01)

CPC (source: EP US)

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