Title (en)

DEVICE, SYSTEM AND METHOD FOR USE IN MACHINES FOR ELECTROCHEMICAL PATTERN REPLICATION

Title (de)

VORRICHTUNG, SYSTEM UND VERFAHREN FÜR MASCHINEN FÜR ELEKTROCHEMISCHE STRUKTURREPLIKATION

Title (fr)

DISPOSITIF, SYSTÈME ET PROCÉDÉ DESTINÉS À ÊTRE UTILISÉS DANS DES MACHINES DE RÉPLICATION DE MOTIFS ÉLECTROCHIMIQUES

Publication

EP 2593584 B1 20170419 (EN)

Application

EP 11743802 A 20110713

Priority

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- SE 1050802 A 20100715
- EP 2011061996 W 20110713

Abstract (en)

[origin: WO2012007526A2] A device for electrochemical pattern replication, ECPR, is provided. The device comprises; a base; a bottom chuck on a X-Y-Theta stage, said bottom chuck being configured to hold a master electrode or a substrate; and a Z-stage with an attached top chuck, said top chuck being configured to hold a master electrode when the bottom chuck is configured to hold a substrate or a substrate when the bottom chuck is configured to hold a master electrode; a displacement monitor system for measuring displacement of the master electrode relative the substrate, wherein said displacement monitor system comprises a position sensor and a reference frame, wherein the position sensor measures a distance to the reference frame. A method for electrochemical pattern replication method, ECPR, is also provided. The method comprises the steps of utilizing a master electrode and a substrate, said method comprising the steps of measuring x-, y-, and theta values of the master electrode, when the master electrode and the substrate are separated in a top position; measuring x-, y-, and theta values of the master electrode, when the master electrode and the substrate are adjacent in a bottom position; calculating a delta value, which is the difference in measured x-, y-, and theta values; comparing the delta value to a reference value; and adjusting the position of the master electrode in relation to the substrate to minimize the delta value. A device for providing electricity to a substrate arranged on a chuck during electrochemical pattern replication, ECPR, is also provided. The device comprises a contact module for mounting on the chuck on all sides of the substrate so that electrical contact is possible along the whole perimeter of a substrate.

IPC 8 full level

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CPC (source: EP)

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