

Title (en)
APPARATUS FOR THE VAPOUR DEPOSITION OF A SUBSTANCE ON A SUBSTRATE

Title (de)
EINRICHTUNG ZUM DAMPFABSCHEIDEN EINES STOFFES AUF EINEM SUBSTRAT

Title (fr)
APPAREIL DE DÉPÔT EN PHASE VAPEUR D'UNE SUBSTANCE SUR UN SUBSTRAT

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Application
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Abstract (en)
[origin: WO2021223844A1] The invention relates to an apparatus (1) for the vapour deposition of a substance on a substrate, comprising: a reactor (2) with at least one evaporator (15) for the evaporation of pulverulent precursor substance particles, a vacuum pump connection for connecting a vacuum pump, and a substrate carrier (4); a carrier-gas line (14) that is connected to the evaporator (15) and is fed by a carrier-gas supply; and a dosing device (5) for feeding pulverulent precursor substance particles into the carrier-gas line (14), which dosing device (5) comprises a supply container (6) that has an outlet (8) and is intended for supplying the pulverulent precursor substance intended to be fed to the reactor (2), and a screw conveyor (12) that is located below the outlet (8) in a conveying channel (11) and has a conveying direction transverse to the outlet direction of the supply container (6) in order to convey the pulverulent substance from the outlet (8) of the supply container (6) to an opening (20) into the carrier-gas line (14). At least part of the surfaces of the parts (6), (23); (11), (12) that are moved so as to rub against one another in the dosing device (5) in order to convey the pulverulent precursor substance is produced from a material which has a higher sublimation point in relation to the pulverulent precursor substance. A preparation stage (32) for removing at least a proportion of the solid particles contained in the carrier-gas stream carrying the sublimated substance is arranged downstream of the evaporator (15) in the direction of flow of the carrier gas. The invention further relates to a method for providing an evaporated substance as a precursor for a vapour deposition process.

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