

Title (en)

METHOD OF PRODUCING THIN, POORLY SOLUBLE COATINGS

Title (de)

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Title (fr)

PROCEDE DE REALISATION DE REVETEMENTS MINCES ET DIFFICILEMENT SOLUBLES

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Application

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Abstract (en)

[origin: DE19916403C1] Stable surface coatings can be produced by sputtering, evaporation coating, bath deposition or metal-organic chemical vapor deposition (MOCVD). With these methods it is not always possible to obtain homogeneous coatings which also reach internal surfaces. For the production of ceramic or oxidic layers (CL/OL) on substrates (S) the invention therefore provides that after application (I) and drying (II) of a suitable starting substance (P) the resulting starting-substance layer (PLD) is exposed (III) to a wet reactant gas (RG) to transform said layer into a corresponding hydroxide or complex layer (HL) and then heat treated (IV) for the formation of a ceramic or oxidic layer (CL/OL). For the alternative preparation of other chalcogenide layers presenting greater material conversion the layers are in addition exposed to a reactant gas containing a chalcogen hydrogen. Metallic layers can alternatively be produced using a reactant gas with reducing action. The methods provided for in the invention can be used in any application concerned with the protection and modification of surfaces, including shadow-cast structures, and the application of functional layers, notably in solar and materials technology.

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