

Title (en)

METHOD FOR STRUCTURING A SURFACE BY MEANS OF ION-BEAM ETCHING

Title (de)

VERFAHREN ZUR STRUKTURIERUNG EINER OBERFLÄCHE MITTELS IONENSTRAHLENÄTZUNG

Title (fr)

PROCEDE DE STRUCTURATION DE SURFACE PAR ABRASION IONIQUE

Publication

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Application

**EP 10799099 A 20101124**

Priority

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Abstract (en)

[origin: WO2011067511A1] The invention relates to a method for structuring a surface, in other words, for forming at least one set of irregularities or patterns (2) having a submicronic height H and at least one characteristic lateral dimension W referred to as the micronic or submicronic width, on a surface of a material (1), in particular a glass, by means of ion-beam etching using an optionally neutralised ion beam, characterised in that said method comprises the following steps: providing said material with a thickness of at least 100 nm, the material being hybrid and solid and including a single or mixed oxide of element(s), the molar percentage of oxide in the material being at least 40%, in particular 40% to 94%, and at least one species, separate from the oxide element(s), in particular a metal, the molar percentage of species in the material ranging from 6% to 50% and being lower than the percentage of said oxide, with at least the majority of the species having a largest characteristic dimension smaller than 50 nm, said hybrid material in particular being metastable prior to said etching; optionally heating said hybrid material prior to said etching; and structuring the surface of said hybrid material with an etching time of less than one hour on an etching surface of more than 1 cm<sup>2</sup> until said set of patterns is formed, the structuring step optionally including heating the hybrid material.

IPC 8 full level

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