

ABSTRACT

Method for structuring a decorative or technical pattern in an
object made of an at least partially transparent amorphous,
5 semi-crystalline or crystalline material

The invention relates to a method for structuring a decorative or technical pattern (22, 60) in the thickness of an object made of an at least partially transparent amorphous, semi-crystalline or crystalline material, the
10 object made of an at least partially transparent material comprising a top surface (18a) and a bottom surface (18b) which extends away from the top surface (18a), the method comprising the step consisting of providing at least one of the top (18a) or bottom (18b) surfaces of the object made of an at least partially transparent material with a mask (24) which defines at least one
15 opening (25) whose outline corresponds to the profile of the decorative or technical pattern (22, 60) to be structured, the mask (24) covering the at least one top (18a) or bottom (18b) surface of the object made of an at least partially transparent material at the positions which are not to be structured, the method also comprising the step which consists of structuring the
20 decorative or technical pattern (22, 60) by means of a mono- or multicharged ion beam (14) through the at least one opening (25) of the mask (24), the mechanical properties of the mask (24) being sufficient to prevent the ions of the ion beam (14) from etching the at least one top (18a) or bottom (18b) surface of the object made of an at least partially transparent material at the
25 positions where this top (18a) or bottom (18b) surface is covered by the mask (24).

Figures 2A, 2B