

ABSTRACT

ION BEAM TREATMENT METHOD FOR PRODUCING SUPERHYDROPHILIC GLASS MATERIALS

5

Process for treatment by an ion beam of a glass material
where:

- 10 - the acceleration voltage of the ions is between 5 kV and 1000 kV;
 - the temperature of the glass material is less than or equal to the glass transition temperature;
 - the dose of nitrogen (N) or oxygen (O) ions per unit of surface area is chosen within a range of between 10^{12} 15 ions/cm² and 10^{18} ions/cm² so as to reduce the contact angle of a drop of water below 20°;
 - a prior pretreatment is carried out with argon (Ar), krypton (Kr) or xenon (Xe) ions in order to strengthen the durability of the superhydrophilic treatment.
- 20 Superhydrophilic glass materials of long duration are thus advantageously obtained.

Figure 1