METHOD FOR REDUCING ROUGHNESS OF A THICK INSULATOR LAYER

ABSTRACT

The invention concerns a method for making a substrate adapted to be used in the field of electronics, optoelectronics and optics, characterized in that it includes at least the following successive steps: a) depositing on a donor substrate (1) an insulating layer (2) whereof the thickness is not less than 20 nm and whereof the roughness is not less than 3 angstroms RMS, for a sweep of 2 µm x 2 µm; b) smoothing treatment (SP) of the free surface (20) of said insulating layer (2), using a gas plasma, formed in a chamber under gas pressure higher than 0.25 Pa, said plasma being generated by means of a radio frequency RF generator, which enables said insulating layer (2) to be imparted with a power density higher than 0.6 W/cm^2, the duration of said smoothing treatment being not less than 10 seconds; c) forming a weakened zone (10) by implanting atomic species, inside said donor substrate (1), to delimit therein a so-called 'active' layer (11) and a residue (12).

FIG. 1C