

ABSTRACT**METHOD OF ANTIREFLECTION AND SCRATCH-RESISTANT TREATMENT IN A
SYNTHETIC SAPPHIRE**

Method of antireflection and scratch-resistant treatment of a synthetic sapphire material where:

- the acceleration voltage of the ions is between 5 kV and 1000 kV and is chosen in order to create an implanted layer having a thickness equal to a multiple of 100 nm;
- the microwave-induced annealing temperatures in the implanted surface are between 800°C and 2000°C with annealing times of between 1 and 1000 seconds.

Synthetic sapphire materials are thus advantageously obtained where the reflection on the treated face is reduced by at least half while maintaining a hardness of greater than or equal to 8.

Figure 1.b