

PIEZOELECTRIC-ON-INSULATOR (POI) SUBSTRATE AND METHOD FOR PRODUCING A PIEZOELECTRIC-ON-INSULATOR (POI) SUBSTRATE

Abstract

The invention discloses a piezoelectric-on-insulator (POI) substrate comprising: a carrier substrate (102), in particular a substrate based on silicon; a piezoelectric layer (108), in particular a layer of lithium tantalate (LTO) or of lithium niobate (LNO); a dielectric layer (106), in particular a layer of silicon oxide, sandwiched between the piezoelectric layer (108) and the substrate (102); a trapping structure (104) sandwiched between the dielectric layer (106) and the carrier substrate (102). The POI substrate is characterised in that the trapping structure (104) comprises at least two trapping layers (104a, 104c), which layers are separated each time by a dielectric intermediate layer (104b). The invention also discloses a method for producing a piezoelectric-on-insulator (POI) substrate.

[Fig. 1]