

Title (en)

METHOD FOR THE PRODUCTION OF A SINGLE-CRYSTAL FILM, IN PARTICULAR PIEZOELECTRIC

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER EINKRISTALLSCHICHT, INSBESONDERE EINER PIEZOELEKTRISCHEN SCHICHT

Title (fr)

PROCEDE DE FABRICATION D'UNE COUCHE MONOCRISTALLINE, NOTAMMENT PIEZOELECTRIQUE

Publication

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Application

**EP 16819558 A 20161221**

Priority

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Abstract (en)

[origin: WO2017108994A1] The invention relates to a method for the production of a single-crystal film (10), characterised in that it comprises the following successive steps: the provision of a donor substrate (100) comprising a piezoelectric material of composition ABO<sub>3</sub>, wherein A consists of at least one element from among Li, Na, K, H, Ca, and B consists of at least one element from among Nb, Ta, Sb, V; the provision of a receiver substrate (110); the transfer of a so-called "seed layer" from the donor substrate (100) to the receiver substrate (110), by means of bonding the donor substrate to the receiver substrate such that the seed layer (102) is located at the bonding interface, and the subsequent thinning of the donor substrate (100) as far as the seed layer (102); the epitaxial growth of a single-crystal film (103) on the piezoelectric material ABO<sub>3</sub> of the seed layer (102), said film having composition A'B'O<sub>3</sub>, wherein: A' consists of at least one element from among Li, Na, K, H; B' consists of at least one element from among Nb, Ta, Sb, V; and A' is different from A or B' is different from B.

IPC 8 full level

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