

Title (en)
METHOD OF A DONOR SUBSTRATE UNDERGOING RECLAMATION

Title (de)
VERFAHREN ZUR RÜCKGEWINNUNG EINES DONORSUBSTRATS

Title (fr)
PROCÉDÉ D'UN SUBSTRAT DONNEUR SOUMIS À UNE RÉCUPÉRATION

Publication
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Application
EP 17755560 A 20170712

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Abstract (en)
[origin: CN109478493A] A donor substrate (502; 602; 702) in a layer transfer process, is stabilized by attaching a backing substrate (504; 604; 703). The backing substrate (504; 604; 703) allows thermal and mechanical stabilization during high-power implant processes. Upon cleaving the donor substrate (502; 602; 702) to release a thin layer of material to a target substrate (510), the backing substrate (504; 604; 703) prevents uncontrolled release of internal stress leading to buckling/fracture of the donor substrate (502; 602; 702). The internal stress may accumulate in the donor substrate (502; 602; 702) due to processes such as cleave region (506; 704) formation, bonding to the target substrate (510), and/or the cleaving process itself, with uncontrolled bow and warp potentially precluding reclamation/reuse of the donor substrate (502; 602; 702) in subsequent layer transfer processes. In certain embodiments the backing substrate (504; 604; 703) may exhibit a Coefficient of Thermal Expansion (CTE) substantially matching, or complementary to, that of the donor substrate (502; 602; 702). In some embodiments the backing substrate (504; 604; 703) may include a feature such as a lip (606).

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Citation (search report)
See references of WO 2018011731A1

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