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(54) Title: METHOD FOR THE TRANSFER OF THIN LAYERS OF MONOCRYSTALLINE MATERIAL ONTO A DESIRABLE SUBSTRATE

(57) Abstract

A method for transferring of monocrystalline, thin layers from a first monocrystalline substrate onto a second substrate, with a reduced requirement with respect to the hydrogen dose needed for layer splitting is realized by co-implantation of hydrogen-trap inducing ions with hydrogen ions, by the high temperature implantation of hydrogen, and by their combination, followed by a heat-treatment to weaken the connection between the implanted layer and the rest of the first substrate, then forming a strong bond between the implanted first substrate and the second substrate and finally using another heat-treatment in order to split the monocrystalline thin layer from the rest of the first substrate by the formation, and growth of hydrogen filled microcracks.

