

Title (en)

METHOD AND APPARATUS FOR THERMAL PROCESSING STRUCTURES FORMED ON A SUBSTRATE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR THERMISCHEN VERARBEITUNG VON AUF EINEM SUBSTRAT GEBILDETEN STRUKTUREN

Title (fr)

PROCÉDÉ ET APPAREIL PERMETTANT D'EFFECTUER UN TRAITEMENT THERMIQUE DE STRUCTURES FORMÉES SUR UN SUBSTRAT

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Application

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Abstract (en)

[origin: WO2007103643A2] The present invention generally describes one or more apparatuses and various methods that are used to perform an annealing process on desired regions of a substrate. In one embodiment, an amount of energy is delivered to the surface of the substrate to preferentially melt certain desired regions of the substrate to remove unwanted damage created from prior processing steps, more evenly distribute dopants in various regions of the substrate, and/or activate various regions of the substrate. The preferential melting processes will allow more uniform distribution of the dopants in the melted region, due to the increased diffusion rate and solubility of the dopant atoms in the molten region of the substrate. The creation of a melted region thus allows: 1) the dopant atoms to redistribute more uniformly, 2) defects created in prior processing steps to be removed, and 3) regions that have hyper-abrupt dopant concentrations to be formed.

IPC 8 full level

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