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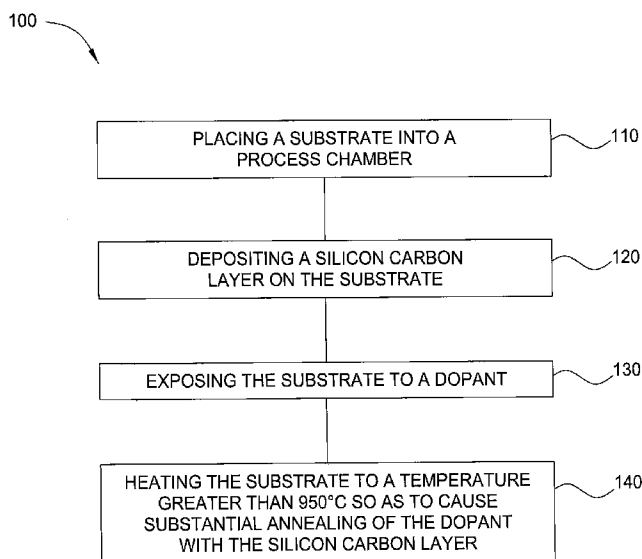
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(54) Title: A METHOD OF ULTRA-SHALLOW JUNCTION FORMATION USING SI FILM ALLOYED WITH CARBON



(57) Abstract: A method for forming an ultra shallow junction on a substrate is provided. In certain embodiments a method of forming an ultra shallow junction on a substrate is provided. The substrate is placed into a process chamber. A silicon carbon layer is deposited on the substrate. The silicon carbon layer is exposed to a dopant. The substrate is heated to a temperature greater than 950°C so as to cause substantial annealing of the dopant within the silicon carbon layer. In certain embodiments the substrate is heated to a temperature between about 1000°C and about 1100°. In certain embodiments the substrate is heated to a temperature between about 1030°C and 1050°C. In certain embodiments, a structure having an abrupt p-n junction is provided.

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