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(54) Title: BACKSIDE SEALING OF A SEMICONDUCTOR SUBSTRATE

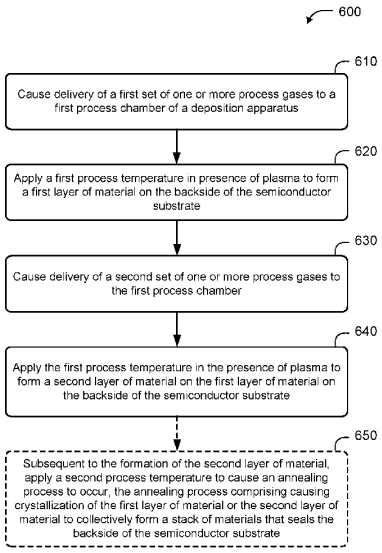


FIG. 6

(57) Abstract: Methods and apparatus for backside sealing of a semiconductor substrate are provided. In some embodiments, such techniques may include: causing delivery of a first set of one or more process gases to a first process chamber of a deposition apparatus, the first process chamber having a semiconductor substrate disposed therein; applying a first process temperature in presence of plasma to form a first layer of material on the backside of the semiconductor substrate; causing delivery of a second set of one or more process gases to the first process chamber; and applying the first process temperature in the presence of plasma to form a second layer of material on the first layer of material on the backside of the semiconductor substrate to collectively form a stack of materials that seals the backside of the semiconductor substrate and mitigates diffusion of dopants from the semiconductor substrate.

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