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(54) Title: METHODS FOR FABRICATING THIN FILM III-V COMPOUND SOLAR CELL

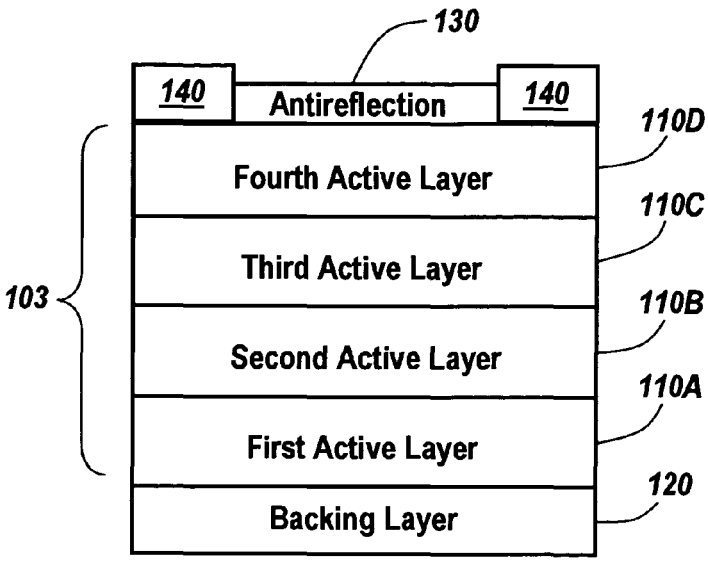


Fig. 8A

(57) Abstract: The present invention utilizes epitaxial lift-off in which a sacrificial layer is included in the epitaxial growth between the substrate and a thin film III-V compound solar cell. To provide support for the thin film III-V compound solar cell in absence of the substrate, a backing layer is applied to a surface of the thin film III-V compound solar cell before it is separated from the substrate. To separate the thin film III-V compound solar cell from the substrate, the sacrificial layer is removed as part of the epitaxial lift-off. Once the substrate is separated from the thin film III-V compound solar cell, the substrate may then be reused in the formation of another thin film III-V compound solar cell.

WO 2009/005825 A8

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