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(54) **METHOD AND SYSTEM FOR FABRICATING  
FIDUCIALS FOR PROCESSING OF  
SEMICONDUCTOR DEVICES**

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(57) **ABSTRACT**

A method of forming alignment marks, each alignment mark including a plurality of fiducials, includes providing a III-V compound substrate having a device region and an alignment mark region. The method also includes forming a first hardmask in the device region and a hardmask structure in the alignment mark region, etching a first surface portion of the III-V compound substrate to form a plurality of trenches in the device region, and epitaxially regrowing a semiconductor layer in the trenches. The method further includes forming a second mask in the device region and a patterned structure in the alignment mark region. The patterned structure includes a set of masked regions corresponding to the plurality of fiducials and a second set of openings. The method also includes forming the plurality of fiducials.

