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(54) **Title**: METHODS OF SELF-ALIGNED GROWTH OF CHALCOGENIDE MEMORY ACCESS DEVICE

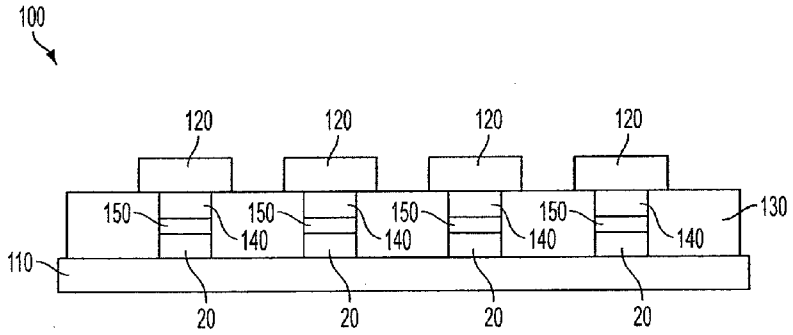


FIG. 2A

(57) **Abstract**: Self-aligning fabrication methods for forming memory access devices comprising a doped chalcogenide material. The methods may be used for forming three-dimensionally stacked cross point memory arrays. The method includes forming an insulating material over a first conductive electrode, patterning the insulating material to form vias that expose portions of the first conductive electrode, forming a memory access device within the vias of the insulating material and forming a memory element over the memory access device, wherein data stored in the memory element is accessible via the memory access device. The memory access device is formed of a doped chalcogenide material and formed using a self-aligned fabrication method.

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