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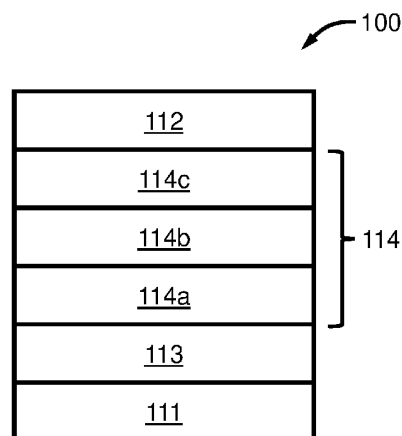


FIG. 1

(57) Abstract: Provided is an electrically actuated resistive non-volatile memory. The resistive memory device comprises a first electrode, a second electrode, a buffer layer, and a primary memory layer. The primary memory layer comprises a first active layer, a second active layer, and a third active layer, wherein an oxygen gradient is configured across the primary memory layer. Methods of fabricating and operating such a memory device are also provided. The memory device advantageously provides for lower power consumption and more stable resistive switching.

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