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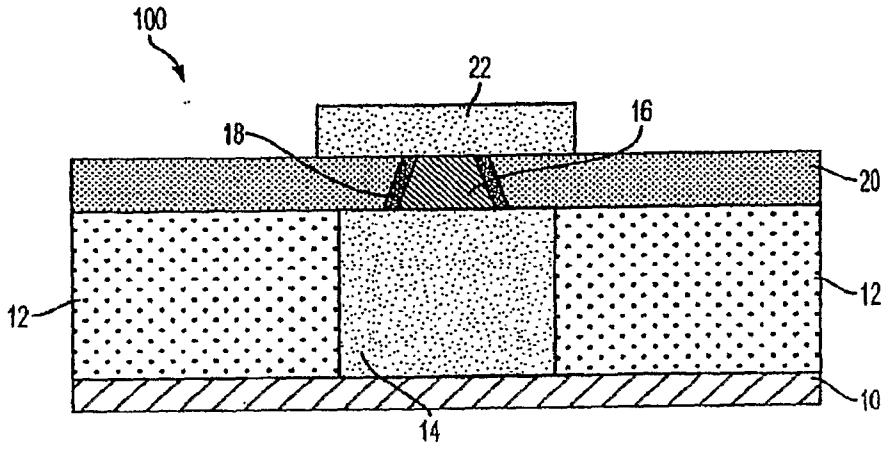
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(54) Title: PHASE CHANGE MEMORY ELEMENTS USING SELF- ALIGNED PHASE CHANGE MATERIAL LAYERS AND METHODS OF MAKING AND USING SAME



(57) Abstract: A phase change memory element and method of forming the same. The memory element includes a substrate supporting a first electrode. An insulating material element is positioned over the first electrode, and a phase change material layer is formed over the first electrode and surrounding the insulating material element such that the phase change material layer has a lower surface that is in electrical communication with the first electrode. The memory element also has a second electrode in electrical communication with an upper surface of the phase change material layer.

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