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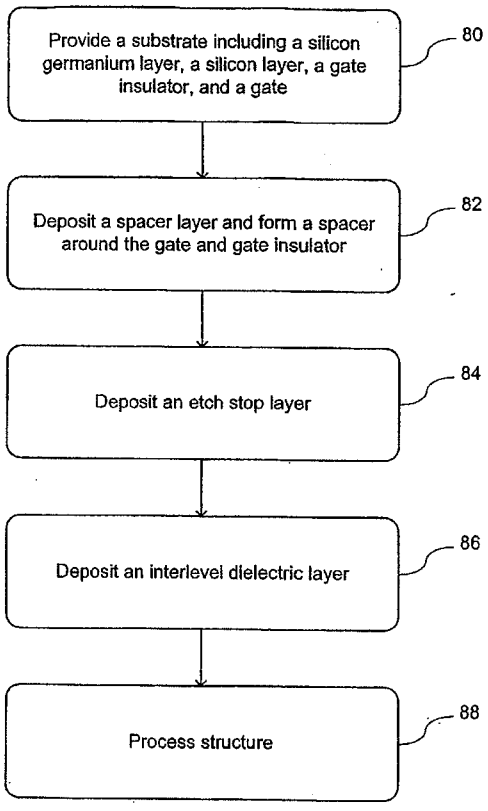
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[Continued on next page]

(54) Title: MOSFET DEVICE WITH TENSILE STRAINED SUBSTRATE AND METHOD OF MAKING THE SAME



(57) Abstract: An exemplary embodiment relates to a method for forming a metal oxide semiconductor field effect transistor (MOSFET). The method includes providing a substrate (40) having a gate (54) formed above the substrate (40) and performing at least one of the following depositing steps: depositing a spacer layer and forming a spacer (60) around a gate (54) and gate insulator (56) located above a layer of silicon (42) above the substrate (40); depositing an etch stop layer (63) above the spacer (60), the gate (54), and the layer of silicon (42); and depositing a dielectric layer (65) above the etch stop layer (63). At least one of the depositing a spacer layer, depositing an etch stop layer (63), and depositing a dielectric layer (65) comprises high compression deposition which increases in tensile strain in the layer of silicon (42).

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