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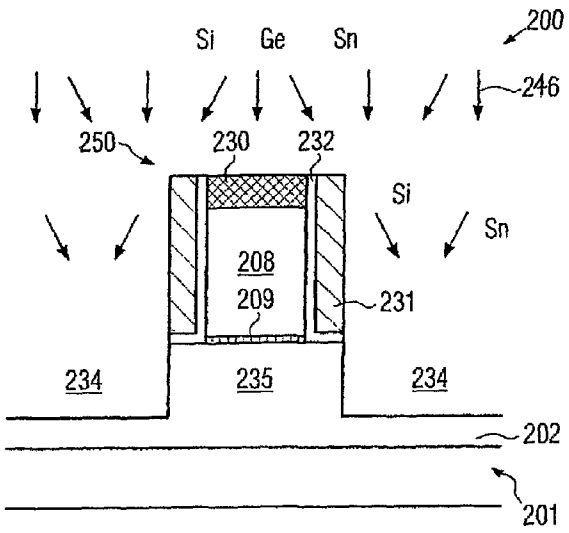
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(54) **Title:** TECHNIQUE FOR STRAIN ENGINEERING IN SI-BASED TRANSISTORS BY USING EMBEDDED SEMICONDUCTOR LAYERS INCLUDING ATOMS WITH HIGH COVALENT RADIUS



(57) **Abstract:** By incorporating an atomic species of increased covalent radius, which may at least partially substitute germanium, a highly efficient strain mechanism may be provided, in which the risk of stress relief due to germanium conglomeration and lattice defects may be reduced. The atomic species of increased radius, such as tin, may be readily incorporated by epitaxial growth techniques on the basis of tin hydride.

WO 2007/053381 A1