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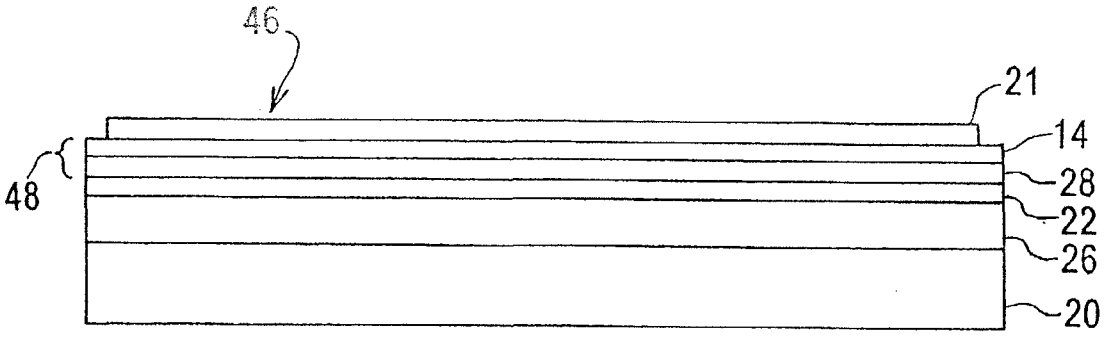
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(54) Title: SEMICONDUCTOR DEVICE WITH TENSILE STRAIN SILICON INTRODUCED BY COMPRESSIVE MATERIAL IN A BURIED OXIDE LAYER



(57) Abstract: A semiconductor device is provided with the high-speed capabilities of silicon on insulator (SOI) and strained silicon technologies, without requiring the formation of a silicon germanium layer. A layer of compressive material (22) is formed on a SOI semiconductor substrate (20) to induce strain in the overlying silicon layer (21). The compressive materials include silicon oxynitride, phosphorus, silicon nitride, and boron/phosphorus doped silica glass.

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