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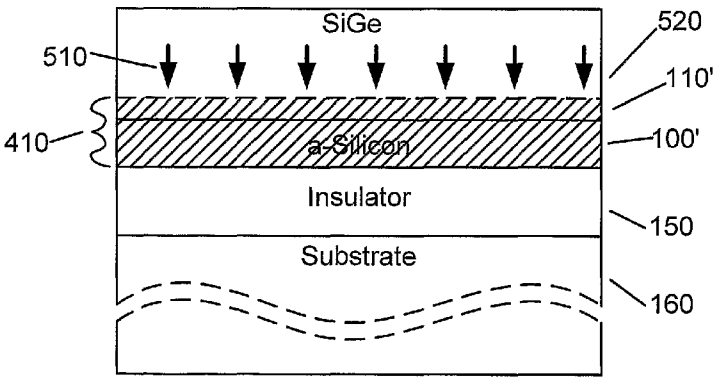
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(54) Title: STRAINED SILICON-ON-INSULATOR (SSOI) AND METHOD TO FORM THE SAME



(57) Abstract: A method for fabricating a strained Si based layer, devices manufactured in this layer, and electronic systems comprising such layers and devices are disclosed. The method comprises the steps of growing epitaxially a SiGe layer on a substrate, and creating a varying Ge concentration in this SiGe layer. The Ge concentration in the SiGe layer includes a unique Ge overshoot zone, where the Ge concentration is abruptly and significantly increased. The Si based layer is epitaxially deposited onto the SiGe layer, whereby is becomes tensilely strained. It is also disclosed that the strained Si based layer, typically Si or SiGe, can be transferred to a different bulk substrate, or to an insulator.

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