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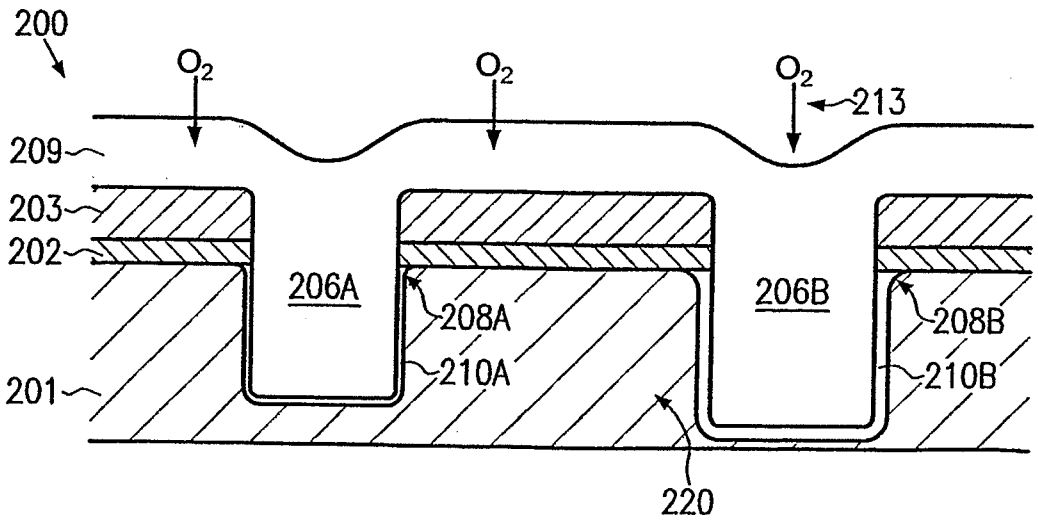
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(54) Title: TRENCH ISOLATION STRUCTURE FOR A SEMICONDUCTOR DEVICE WITH A DIFFERENT DEGREE OF CORNER ROUNDING AND A METHOD OF MANUFACTURING THE SAME



(57) Abstract: In a trench isolation structure of a semiconductor device, oxide liners are formed within the trenches 206A, 206B, wherein a non-oxidizable mask 221 is employed during various oxidation steps, thereby creating different types of liner oxides and thus different types of corner rounding and thus mechanical stress. Therefore, for a specified type of circuit elements, the characteristics of the corresponding isolation trenches may be tailored to achieve an optimum device performance.

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