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(72) Inventors: **HÄCKL, Walter**; Fasanenstr. 7, 84558 Kirchweidach (DE). **CHOU, Ta-shun**; Streitstr. 23, 13587 Berlin (DE). **POPP, Andreas**; August-B.-Allee 7, 15732 Eichwalde (DE).

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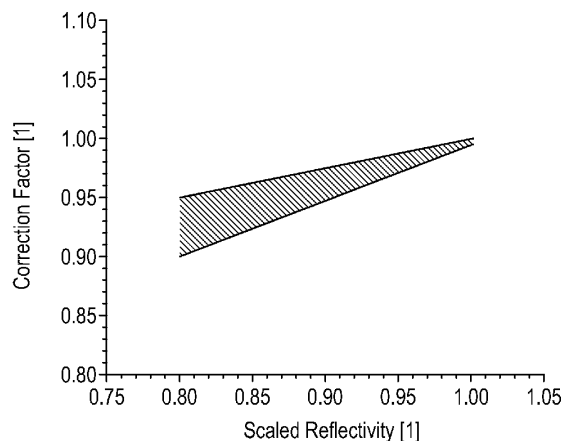
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(71) Applicant: **SILTRONIC AG** [DE/DE]; Einsteinstr. 172
Tower B / Blue Tower, 81677 München (DE).

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(54) Title: METHOD FOR PRODUCING A GALLIUM OXIDE LAYER ON A SUBSTRATE

Fig. 4



(57) Abstract: A method of growing a β -Ga₂O₃ layer on a substrate, comprising the following steps: (1) providing a substrate, (2) performing a first deposition cycle at a first growth rate using Oxygen and a precursor comprising Ga and the first deposition cycle having a thickness of at least 3 atomic layers of β -Ga₂O₃ and at most 20 atomic layers of β -Ga₂O₃, wherein a regression curve for a layer surface reflectivity is determined using a plurality of tuples of a measured first layer surface reflectivity and a corresponding first layer thickness, and (3) a second deposition cycle including a measurement of a second layer thickness and a second layer surface reflectivity, with a predetermined second growth rate determined from the first growth rate multiplied by a correction factor F, where the correction factor F is greater than a lower limit L₁ which is calculated as L₁ = 0.995 -

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$R_{ef} \times 0.475$ and smaller than an upper limit L_u which is calculated as $L_u = 1 - R_{ef} \times 0.25$, where R_{ef} represents a dimensionless layer surface reflectivity index calculated from the quotient of the measured second layer surface reflectivity and the extrapolated layer surface reflectivity from the regression curve evaluated at the second layer thickness.