

Title (en)
QUANTUM COMPONENT

Title (de)
QUANTENBAUELEMENT

Title (fr)
COMPOSANT QUANTIQUE

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Application
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Abstract (en)
[origin: WO2022195206A1] The invention relates to a quantum component comprising: • a substrate (6); • two suspension electrodes (4); • a plurality of gate electrodes (1, 2, 3) arranged between the two suspension electrodes, the two suspension electrodes being raised relative to the gate electrodes; • at least one nano-object element (8), in particular a nanowire or a nanotube, suspended between the two suspension electrodes, the at least one nano-object element being placed above the gate electrodes, the electrodes of the quantum component comprising: • a plurality of low frequency gate electrodes (1, 2) for defining electrostatic potentials in the nano-object element so as to enable at least two quantum dots to be formed in the nano-object element; • at least one microwave gate electrode (3); • wherein the distance, referred to as the microwave distance, vertically separating the at least one microwave gate electrode (3) from the at least one nano-object element (8) differs from the distance, referred to as the low-frequency distance, vertically separating the at least one low-frequency gate electrode (1, 2) from the at least one nano-object element (8).

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