

Title (en)

METHOD AND DETECTOR FOR MICROSCOPIC MEASUREMENT BY MEANS OF A COLOUR CENTER

Title (de)

VERFAHREN UND DETEKTOR ZUR MIKROSKOPISCHEN MESSUNG MITTELS EINES FARBZENTRUMS

Title (fr)

PROCÉDÉ ET DÉTECTEUR DE MESURE MICROSCOPIQUE AU MOYEN D'UN CENTRE COLORÉ

Publication

**EP 3472601 A1 20190424 (EN)**

Application

**EP 17732260 A 20170615**

Priority

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- NL 2017050395 W 20170615

Abstract (en)

[origin: WO2017217847A1] A method and detector for microscopic measurement using an electron beam (e) and a colour center (NV). At the start of a measurement, the electron beam may be directed to coincide with the colour center for controlling an initial state (s0) of its electron-spin (ms). The electron beam may also be directed to a proximal distance (D) away from the colour center and used for generating a magnetic field (B) that influences a progression (P) of the electron-spin of the colour center from its initial state to a progressed state (sp). At the end of the measurement the electron beam may be directed back to coincide with the colour center and populate an electronic excited state (E) in the colour center. Luminescence caused by radiative decay of the electronic excited state can be measured to determine a corresponding electron spin.

IPC 8 full level

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