

Abstract

The present invention relates to a method by means of which defects in materials, preferably in solid bodies (18), can be localized with considerably higher spatial resolution than before. With the
5 present invention, such defects can be quickly and economically imaged with high spatial resolution. Above all, with the present invention it is possible to contactlessly spin-selectively excite and capture or image defects in the solid body with high sensitivity, high dynamic range, large field of view and excellent resolution, which far exceeds the present capabilities of optical detection processes. Furthermore, with the process according to the invention there is an excellent possibility for
10 detecting spin even in individual images, wherein high contrast of the spin states and better fidelity of reproduction of the spin states are made possible. The device (10) according to the invention and the process according to the invention are also extremely useful for quantum calculation using defect spins in solid bodies (18), for quantum-capable capturing and for quantum-capable measurement networks.

(Fig. 1)