Title (en)

MEMS ACTUATION DEVICE AND METHOD

Title (de)

MEMS-BETÄTIGUNGSVORRICHTUNG UND VERFAHREN

Title (fr)

DISPOSITIF ET PROCÉDÉ D'ACTIONNEMENT DE MEMS

Publication

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Application

EP 20729722 A 20200529

Priority

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Abstract (en)

[origin: WO2021239243A1] An actuation device (100) is disclosed, comprising a support structure (110) and a flexible cantilever beam (101) extending from a first end (101a) fixed to the support structure (110) to a second free end (101b). The flexible cantilever beam (101) comprises a first piezoelectrical portion facing the first fixed end (101a) of the cantilever beam (101) and a second piezoelectrical portion facing the second free end (101b) of the cantilever beam (101). Moreover, the cantilever beam (101) comprises a plurality of electrodes configured to apply a first electrical field to the first piezoelectrical portion and a second electrical field to the second piezoelectrical portion such that, when applying the first electrical field to the first piezoelectrical portion and the second electrical field to the second piezoelectrical portion, the first electrical field forces the first piezoelectrical portion to bend in a first lateral direction (A) and the second electrical field forces the second piezoelectrical portion to bend in a second lateral direction (B) different from the first lateral direction (A), thereby causing lateral movement of the second free end (101b) of the cantilever beam (101). Moreover, a corresponding actuation method is disclosed. Advantageously, the actuation device (100) provides for an improved bending behaviour at the second free end (101b) of the cantilever beam (101).

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