

Title (en)

APPARATUS FOR SWITCHING AND MANIPULATING PARTICLES AND METHOD OF USE THEREOF

Title (de)

APPARAT ZUR UMSCHALTEN UND BEHANDLEN VON TEILCHEN UND BENUTZUNGSVERFAHREN DIESES APPARATES

Title (fr)

APPAREIL DE COMMUTATION ET MANIPULATION DE PARTICULES ET SON PROCÉDÉ D'UTILISATION

Publication

**EP 1320922 A2 20030625 (EN)**

Application

**EP 01979923 A 20010924**

Priority

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- US 0142426 W 20010924
- US 67826300 A 20001003

Abstract (en)

[origin: WO0227909A2] A device (103, 106, 112, 113, 110, 152, 158, 168, 170A, 170B, 170C, 182, 184, 250, 295) acts as a particle switch to transport and/or re-direct microparticles which are in a fluid suspension. The switch (103, 107, 112, 113, 110, 152, 158, 168, 170A, 170B, 170C, 182, 184, 250, 295) comprises at least three structural branches (e.g., 103a/103b/103c, 107a/107b/107c/107d, 110a/110b/110c, 110d/110e/110f, 110g/110h/110i, 152a/152b/152c, etc.); and the branches may be connected at a common junction (103, 107, 150, 158, 258). Particles (160, 164) can be transported along the branches as a result of the forces generated along that branch. Particles are transported into or out of the particle switch via the ends (e.g., 105a, 105b, 105c, 108a, 108b, 108c) of the branches. Particles can be switched from one branch into one of the other branches. Depending on the properties of the particles, the transportation mechanism may be traveling-wave-dielectrophoresis or traveling-wave-electrophoresis.

IPC 1-7

**H02N 11/00**; **B03C 5/02**

IPC 8 full level

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