

Title (en)  
DEVICE AND METHOD FOR SEPARATING MATERIALS

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR TRENNUNG VON MATERIALIEN

Title (fr)  
DISPOSITIF ET PROCÉDÉ DE SÉPARATION DE MATÉRIAUX

Publication  
**EP 3409372 A1 20181205 (EN)**

Application  
**EP 17174187 A 20170602**

Priority  
EP 17174187 A 20170602

Abstract (en)  
According to an example aspect of the present invention, there is provided a device (1) for separating materials in the form of particles and/or drops from a gas flow, especially particles and/or drops the diameter of which varies from one nanometer to a few dozen nanometers, the device comprising an inlet (2) for incoming air (3) to be purified, a collection chamber (4), an outlet (6) for the purified air (7), a voltage source (8) with actuators, an fastening column (9) to which ion yield tips (10) have been coupled, the device (1) is configured to direct high tension to the ion yield tips (10) providing ion beams (11) from the ion yield tips (10) to the collection surface (12), the collection surface (12) conducting electricity is electrically insulated from the outer wall (5) of the collection chamber (4) by an electrical insulation, and the device (1) is configured to direct voltage of opposite sign to the ion yield tips (10) than the voltage directed to the collection surface (12), wherein ion yield tips (10) are arranged directly on a surface (13) of the fastening column (9) having a length (L col ), wherein the ion yield tips (10) protrude from the surface (13) of the fastening column (9) into a cavity (14) of the collection chamber (4).

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CPC (source: EP)  
**B03C 3/41** (2013.01); **B03C 3/49** (2013.01); **B03C 2201/10** (2013.01)

Citation (applicant)  
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