

(12) **United States Patent**
Bateman et al.

(10) **Patent No.:** **US 9,410,927 B2**
(45) **Date of Patent:** ***Aug. 9, 2016**

(54) **MASS SPECTROMETER**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/725,451**

(22) Filed: **May 29, 2015**

(65) **Prior Publication Data**

US 2015/0260683 A1 Sep. 17, 2015

Related U.S. Application Data

(63) Continuation of application No. 14/256,301, filed on Apr. 18, 2014, now Pat. No. 9,048,073, which is a

(Continued)

(30) **Foreign Application Priority Data**

Nov. 4, 2004 (GB) 0424426.5

(51) **Int. Cl.**

G01N 27/62 (2006.01)

H01J 49/00 (2006.01)

(Continued)

(52) **U.S. Cl.**

CPC **G01N 27/622** (2013.01); **H01J 49/004** (2013.01); **H01J 49/0027** (2013.01);

(Continued)

(58) **Field of Classification Search**

CPC H01J 49/065; H01J 49/066; H01J 49/062
See application file for complete search history.

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(57) **ABSTRACT**

A mass spectrometer is disclosed comprising an ion mobility spectrometer or separator and an ion guide arranged downstream of the ion mobility spectrometer or separator. A plurality of axial potential wells are created in the ion guide so that ions received from the ion mobility spectrometer or separator become confined in separate axial potential wells. The potential wells maintain the fidelity and/or composition of ions received from the ion mobility spectrometer or separator. The potential wells are translated along the length of the ion guide.

21 Claims, 17 Drawing Sheets

