

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
15 May 2025 (15.05.2025)



(10) International Publication Number  
**WO 2025/099435 A1**

(51) International Patent Classification:  
**H01J 49/06** (2006.01)

(21) International Application Number:  
PCT/GB2024/052829

(22) International Filing Date:  
07 November 2024 (07.11.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2317200.0 09 November 2023 (09.11.2023) GB

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,  
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,

DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,  
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,  
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,  
MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,  
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,  
RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,  
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, CV,  
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,  
SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,  
RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,  
DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,  
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,  
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: ION ATTENUATION DEVICE

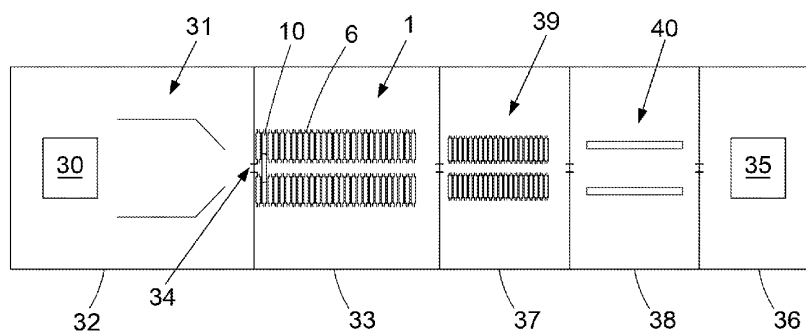


FIG. 3

(57) Abstract: A mass and/or mobility spectrometer comprising: an ion attenuation device comprising an ion guide 6 and an ion attenuator 10 arranged within the ion guide, wherein the ion attenuator is configured to repeatedly switch between a high attenuation mode in which it attenuates ions at a first rate and a low attenuation mode in which it attenuates ions at a lower rate. The spectrometer is also configured to maintain the ion attenuation device at a pressure such that different groups of ions that are transmitted by the ion attenuator in different respective low attenuation modes merge with each other downstream of the ion attenuator.



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