



(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

Note: Bibliography reflects the latest situation

- (15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see page(s)
INID code(s) 73
- (51) Int Cl.:
G01N 27/64 ^(1968.09) **H01J 49/04** ^(1980.01)
H01J 49/42 ^(1980.01) **B01D 59/48** ^(1968.09)
- (48) Corrigendum issued on:
11.01.2006 Bulletin 2006/02
- (86) International application number:
PCT/CA1999/000718
- (45) Date of publication and mention
of the grant of the patent:
02.11.2005 Bulletin 2005/44
- (87) International publication number:
WO 2000/008457 (17.02.2000 Gazette 2000/07)
- (21) Application number: **99936212.2**
- (22) Date of filing: **05.08.1999**

(54) **APPARATUS AND METHOD FOR ATMOSPHERIC PRESSURE 3-DIMENSIONAL ION TRAPPING**

VORRICHTUNG UND VERFAHREN ZUR DREIDIMENSIONALEN IONENSPEICHERUNG UNTER
ATMOSPHÄRENDRUCK

APPAREIL ET PROCEDE DE CAPTURE TRIDIMENSIONNELLE D'IONS, SOUS PRESSION
ATMOSPHERIQUE

- (84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
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- (30) Priority: **05.08.1998 US 95481 P**
29.01.1999 CA 2260572
28.05.1999 US 321820
- (56) References cited:
US-A- 5 420 424 **US-A- 5 729 014**
- (43) Date of publication of application:
30.05.2001 Bulletin 2001/22
- **GUEVREMONT R ET AL: "High field asymmetric waveform ion mobility spectrometry-mass spectrometry: an investigation of leucine enkephalin ions produced by electrospray ionization" JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY,US,ELSEVIER SCIENCE INC., NEW YORK, NY, vol. 10, no. 6, page 492-501 XP004173039 ISSN: 1044-0305**
 - **HUDGINS R R ET AL: "High resolution ion mobility measurements for gas phase proteins: correlation between solution phase and gas phase conformations" INTERNATIONAL JOURNAL OF MASS SPECTROMETRY AND ION PROCESSES,NL,ELSEVIER SCIENTIFIC PUBLISHING CO. AMSTERDAM, vol. 165-166, page 497-507 XP004103206 ISSN: 0168-1176**
- (60) Divisional application:
03020143.8 / 1 391 912
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- RIEGNER ET AL: "Qualitative evaluation of field ion spectrometry for chemical warfare agent detection" PROCEEDINGS OF THE 45TH ASMS CONFERENCE ON MASS SPECTROMETRY AND ALLIED TOPICS , June 1997 (1997-06), pages 473a-473b, XP000865529 cited in the application
- BURYAKOV ET AL.: "A new method of separation of multi-atomic ions by mobility at atmospheric pressure using a high-frequency amplitude asymmetric strong electric field" INTERNATIONAL JOURNAL OF MASS SPECTROMETRY AND ION PROCESSES., vol. 128, 1993, pages 143-148, XP000865595 ELSEVIER SCIENTIFIC PUBLISHING CO. AMSTERDAM., NL ISSN: 0168-1176 cited in the application
- CARNAHAN B. ET AL.: "Field ion spectrometry - a new analytical technology for trace gas analysis" PROCEEDINGS OF THE 41ST ISA ANALYSIS DIVISION SYMPOSIUM , vol. 29, 21 - 24 April 1996, pages 85-94, XP000863733 cited in the application