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(54) Title: SAMPLE ANALYSIS SYSTEMS AND METHODS OF USE THEREOF

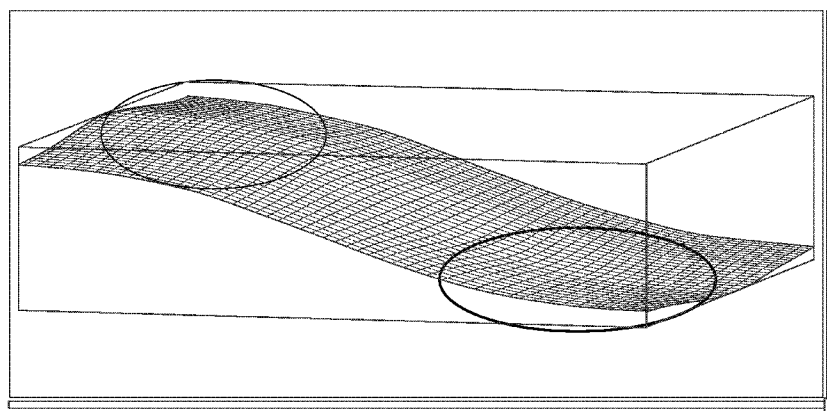


FIG. 3

(57) Abstract: The invention generally relates to sample analysis systems and methods of use thereof. In certain aspects, the invention provides a system for analyzing a sample that includes an ion generator configured to generate ions from a sample. The system additionally includes an ion separator configured to separate at or above atmospheric pressure the ions received from the ion generator without use of laminar flowing gas, and a detector that receives and detects the separated ions.



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - H01J 49/26 (2015.01) CPC - H01J 49/26 (2015.04) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) -H01J 49/00, H01J 49/10, H01J 49/26, H01J 49/44 (2015.01) USPC -250/281, 250/282, 250/290, 250/299 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched CPC -H01J 49/004, H01J 49/26, H01J 49/284, H01J 49/288, H01J 49/466 (2015.04) (keyword delimited) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Orbit, Google Patents, Google. Search terms used: ion, detector, mass spectrometer, neutral, atmospheric pressure, ion analysis probe, reaction product		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,972,407 B2 (MILLER et al) 06 December 2005 (06.12.2005) entire document	1-4, 7-9, 11-13, 15-20
Y		5, 6, 10, 14, 21
Y	WO 2013/184320 A1 (PURDUE RESEARCH FOUNDATION) 12 December 2013 (12.12.2013) entire document	5, 6
Y	WANG et al. Spatial Distribution Measurement of Ions Surrounding an Alpha Source using a New Micro-ionization Chamber. Journal of Nuclear Science and Technology, Vol. 42, No. 12. 2005. [Retrieved 15 August 2015]. Retrieved from internet:URL: http://www.tandfonline.com/doi/pdf/10.1080/18811248.2005.9711053 entire document	5
Y	US 7,977,629 B2 (MCEWEN et al) 12 July 2011 (12.07.2011) entire document	10, 14
Y	US 7,145,133 B2 (THOMSON) 05 December 2006 (05.12.2006) entire document	21
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		
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