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**Tang et al.**

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(54) **MULTI-SOURCE ION FUNNEL**

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(57) **ABSTRACT**

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patent is extended or adjusted under 35  
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A method for introducing ions generated in a region of  
relatively high pressure into a region of relatively low  
pressure by providing at least two electrospray ion sources,  
providing at least two capillary inlets configured to direct  
ions generated by the electrospray sources into and through  
each of the capillary inlets, providing at least two sets of  
primary elements having apertures, each set of elements  
having a receiving end and an emitting end, the primary sets  
of elements configured to receive a ions from the capillary  
inlets at the receiving ends, and providing a secondary set of  
elements having apertures having a receiving end and an  
emitting end, the secondary set of elements configured to  
receive said ions from the emitting end of the primary sets  
of elements and emit said ions from said emitting end of the  
secondary set of elements. The method may further include  
the step of providing at least one jet disturber positioned  
within at least one of the sets of primary elements, providing  
a voltage, such as a dc voltage, in the jet disturber, thereby  
adjusting the transmission of ions through at least one of the  
sets of primary elements.

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(52) **U.S. Cl.** ..... **250/288**; 250/396 R; 250/292

(58) **Field of Search** ..... 250/288, 396 R,  
250/292

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**34 Claims, 9 Drawing Sheets**

