

13. The electrospray device according to claim 12, wherein the insulating material is selected from the group consisting of silicon dioxide, silicon nitride, and combinations thereof.

14. The electrospray device according to claim 1, wherein the entrance orifice, the exit orifice, and the channel are filled with said separation material suitable to effect chromatographic separation of analytes passing through said electrospray device.

15. The electrospray device according to claim 14, wherein the separation material comprises a porous polymer, polymer monolith, non-monolith polymer particles, particles containing a stationary phase, silica particles, non-porous silica, or silica particles encapsulated in a polymer matrix.

16. The electrospray device according to claim 1, wherein at least one spray unit is capable of generating a single electrospray plume.

17. The electrospray device according to claim 1, wherein at least one spray unit is capable of generating multiple electrospray plumes.

18. The electrospray device according to claim 1, wherein said substrate has a plurality of said spray units.

19. The electrospray device according to claim 18, wherein at least one of the exit orifices is capable of generating one plume of material passing through the electrospray device.

20. The electrospray device according to claim 18, wherein at least one of the exit orifices is capable of generating a plurality of plumes of material passing through the electrospray device.

21. The electrospray device according to claim 18, wherein a plume of material passing through the electrospray device is generated by a plurality of the exit orifices.

22. The electrospray device according to claim 18, wherein the electrospray is generated from a single fluid stream.

23. The electrospray device according to claim 1, further comprising:

a conduit positioned to provide fluid to the entrance orifice.

24. The electrospray device according to claim 1, further comprising:

a reservoir upstream of and in fluid communication with the entrance orifice.

25. The electrospray device according to claim 24, wherein the reservoir is filled with a separation material suitable to effect chromatographic separation of analytes passing through said electrospray device.

26. The electrospray device according to claim 25, wherein the separation material comprises a porous polymer, polymer monolith, non-monolith polymer particles, particles containing a stationary phase, silica particles, non-porous silica, or silica particles encapsulated in a polymer matrix.

27. The electrospray device according to claim 24, further comprising:

a well positioned in fluid communication with the reservoir so that fluid in the well is dischargeable into the reservoir.

28. The electrospray device according to claim 27, wherein the well is filled with a separation material suitable to effect chromatographic separation of analytes passing through said electrospray device.

29. The electrospray device according to claim 28, wherein the separation material comprises a porous polymer, polymer monolith, non-monolith polymer particles, particles containing a stationary phase, silica particles, non-porous silica, or silica particles encapsulated in a polymer matrix.

30. The electrospray device according to claim 1, wherein the separation material is a monolithic polymer bed formed by in situ polymerization of a monomer solution containing a porogen and an initiator.

31. The electrospray device according to claim 30, wherein the monomer comprises styrene, acrylic acid and its esters, methacrylic acid and its esters, vinyl pyridine, maleate, vinyl ester, vinyl ether, and vinylalcohol derivatives, crosslinked with divinylbenzene, ethylene dimethacrylate or diacrylate, diethylene glycol dimethacrylate or diacrylate, divinylpyridine, bis-N-vinyl-2-pyrrolidone, N,N-methylene-bisacrylamide or bismethacrylamide, or trimethylolpropane trimethacrylate.

32. The electrospray device according to claim 18, wherein the exit orifices of the spray units are present on the ejection surface at a density of up to about 10,000 exit orifices/cm<sup>2</sup>.

33. The electrospray device according to claim 18, wherein the exit orifices of the spray units are present on the ejection surface at a density of up to about 15,625 exit orifices/cm<sup>2</sup>.

34. The electrospray device according to claim 18, wherein the exit orifices of the spray units are present on the ejection surface at a density of up to about 27,566 exit orifices/cm<sup>2</sup>.

35. The electrospray device according to claim 18, wherein the exit orifices of the spray units are present on the ejection surface at a density of up to about 40,000 exit orifices/cm<sup>2</sup>.

36. The electrospray device according to claim 18, wherein the exit orifices of the spray units are present on the ejection surface at a density of up to about 160,000 exit orifices/cm<sup>2</sup>.

37. The electrospray device according to claim 18, wherein the spacing on the ejection surface between the centers of adjacent exit orifices of the spray units is less than about 500  $\mu\text{m}$ .

38. The electrospray device according to claim 18, wherein the spacing on the ejection surface between the centers of adjacent exit orifices of the spray units is less than about 200  $\mu\text{m}$ .

39. The electrospray device according to claim 18, wherein the spacing on the ejection surface between the centers of adjacent exit orifices of the spray units is less than about 100  $\mu\text{m}$ .

40. The electrospray device according to claim 18, wherein the spacing on the ejection surface between the centers of adjacent exit orifices of the spray units is less than about 50  $\mu\text{m}$ .

41. The electrospray device according to claim 3, wherein said first electrode is positioned within 500 microns of the exit orifice.

42. The electrospray device according to claim 3, wherein said first electrode is positioned within 200 microns of the exit orifice.

43. The electrospray device according to claim 3, wherein said second electrode is positioned within 500 microns of the exit orifice.