

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

45. The electrospray device according to claim 1, wherein the exit orifice has a distal end in conductive contact with the substrate.

46. The electrospray device according to claim 1, wherein the device is configured to permit an electrospray of fluid at a flow rate of up to about 2  $\mu\text{L}/\text{minute}$ .

47. The electrospray device according to claim 1, wherein the device is configured to permit an electrospray of fluid at a flow rate of from about 100 nL/minute to about 500 nL/minute.

48. An electrospray system for spraying fluid comprising an array of a plurality of electrospray devices of claim 1.

49. The electrospray system according to claim 48, wherein the device is configured to permit an electrospray of fluid at a flow rate of up to about 2  $\mu\text{L}/\text{minute}$ .

50. The electrospray system according to claim 48, wherein the device is configured to permit an electrospray of fluid at a flow rate of from about 100 nL/minute to about 500 nL/minute.

51. The electrospray system according to claim 48, wherein the device is configured to permit an electrospray of fluid at a flow rate of greater than about 2  $\mu\text{L}/\text{minute}$ .

52. The electrospray system according to claim 48, wherein the flow rate is from about 2  $\mu\text{L}/\text{minute}$  to about 1 mL/minute.

53. The electrospray system according to claim 48, wherein the electrospray device density in the array exceeds about 5 devices/cm<sup>2</sup>.

54. The electrospray system according to claim 48, wherein the electrospray device density in the array exceeds about 16 devices/cm<sup>2</sup>.

55. The electrospray system according to claim 48, wherein the electrospray device density in the array exceeds about 30 devices/cm<sup>2</sup>.

56. The electrospray system according to claim 48, wherein the electrospray device density in the array exceeds about 81 devices/cm<sup>2</sup>.

57. The electrospray system according to claim 48, wherein the electrospray device density in the array is from about 30 devices/cm<sup>2</sup> to about 100 devices/cm<sup>2</sup>.

58. The electrospray system according to claim 48, wherein said array is an integral monolith of said devices.

59. The electrospray system according to claim 48, wherein at least two of the devices are in fluid communication with different fluid streams.

60. The electrospray system according to claim 48, wherein at least one spray unit is configured to generate multiple electrospray plumes of fluid.

61. The electrospray system according to claim 48, wherein at least one of the electrospray devices is configured to generate a single combined electrospray plume of fluid.

62. The electrospray system according to claim 48, wherein at least one spray unit is configured to generate a single electrospray plume of fluid.

63. The electrospray system according to claim 48, wherein at least one spray unit is configured to generate multiple electrospray plumes of fluid which remain discrete.

64. The electrospray system according to claim 48, wherein the spacing on the ejection surface between adjacent devices is about 9 mm or less.

65. The electrospray system according to claim 48, wherein the spacing on the ejection surface between adjacent devices is about 4.5 mm or less.

66. The electrospray system according to claim 48, wherein the spacing on the ejection surface between adjacent devices is about 2.2 mm or less.

67. The electrospray system according to claim 48, wherein the spacing on the ejection surface between adjacent devices is about 1.1 mm or less.

68. The electrospray system according to claim 48, wherein the spacing on the ejection surface between adjacent devices is about 0.56 mm or less.

69. The electrospray system according to claim 48, wherein the spacing on the ejection surface between adjacent devices is about 0.28 mm or less.

70. A system for processing droplets/sprays of fluid comprising:

an electrospray device according to claim 1 and

a device to receive droplets/sprays of fluid from the exit orifice of said electrospray device.

71. The system according to claim 70, wherein said substrate has a plurality of spray units and said device to receive fluid droplets/sprays comprises:

a daughter plate having a plurality of fluid receiving wells each positioned to receive fluid ejected from a respective one of the exit orifices.

72. The system according to claim 71, wherein said device to receive fluid is a mass spectrometry device.

73. A system for preparing samples for analysis comprising:

a multi-well plate having opposed surfaces and comprising a plurality of wells, each defined by an entrance opening at one of the surfaces and an exit opening at the other surface and having a wall extending between the entrance and exit openings and

a plurality of electrospray devices according to claim 1, each positioned to receive fluid from a well of the multi-well plate.

74. The system according to claim 73, wherein each of the plurality of electrospray devices further comprises:

a reservoir between an exit opening of a well of the multi-well plate and an entrance orifice.

75. The system according to claim 74, wherein the reservoir is filled with a separation material suitable to effect chromatographic separation of analytes passing through said electrospray device.

76. The system according to claim 75, 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.

77. The system according to claim 74, wherein the well is filled with a separation material suitable to effect chromatographic separation of analytes passing through said electrospray device.

78. The system according to claim 77, 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.