

substantially onwardly transmitted by said second device and/or for solvent ions to be substantially attenuated by said second device.

**43-45.** (canceled)

**46.** A mass spectrometer as claimed in claim 1, wherein said combustion chamber is arranged and adapted to combust analyte ions in an atmosphere of oxygen.

**47.** A mass spectrometer as claimed in claim 46, wherein said combustion chamber comprises a copper oxide catalyst.

**48.** (canceled)

**49.** (canceled)

**50.** A mass spectrometer as claimed in claim 1, further comprising means arranged so as to provide a second stream of gas which flows, in use, into said combustion chamber and wherein at least some atoms, molecules or ions which emerge from said second device are arranged to be entrained in said second stream of gas, wherein said second stream of gas comprises one or more gases selected from the group consisting of: (i) nitrogen; (ii) helium; and (iii) oxygen.

**51.** (canceled)

**52.** A mass spectrometer as claimed in claim 1, further comprising one or more cryogenic traps for separating carbon dioxide from other combustion products.

**53.** A mass spectrometer as claimed in claim 1, further comprising a second ion source arranged and adapted to ionise one or more combustion products received from said combustion chamber or which exit from said combustion chamber, wherein said second ion source is selected from the group consisting of: (i) an Electrospray ionisation (“ESI”) ion source; (ii) an Atmospheric Pressure Photo Ionisation (“APPI”) ion source; (iii) an Atmospheric Pressure Chemical Ionisation (“APCI”) ion source; (iv) a Matrix Assisted Laser Desorption Ionisation (“MALDI”) ion source; (v) a Laser Desorption Ionisation (“LDI”) ion source; (vi) an Atmospheric Pressure Ionisation (“API”) ion source; (vii) a Desorption Ionisation on Silicon (“DIOS”) ion source; (viii) an Electron Impact (“EI”) ion source; (ix) a Chemical Ionisation (“CI”) ion source; (x) a Field Ionisation (“FI”) ion source; (xi) a Field Desorption (“FD”) ion source; (xii) an Inductively Coupled Plasma (“ICP”) ion source; (xiii) a Fast Atom Bombardment (“FAB”) ion source; (xiv) a Liquid Secondary Ion Mass Spectrometry (“LSIMS”) ion source; (xv) a Desorption Electrospray Ionisation (“DESI”) ion source; (xvi) a Nickel-63 radioactive ion source; (xvii) an Atmospheric Pressure Matrix Assisted Laser Desorption Ionisation ion source; and (xviii) a Thermospray ion source.

**54-56.** (canceled)

**57.** A mass spectrometer as claimed in claim 1, wherein said mass analyser is selected from the group consisting of: (i) a quadrupole mass analyser; (ii) a 2D or linear quadrupole mass analyser; (iii) a Paul or 3D quadrupole mass analyser; (iv) a Penning trap mass analyser; (v) an ion trap mass analyser; (vi) a magnetic sector mass analyser; (vii) Ion Cyclotron Resonance (“ICR”) mass analyser; (viii) a Fourier Transform Ion Cyclotron Resonance (“FTICR”) mass analyser; (ix) an electrostatic or orbitrap mass analyser; (x) a Fourier Transform electrostatic or orbitrap mass analyser; (xi) a Fourier Transform mass analyser; (xii) a Time of Flight mass analyser; (xiii) an axial acceleration Time of Flight mass analyser; (xiv) an orthogonal acceleration Time of Flight mass analyser; and (xv) an Accelerator Mass Spectrometer (“AMS”).

**58.** A mass spectrometer as claimed in claim 1, wherein said mass analyser is arranged to mass analyse or measure the

relative intensities or abundances of one, two, three or more than three isotopes of carbon dioxide, said carbon dioxide being formed by combustion of analyte ions comprising carbon in said combustion chamber.

**59.** A method of mass spectrometry comprising:

separating or dispersing analyte atoms or molecules in a first device;

ionising analyte atoms or molecules received from said first device in an ion source, said ion source being arranged downstream of said first device;

separating analyte ions from other ions in a second device, said second device comprising one or more electrodes; receiving and at least partially combusting at least some analyte ions in a combustion chamber; and mass analysing or measuring ions.

**60.** A method as claimed in claim 59, further comprising ionising at least some of the combustion products formed in said combustion chamber and wherein the step of mass analysing or measuring ions comprises mass analysing or measuring the relative intensities or abundances of one, two, three or more than three isotopes of carbon dioxide, said carbon dioxide being formed by combustion of analyte ions comprising carbon in said combustion chamber.

**61.** (canceled)

**62.** (canceled)

**63.** A mass spectrometer comprising:

a liquid chromatography system;

a combustion device;

a mass analyser arranged downstream of said combustion device; and

an interface device for interfacing said liquid chromatography system to said combustion device, said interface device being arranged to at least partially separate analyte ions from solvent ions and to onwardly transmit at least some analyte ions to said combustion device whilst substantially attenuating at least some solvent ions.

**64.** A mass spectrometer as claimed in claim 63, wherein said interface device comprises an ion source for ionising analyte and/or solvent atoms, molecules or ions and/or a Field Asymmetric Ion Mobility Spectrometry (“FAIMS”) device for separating analyte ions from solvent ions or an ion mobility spectrometer or separator for separating ions according to their ion mobility.

**65.** (canceled)

**66.** (canceled)

**67.** A mass spectrometer comprising:

an ion mobility spectrometer or separator arranged to separate certain desired analyte ions from undesired solvent ions; and

a combustion chamber arranged downstream of said ion mobility spectrometer or separator, said combustion chamber being arranged to receive analyte ions.

**68.** A mass spectrometer comprising:

an ion mobility spectrometer or separator arranged to separate certain desired analyte ions from undesired solvent ions; and

an isotope ratio mass analyser or isotope ratio mass spectrometer arranged downstream of said ion mobility spectrometer or separator, said isotope ratio mass analyser or isotope ratio mass spectrometer being arranged to mass analyse or measure the combustion products separated analyte ions.