30. An apparatus according to claim 23 wherein at least one anode and at least one cathode comprise at least one catalyst.

31. An apparatus according to any of claims 29 to 30 wherein said electrode comprising said catalyst further comprises at least one porous metal.

32. An apparatus according to claim 31 wherein said metal comprises nickel.

33. An apparatus according to any of claims 29 to 32 wherein said catalyst comprises a cobalt based catalyst.

34. An apparatus according to claim 33 wherein said catalyst is supported on silica.

35. An apparatus according to any of claims 28 to 34, wherein said catalyst is a metal catalyst supported on a microporous solid support obtained or obtainable from a process comprising:

(A) adding together a metal catalyst precursor and surface-modified nanoparticles of the material of the microporous solid support to form an aqueous supported-catalyst precursor solution; and

(B) subjecting the aqueous supported-catalyst precursor solution to a source of energy at a power sufficient to cause repeated formation and collapse of films in the supported-catalyst precursor solution and to facilitate the emergence of the metal catalyst precursor or a decomposition product thereof supported on the microporous solid support.

~~36. A method of removing long chain hydrocarbons from a stream of gas, comprising:~~

generating plasma in a plasma generation zone of a vessel between an anode and a cathode, passing a stream of gas between at least one inlet and at least one outlet and through said plasma generation zone of said vessel, said vessel containing at least one catalyst within said plasma generation zone.

37. A method according to claim 36 wherein said vessel also contains at least one plasma promoter.

38. A method according to claim 37 wherein said plasma promoter comprises at ~~least one of barium titanate and glass balls.~~

39. A method according to any of claims 36 to 38, wherein said catalyst comprises at least one of nickel, cobalt and iron.

40. A method according to any of claims 36 to 39, wherein said catalyst is a metal catalyst supported on a microporous solid support obtained or obtainable from a process comprising:

(A) adding together a metal catalyst precursor and surface-modified nanoparticles of the material of the microporous solid support to form an aqueous supported-catalyst precursor solution; and

(B) subjecting the aqueous supported-catalyst precursor solution to a source of energy at a power sufficient to cause repeated formation and collapse of films in the supported-catalyst precursor solution and to facilitate the emergence of the metal catalyst precursor or a decomposition product thereof supported on the microporous solid support.