32. The method of any one of claims 21-31, further comprising a reducing step after step (3), the reducing step comprising contacting the de-coked catalyst with a reducing gas stream comprising molecular hydrogen.

33. The method of any one of claims 21-32, further comprising:

a purging step prior to step (3), the purging step comprising contacting the fluorinated-chlorinated spent catalyst with a purging stream consisting essentially of an inert gas;

a hydrocarbon treatment step prior to step (3), the hydrocarbon treatment step comprising contacting the fluorinated-chlorinated spent catalyst with a hydrocarbon treatment stream comprising a hydrocarbon feed comprising C_6-C_8 alkanes and/or cycloalkanes; or

both.

~~34. A rejuvenated catalyst produced by the method of any one of claims 21-33.~~

~~35~~34. A method of treating a spent catalyst comprising a transition metal and a catalyst support, the method comprising:

(1) contacting the spent catalyst with a chlorine-containing stream comprising a chlorine-containing compound to produce a chlorinated spent catalyst;

(2) contacting the chlorinated spent catalyst with a fluorine-containing stream comprising a fluorine-containing compound to produce a chlorinated-fluorinated spent catalyst; and

(3) contacting the chlorinated-fluorinated spent catalyst with a decoking gas stream comprising oxygen.

~~36~~35. The method of claim ~~35~~34, wherein:

step (1) is conducted at a chlorination temperature in a range from about 150 °C to about 300 °C;

a concentration of chlorine (Cl) in the chlorine-containing stream is less than about 2,500 ppm by volume;

the chlorine-containing stream comprises Cl_2 and nitrogen, and is substantially free of oxygen-containing compounds;

step (2) is conducted at a fluorination temperature in a range from about 25 °C to about 250 °C;

a concentration of fluorine (F) in the fluorine-containing stream is less than about 2,500 ppm by volume; and

the fluorine-containing stream comprises F_2 and nitrogen, and is substantially free of oxygen-containing compounds.

~~37~~36. The method of claim ~~35~~ 34 or ~~36~~35, wherein the spent catalyst comprises:

platinum on a KL-zeolite;

a support matrix comprising alumina, silica, a mixed oxide thereof, or a mixture thereof;

from about 0.025 wt. % to about 5 wt. % chlorine; and

from about 0.025 wt. % to about 5 wt. % fluorine.

~~38~~37. A reforming process comprising:

(A) contacting a hydrocarbon feed with an aromatization catalyst comprising a transition metal and a catalyst support under reforming conditions in a reactor system to produce an aromatic product;

(B) performing step (A) for a time period sufficient to form a spent aromatization catalyst;

(C) contacting the spent aromatization catalyst with a fluorine-containing stream comprising a fluorine-containing compound to produce a fluorinated spent catalyst;

(D) contacting the fluorinated spent catalyst with a chlorine-containing stream comprising a chlorine-containing compound to produce a fluormated-chlorinated spent catalyst; and

(E) contacting the fluorinated-chlorinated spent catalyst with a decoking gas stream comprising oxygen.

~~39~~38. The process of claim ~~38~~37, wherein the reforming process is an *in situ* process.

~~40~~39. The process of claim ~~38~~37, wherein steps (C)-(E) are performed in a vessel external to the reactor system.

~~41~~40. A reforming process comprising:

(A) contacting a hydrocarbon feed with an aromatization catalyst comprising a transition metal and a catalyst support under reforming conditions in a reactor system to produce an aromatic product;

(B) performing step (A) for a time period sufficient to form a spent aromatization catalyst;

(C) contacting the spent aromatization catalyst with a chlorine-containing stream comprising a chlorine-containing compound to produce a chlorinated spent catalyst;

(D) contacting the chlorinated spent catalyst with a fluorine-containing stream comprising a fluorine-containing compound to produce a chlorinated-fluorinated spent catalyst; and

(E) contacting the chlorinated-fluorinated spent catalyst with a decoking gas stream comprising oxygen.

wherein the spent aromatization catalyst comprises from about 0.1 wt. % to about 10 wt. % transition metal, based on the weight of the spent aromatization catalyst excluding carbon.

~~42~~41. The process of claim ~~41~~40, wherein the reforming process is an *in situ* process.

~~43~~42. The process of claim ~~41~~40, wherein steps (C)-(E) are performed in a vessel external to the reactor system.