which are in contact with aqueous systems. The non-corrosive chemical cleaning agent may be a lower alkyl amine, e.g., dimethylamine, lower hydroxyalkyl amine, e.g., ethanolamine and pentanolamine, or cyclic dimines, e.g., 1,10-phenanthroline, 2,9-dimethyl-1,10-phenanthroline, 2,2'-bipyrindine and 4,4'-bypyridine, or combinations thereof.

SUMMARY

[0004] In one aspect, the present disclosure refers to an anti-fouling composition comprising: (a) a metallic component selected from the group of potassium nitrate, calcium nitrate, sodium nitrate ~~alkali metal salt, alkaline earth metal salt, salt of tin~~, and combinations thereof; and (b) a non-metallic component selected from the group of urea, ~~oxalic acid, succinic acid, tartaric acid,~~ EDTA, ammonium oxalate, ammonium nitrate, ammonium acetate, ammonium sulfate, ~~sugar, potassium nitrate, calcium nitrate, sodium nitrate~~ and combinations thereof~~, wherein the non-metallic component is combination of urea and ammonium salt, or wherein the non-metallic component is EDTA~~; wherein the metallic component ~~weight ratio~~ in the composition is 50 to 95% by weight ~~in the range of 20 to 95%~~ and the non-metallic ~~ratio~~ component in the composition is 5 to 50% by weight~~in the range of 5 to 80%~~; wherein said composition exhibits low residue in the range of below 8%. In one example, the present disclosure refers to an anti-fouling composition comprising: (a) a metallic component selected from the group of alkali metal salt, alkaline metal salt, transitional metal salt, salt of tin, and combinations thereof; and (b) a non-metallic component selected from the group of urea, oxalic acid, succinic acid, tartaric acid, EDTA, ammonium oxalate, ammonium nitrate, ammonium acetate, ammonium sulfate, sugar, and combinations thereof~~, wherein the non-metallic component is combination of urea and ammonium salt, or wherein the non-metallic component is EDTA~~. In another aspect, the present disclosure refers to a method for preparation of a composition as disclosed herein for mitigation of foulants in reactors, the method comprising the steps of (a) contacting a non-metallic component being a combination of urea and ammonium salt, or EDTA, and a metallic component with water to form a mixture; (b) removing water from the mixture to obtain a composition. The present disclosure describes an anti-fouling composition including: (a) a metallic component comprising of at least one metal salt; and (b) a non-metallic component. The present disclosure describes a method for preparation of an anti-fouling composition for mitigation of foulants in reactors, the method including the steps of: (a) contacting at least one non-metallic component and a metallic component with water to form a mixture; and (b)

I/We Claim:

1. An ~~Anti~~anti-fouling composition comprising: (a) a metallic component selected from the group of potassium nitrate, calcium nitrate, sodium nitrate ~~alkali metal salt, alkaline earth metal salt, transition metal salt, salt of tin~~, and combinations thereof; and (b) a non-metallic component selected from the group of urea, ~~oxalic acid, succinic acid, tartaric acid~~, EDTA, ammonium oxalate, ammonium nitrate, ammonium acetate, ammonium sulfate, ~~sugar, potassium nitrate, calcium nitrate, sodium nitrate~~ and combinations thereof~~, wherein the non-metallic component is combination of urea and ammonium salt, or wherein the non-metallic component is EDTA~~; wherein the metallic component ~~weight ratio~~ in the composition is 50 to 95% by weight ~~in the range of 20 to 95%~~ and the non-metallic ~~ratio~~ component in the composition is 5 to 50% by weight~~in the range of 5 to 80%~~; wherein said composition exhibits low residue in the range of below 8%.

~~2. The composition as claimed in claim 1, wherein the metallic component is selected from the group of alkali metal salt, and combinations thereof.~~

~~3. The composition as claimed in claim 1, wherein the metallic component is selected from the group of alkaline earth metal salt, and combinations thereof.~~

~~4. The composition as claimed in claim 1, wherein the metallic component is selected from the group of salt of tin, and combinations thereof.~~

~~5. The composition as claimed in claim 1, wherein the metallic component weight ratio in the composition is in the range of 20% and the non-metallic ratio in the composition is in the range of 80%.~~

~~6.~~2. The composition as claimed in Claim 1 for use in foulant removal.

~~7.~~3. A method for preparation of a composition according to claim 1 for mitigation of foulants in reactors, the method comprising the steps of:

a) contacting a non-metallic component being a combination of urea and ammonium salt, or EDTA, and a metallic component with water to form a mixture;

b) removing water from the mixture to obtain a composition.