CLAIMS

What is claimed is:

1. A composition comprising:

(i) water;

(ii) one or more oxidizing agents comprising between approximately 0.1 wt% and approximately 1.0 wt% of neat nitric acid;

(iii) one or more acids other than the nitric acid; and

(iv) one or more halogen ion source.

2. The composition of claim 1, further comprising **(v)** one or more chelating agent.

3. The composition of claim 1, wherein the one or more oxidizing agents further comprises one or more of peroxomonosulfate, perborate, perchlorate, perchloric acid, peracetate anions, periodate, persulfate, permanganate, chromate, dichromate, benzoquinones and an amine-N-oxide.

4. The composition of claim 1, wherein the one or more oxidizing agents comprises one or more of ammonium persulfate, 2,5-dihydroxy-1,4-benzoquinone, nitrosylsulfuric acid, and pyridine N-oxide, 4-methylmorpholine-N-oxide.

5. The composition of claim 1, wherein the one or more acids comprises one or more of sulfuric acid, hydrochloric acid, methane sulfonic acid, 4-methylbenzenesulfonic acid, hydrobromic acid, citric acid, malonic acid, hydrofluoric acid, acetic acid, phosphoric acid and hydroiodic acid.

6. The composition of claim 1, wherein a total wt% of neat acid in the composition is approximately 30 wt% to approximately 45 wt%.

7. The composition of claim 1, wherein a total wt% of neat acid in the composition is approximately 35 wt% to approximately 45 wt%.

8. The composition of claim 1, wherein the one or more acids comprises approximately 39.2 wt% of neat sulfuric acid.

9. The composition of claim 1, wherein the one or more acids comprises approximately 3.5 wt% of neat hydrochloric acid.

10. The composition of claim 1, wherein the one or more acids comprises sulfuric acid and hydrochloric acid.

11. The composition of claim 1, wherein the one or more acids comprises approximately 39.2 wt% of neat sulfuric acid and of approximately 3.5 wt% of neat hydrochloric acid.

12. The composition of claim 1, wherein the composition comprises water, approximately 33.5 wt% to approximately 50 wt% of neat sulfuric acid and approximately 0.9 wt% of neat nitric acid.

13. The composition of claim 1, wherein the composition comprises water, approximately 3.0 wt% to approximately 5.0 wt% of neat hydrochloric acid and approximately 0.6 wt% to approximately 0.9 wt% of neat nitric acid.

14. The composition of claim 1, wherein the composition comprises water, approximately 3.0 wt% to approximately 5.0 wt% of neat hydrochloric acid, approximately 0.6 wt% to approximately 0.9 wt% of neat nitric acid and approximately 33.5 wt% to approximately 50 wt% of neat sulfuric acid.

15. The composition of claim 1, wherein the composition comprises water and approximately 40 wt% to approximately 45 wt% combined of neat sulfuric acid, neat hydrochloric acid and neat nitric acid.

16. The composition of claim 1, wherein the composition comprises water and approximately 43 wt% to approximately 45 wt% combined of neat sulfuric acid, neat hydrochloric acid and neat nitric acid.

17. The composition of claim 1, wherein the composition comprises water, approximately 39.2 wt% of neat sulfuric acid, approximately 3.5 wt% of neat hydrochloric acid and approximately 0.9 wt% of neat nitric acid.

18. The composition of claim 1, wherein the composition consists essentially of water, approximately 39.2 wt% of neat sulfuric acid, approximately 3.5 wt% of neat hydrochloric acid and approximately 0.9 wt% of neat nitric acid.

19. The composition of claim 1, wherein the composition consists of water, approximately 39.2 wt% of neat sulfuric acid, approximately 3.5 wt% of neat hydrochloric acid and approximately 0.9 wt% of neat nitric acid.

20. The composition of claim 1, wherein the one or more halogen ion source comprises one or more of hydrobromic acid, hydroiodic acid, hydrogen chloride, hydrofluoric acid, hydrochloric acid, ammonium chloride, ammonium bromide, ammonium fluoride and ammonium iodide.

21. The composition of claim 1, wherein the one or more halogen ion source comprises one or more of ammonium chloride, ammonium bromide, ammonium fluoride and ammonium iodide.

22. The composition of wherein the composition has an Fe_2O_3 solubility of approximately 2 mg/100 ml or greater to approximately 11 mg/100 ml or greater.

23. A method of removing a metal-containing layer of a pellicle structure comprising the steps of:

a. providing a semiconductor device comprising a substrate, an EUV mask and a metal-containing EUV mask-protecting structure comprising nickel;

b. exposing the semiconductor device to EUV radiation; and

c. removing the metal-containing EUV mask-protecting structure by contacting said semiconductor device to the composition of claim 1.