CLAIMS:

1. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first metal polishing rate modifier agent having a standard reduction potential less than 0.34 V relative to a standard hydrogen electrode, wherein the first metal polishing rate modifier agent is a quinone,

(c) a second metal polishing rate modifier agent having a standard reduction potential greater than 0.34 V relative to a standard hydrogen electrode, and

(d) a liquid carrier.

2. The chemical-mechanical polishing composition of claim 1, wherein the quinone is an anthraquinone with one or more functional groups.

3. The chemical-mechanical polishing composition of claim 2, wherein the anthraquinone is selected from the group consisting of 9,10-anthraquinone-1,8-disulfonic acid, 9,10-anthraquinone-1,5-disulfonic acid, 9,10-anthraquinone-2,6-disulfonic acid, and salts thereof.

4. The chemical-mechanical polishing composition of claim 1, wherein the second agent is an organic agent.

5. The chemical-mechanical polishing composition of claim 4, wherein the second agent is selected from the group consisting of dihydroxybenzoquinones, naphthoquinones, chloranilic acid, and dichloroindophenol.

6. The chemical-mechanical polishing composition of claim 4, wherein the second agent is selected from the group consisting of *n*-methylmorpholine-N-oxide and *t*-butyl peroxide.

7. The chemical-mechanical polishing composition of claim 1, wherein the second agent is an inorganic agent.

8. The chemical-mechanical polishing composition of claim 7, wherein the second agent is selected from the group consisting of hydrogen peroxide, iodate salts, persulfate salts, permanganate salts, I_2, inorganic salts of iron (III), organic salts of iron (III), and potassium peroxymonosulfate.

9. The chemical-mechanical polishing composition of claim 7, wherein the second agent is selected from the group consisting of perchlorate salts, bromate salts, and cerium (IV) sulfate.

10. The chemical-mechanical polishing composition of claim 1, wherein the composition further comprises a halide selected from the group consisting of chloride and bromide.

11. The chemical-mechanical polishing composition of claim 1, wherein the composition further comprises iodide.

12. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first metal polishing rate modifier agent, wherein the first agent is an organic oxidizing agent comprising a quinone moiety,

(c) a second metal polishing rate modifier agent, wherein the second agent is selected from the group consisting of iodide, iodine, I_2·malonamide$_3$, and triiodide, and

(d) a liquid carrier.

13. The chemical-mechanical polishing composition of claim 12, wherein the first agent is an anthraquinone with one or more functional groups.

14. The chemical-mechanical polishing composition of claim 13, wherein the anthraquinone is selected from the group consisting of 9,10-anthraquinone-1,8-disulfonic acid, 9,10-anthraquinone-1,5-disulfonic acid, 9,10-anthraquinone-2,6-disulfonic acid, and salts thereof.

15. The chemical-mechanical polishing composition of claim 12, wherein the second agent is I_2·malonamide$_3$.

16. The chemical-mechanical polishing composition of claim 12, wherein the second agent is iodide.

17. The chemical-mechanical polishing composition of claim 12, wherein the composition further comprises an oxidizing agent selected from the group consisting of hydrogen peroxide, iodate salts, persulfate salts, permanganate salts, bromate salts, potassium peroxymonosulfate, chloranilic acid, and *n*-methylmorpholine-N-oxide.

18. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first metal polishing rate modifier agent, wherein the first agent is an organic oxidizing agent comprising a quinone moiety,

(c) a second metal polishing rate modifier agent, wherein the second agent is an oxidizing agent present in a concentration below the concentration of the first agent, and

(d) a liquid carrier.

19. The chemical-mechanical polishing composition of claim 18, wherein the first agent is present in a concentration of about 1 to about 60 mmol.

20. The chemical-mechanical polishing composition of claim 19, wherein the first agent is present in a concentration of about 1 to about 10 mmol.

21. The chemical-mechanical polishing composition of claim 18, wherein the first agent is an anthraquinone with one or more functional groups.

22. The chemical-mechanical polishing composition of claim 21, wherein the anthraquinone is selected from the group consisting of 9,10-anthraquinone-1,8-disulfonic acid, 9,10-anthraquinone-1,5-disulfonic acid, 9,10-anthraquinone-2,6-disulfonic acid, and salts thereof.

23. The chemical-mechanical polishing composition of claim 18, wherein the second agent is an organic agent.

24. The chemical-mechanical polishing composition of claim 23, wherein the second agent is selected from the group consisting of dihydroxybenzoquinones, naphthoquinones, chloranilic acid, and dichloroindophenol, and I_2·malonamide$_3$.

25. The chemical-mechanical polishing composition of claim 23, wherein the second agent is selected from the group consisting of *n*-methylmorpholine-N-oxide and *t*-butyl peroxide.

26. The chemical-mechanical polishing composition of claim 24, wherein the second agent is I_2·malonamide$_3$.

27. The chemical-mechanical polishing composition of claim 18, wherein the second agent is an inorganic agent.

28. The chemical-mechanical polishing composition of claim 27, wherein the second agent is selected from the group consisting of hydrogen peroxide, iodate salts, persulfate salts, permanganate salts, I_2, inorganic salts of iron (III), organic salts of iron (III), and potassium peroxymonosulfate.

29. The chemical-mechanical polishing composition of claim 27, wherein the second agent is selected from the group consisting of perchlorate salts, bromate salts, and cerium (IV) sulfate.

30. The chemical-mechanical polishing composition of claim 18, wherein the composition further comprises a halide selected from the group consisting of chloride and bromide.

31. The chemical-mechanical polishing composition of claim 18, wherein the composition further comprises iodide.

32. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first oxidizing agent that is an organic oxidizing agent comprising a quinone moiety, with the proviso that the first organic oxidizing agent is not 1,2-napthoquinone-4-sulfonic acid, aminoanthraquinone sulfonic acid, or hydroquinone sulfonic acid,

(c) a second oxidizing agent, with the proviso that the second oxidizing agent is not the same as the first oxidizing agent and is not potassium iodate or nitric acid, and

(d) a liquid carrier.

CLAIMS

1. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first metal polishing rate modifier agent having a standard reduction potential less than 0.34 V relative to a standard hydrogen electrode, wherein the first metal polishing rate modifier agent is an anthraquinone selected from the group consisting of 9,10-anthraquinone-1,8-disulfonic acid, 9,10-anthraquinone-1,5-disulfonic acid, 9,10-anthraquinone-2,6-disulfonic acid, and salts thereof,

(c) a second metal polishing rate modifier agent having a standard reduction potential greater than 0.34 V relative to a standard hydrogen electrode, and

(d) a liquid carrier.

2. The chemical-mechanical polishing composition of claim 1, wherein the second agent is an organic agent.

3. The chemical-mechanical polishing composition of claim 2, wherein the second agent is selected from the group consisting of dihydroxybenzoquinones, naphthoquinones, chloranilic acid, and dichloroindophenol.

4. The chemical-mechanical polishing composition of claim 2, wherein the second agent is selected from the group consisting of *n*-methylmorpholine-N-oxide and *t*-butyl peroxide.

5. The chemical-mechanical polishing composition of claim 1, wherein the second agent is an inorganic agent.

6. The chemical-mechanical polishing composition of claim 5, wherein the second agent is selected from the group consisting of hydrogen peroxide, iodate salts, persulfate salts, permanganate salts, I_2, inorganic salts of iron (III), organic salts of iron (III), and potassium peroxymonosulfate.

7. The chemical-mechanical polishing composition of claim 5, wherein the second agent is selected from the group consisting of perchlorate salts, bromate salts, and cerium (IV) sulfate.

8. The chemical-mechanical polishing composition of claim 1, wherein the composition further comprises a halide selected from the group consisting of chloride and bromide.

9. The chemical-mechanical polishing composition of claim 1, wherein the composition further comprises iodide.

10. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first metal polishing rate modifier agent, wherein the first agent is an anthraquinone with one or more functional groups, wherein the anthraquinone is selected from the group consisting of 9,10-anthraquinone-1,8-disulfonic acid, 9,10-anthraquinone-1,5-disulfonic acid, 9,10-anthraquinone-2,6-disulfonic acid, and salts thereof,

(c) a second metal polishing rate modifier agent, wherein the second agent is selected from the group consisting of iodide, iodine, I_2·malonamide$_3$, and triiodide, and

(d) a liquid carrier.

11. The chemical-mechanical polishing composition of claim 10, wherein the second agent is I_2·malonamide$_3$.

12. The chemical-mechanical polishing composition of claim 10, wherein the second agent is iodide.

13. The chemical-mechanical polishing composition of claim 10, wherein the composition further comprises an oxidizing agent selected from the group consisting of hydrogen peroxide, iodate salts, persulfate salts, permanganate salts, bromate salts, potassium peroxymonosulfate, chloranilic acid, and *n*-methylmorpholine-N-oxide.

14. A chemical-mechanical polishing composition comprising:

(a) an abrasive,

(b) a first metal polishing rate modifier agent, wherein the first agent is an anthraquinone with one or more functional groups, wherein the anthraquinone is selected from the group consisting of 9,10-anthraquinone-1,8-disulfonic acid, 9,10-anthraquinone-1,5-disulfonic acid, 9,10-anthraquinone-2,6-disulfonic acid, and salts thereof,

(c) a second metal polishing rate modifier agent, wherein the second agent is an oxidizing agent present in a concentration below the concentration of the first agent, and

(d) a liquid carrier.

15. The chemical-mechanical polishing composition of claim 14, wherein the first agent is present in a concentration of about 1 to about 60 mmol.

16. The chemical-mechanical polishing composition of claim 15, wherein the first agent is present in a concentration of about 1 to about 10 mmol.

17. The chemical-mechanical polishing composition of claim 14, wherein the second agent is an organic agent.

18. The chemical-mechanical polishing composition of claim 17, wherein the second agent is selected from the group consisting of dihydroxybenzoquinones, naphthoquinones, chloranilic acid, and dichloroindophenol, and $I_2 \cdot \text{malonamide}_3$.

19. The chemical-mechanical polishing composition of claim 17, wherein the second agent is selected from the group consisting of *n*-methylmorpholine-N-oxide and *t*-butyl peroxide.

20. The chemical-mechanical polishing composition of claim 18, wherein the second agent is $I_2 \cdot \text{malonamide}_3$.

21. The chemical-mechanical polishing composition of claim 14, wherein the second agent is an inorganic agent.

22. The chemical-mechanical polishing composition of claim 21, wherein the second agent is selected from the group consisting of hydrogen peroxide, iodate salts, persulfate salts, permanganate salts, I_2, inorganic salts of iron (III), organic salts of iron (III), and potassium peroxymonosulfate.

23. The chemical-mechanical polishing composition of claim 21, wherein the second agent is selected from the group consisting of perchlorate salts, bromate salts, and cerium (IV) sulfate.

24. The chemical-mechanical polishing composition of claim 14, wherein the composition further comprises a halide selected from the group consisting of chloride and bromide.

25. The chemical-mechanical polishing composition of claim 14, wherein the composition further comprises iodide.