CLAIMS:

1. An aqueous slurry, useful for the chemical-mechanical polishing of a work piece which contains a metal, comprising: water, submicron alpha-alumina particles, and one or more of a less abrasive submicron solid particle chosen from the group consisting of gamma-alumina, delta-alumina, amorphous alumina, and amorphous silica, wherein said alpha-alumina constitutes 1 to 50 percent by weight of the total solids in said slurry as used.

2. An aqueous slurry according to claim 1 wherein said alpha-alumina constitutes 5 to 25 percent by weight of the total solids in said slurry.

3. An aqueous slurry according to claim 1 further comprising an oxidizing agent.

4. An aqueous slurry according to claim 2 further comprising an oxidizing agent.

5. An aqueous slurry according to claim 3 wherein the work piece further contains a dielectric material, the slurry further comprising an agent to suppress the rate of removal of a dielectric material.

6. An aqueous slurry according to claim 4 wherein the work piece further contains a dielectric material, the slurry further comprising an agent to suppress the rate of removal of a dielectric material.

7. An aqueous slurry according to claim 1, 2, 3, 4, 5 or 6 wherein said alpha-alumina is employed in combination with submicron particles of gamma-alumina.

8. An aqueous slurry according to claim 1, 2, 3, 4, 5 or 6 wherein said alpha-alumina is employed in combination with submicron particles of amorphous alumina.

9. An aqueous slurry according to claim 1, 2, 3, 4, 5 or 6 wherein said alpha-alumina is employed in combination with submicron particles of amorphous silica.

10. A method for polishing or planarizing the surface of a work piece which contains a metal comprising (a) applying an aqueous slurry comprising: water, submicron alpha-alumina particles, and one or more of a less abrasive submicron solid particle chosen

from the group consisting of gamma-alumina, delta-alumina, amorphous alumina, and amorphous silica, where said alpha-alumina constitutes 1 to 50 percent by weight of the total solids in said slurry, to the surface of said work piece and (b) polishing or planarizing the surface of said work piece by chemical-mechanical polishing means.

11. A method according to claim 10 wherein said alpha-alumina constitutes 5 to 25 percent by weight of the total solids in said slurry.

12. A method according to claim 10 wherein said slurry further comprises an oxidizing agent.

13. A method according to claim 11 wherein said slurry further comprises an oxidizing agent.

14. A method according to claim 12 wherein said slurry further comprises an agent to suppress the rate of removal of a dielectric material.

15. A method according to claim 13 wherein said slurry further comprises an agent to suppress the rate of removal of a dielectric material.

16. A method according to claim 10, 11, 12, 13, 14 or 15 in which said metal contained in said work piece is tungsten.

17. A method according to claim 10, 11, 12, 13, 14 or 15 in which said metal contained in said work piece is aluminum.

18. A method according to claim 10, 11, 12, 13, 14 or 15 in which said metal contained in said work piece is copper.

19. A method according to claim 10, 11, 12, 13, 14 or 15 in which said metal contained in said work piece is nickel.

20. A method according to claim 10, 11, 12, 13, 14 or 15 in which said metal contained in said work piece is tantalum.