**CLAIMS**

1. A fluid composition for chemical-mechanical polishing, comprising:

a solvent;

0.5-5 wt% of a first oxidizing agent comprising an ion, salt, acid, or base of permanganate or $Ce^{+4}$ and having an oxidation potential of 0.4 V or greater;

0.1-0.5 wt% of a second oxidizing agent comprising an ion, salt, acid, or base of persulfate and having a higher oxidation potential than the first oxidizing agent; and

0.05-0.75 wt% of a multivalent cation component comprising $Al^{+3}$, $Fe^{+3}$, or $Co^{+3}$.

2. The fluid composition of claim 1, wherein the multivalent cation component is a salt, acid, or base.

3. The fluid composition of claim 1, wherein the multivalent cation component comprises an anionic component comprising a nitrate, tetrafluoroborate, fluorosulfate, hexafluorophosphate, fluorophosphonate, selenate, sulfate, phosphate, chloride, fluoride, or sulfamate.

4. The fluid composition of claim 1, wherein the multivalent cation component comprises aluminum nitrate or iron nitrate.

5. The fluid composition of claim 1, wherein the multivalent cation component is a free acting ion or part of a complex.

6. The fluid composition of claim 1, wherein the oxidizing agent comprises sodium permanganate or potassium permanganate.

7. The fluid composition of claim 1, wherein the second oxidizing agent comprises sodium persulfate or potassium persulfate.

8. The fluid composition of claim 1, wherein the fluid composition is substantially free of abrasive particles.

9. The fluid composition of claim 1, wherein the solvent is water.

10. A method of polishing an inorganic material, comprising:

applying the fluid composition of claims 1-9 to a polishing pad; and

polishing the inorganic material with the polishing pad.

11. The method of claim 10, wherein the inorganic material comprises silicon carbide, gallium nitride, gallium arsenide, aluminum nitride, indium phosphide, cadmium telluride, zinc telluride, zinc selenide, cadmium arsenide, bismuth telluride, or combinations thereof.

12. The method of claim 10, wherein the inorganic material is a single group 14 element of the periodic table or a single group 16 element of the periodic table.

13. The method of claim 10, wherein the polishing pad comprises textile, polyurethane, polyethylene, polyester, polyvinylchloride, polycarbonate, polyamide, polyacrylate, polystyrene, polypropylene, nylon, or combinations thereof.

14. The method of claim 10, wherein the polished inorganic material has an overall surface roughness of less than 5 Å.

15. The method of claim 10, wherein a material removal rate of the polishing is greater than 0.2 microns/hr.