CLAIMS

1. A chemical mechanical polishing aqueous dispersion comprising (A) silica particles that include at least one functional group selected from a group consisting of a sulfo group and salts thereof, and (B) an acidic compound.

2. The chemical mechanical polishing aqueous dispersion according to claim 1, wherein the acidic compound (B) is an organic acid.

3. The chemical mechanical polishing aqueous dispersion according to claim 1 or 2, the chemical mechanical polishing aqueous dispersion having a pH of 1 to 6.

4. The chemical mechanical polishing aqueous dispersion according to claim 3, wherein the silica particles (A) have a zeta potential of -20 mV or less in the chemical mechanical polishing aqueous dispersion.

5. The chemical mechanical polishing aqueous dispersion according to any one of claims 1 to 4, wherein the silica particles (A) have an average particle size measured by a dynamic light scattering method of 15 to 100 nm.

6. The chemical mechanical polishing aqueous dispersion according to any one of claims 1 to 5, the chemical mechanical polishing aqueous dispersion being used to polish a substrate that is used together with another substrate when producing a semiconductor device, and is positively charged during chemical mechanical polishing.

7. The chemical mechanical polishing aqueous dispersion according to claim 6, wherein the substrate that is positively charged during chemical mechanical polishing is

a silicon nitride film.

8. A chemical mechanical polishing method comprising polishing a substrate using the chemical mechanical polishing aqueous dispersion according to any one of claims 1 to 7, the substrate being used together with another substrate when producing a semiconductor device, and positively charged during chemical mechanical polishing.

CLAIMS

1. A chemical mechanical polishing aqueous dispersion comprising (A) silica particles and (B) an acidic compound; the chemical mechanical aqueous dispersion is characterized in that the silica particles have a configuration in which at least one functional group selected from a group consisting of a sulfo group and salts thereof is covalently bonded to the surface thereof.

2. The chemical mechanical polishing aqueous dispersion according to claim 1, wherein the acidic compound (B) is an organic acid.

3. The chemical mechanical polishing aqueous dispersion according to claim 1 or 2, the chemical mechanical polishing aqueous dispersion having a pH of 1 to 6.

4. The chemical mechanical polishing aqueous dispersion according to claim 3, wherein the silica particles (A) have a zeta potential of -20 mV or less in the chemical mechanical polishing aqueous dispersion.

5. The chemical mechanical polishing aqueous dispersion according to any one of claims 1 to 4, wherein the silica particles (A) have an average particle size measured by a dynamic light scattering method of 15 to 100 nm.

6. A chemical mechanical polishing method comprising polishing a film using the chemical mechanical polishing aqueous dispersion according to any one of claims 1 to 5, wherein the chemical mechanical polishing aqueous dispersion is used to polish a film that is used together with another film when producing a semiconductor device, and is positively charged during chemical mechanical polishing.

7. The chemical mechanical polishing method according to claim 6, wherein the film that is positively charged during chemical mechanical polishing is a silicon nitride film.