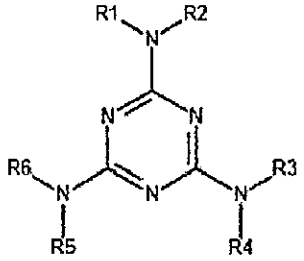
Claims

1. Use of a chemical mechanical polishing (CMP) composition (Q) for chemical mechanical polishing of a substrate (S) comprising (i) cobalt and/or (ii) a cobalt alloy, wherein the CMP composition (Q) comprises

   (A) Inorganic particles

   (B) a triazine derivative of the general formula (I)



(I)

   wherein R^1, R^2, R^3, R^4, R^5 and R^6 are independently from each other H, methyl, ethyl, propyl, butyl, pentyl, C_2-C_{10}-alkylcarboxylic acid, hydroxymethyl, vinyl or allyl

   (C) at least one amino acid,

   (D) at least one oxidizer

   (E) an aqueous medium and

   wherein the total amount of compound (B) of general formula (I) is in the range of from 0.003 wt.-% to 0.1 wt.-% based on the total weight of the respective CMP composition, and

   wherein the CMP composition (Q) has a pH of from 7 to 10.

2. Use of a CMP composition (Q) according to claim 1, wherein the inorganic particles (A) are colloidal inorganic particles.

3. Use of a CMP composition (Q) according to anyone of claims 1 to 2, wherein the colloidal inorganic particles are silica particles.

4. Use of a CMP composition (Q) according to anyone of the claims 1 to 3, wherein the compound (B) is of general formula (I) and wherein R^1, R^2, R^3, R^4, R^5 and R^6 are independently from each other H, methyl, ethyl, propyl, butyl, C_2-C_{10}-alkylcarboxylic acid, hydroxymethyl or allyl.

5. Use of a CMP composition (Q) according to anyone of the claims 1 to 4, wherein the compound (B) is of general formula (I) and wherein R^1, R^2, R^3, R^4, R^5 and R^6 are independently from each other H, methyl, tert-butyl, hexanoic acid, hydroxymethyl or allyl.

6. Use of a CMP composition (Q) according to anyone of the claims 1 to 5, wherein the at least one amino acids (C) is glycine, alanine, leucine, valine, cysteine, serine and proline or a salt thereof.

7. Use of a CMP composition (Q) according to anyone of the claims 1 to 6, wherein the total amount of the at least one amino acid (C) is in the range of from 0,1 wt.-% to 2.25 wt.-% based on the total weight of the respective CMP composition.

8. Use of a CMP composition (Q) according to anyone of claims 1 to 7, wherein the oxidizer comprises a peroxide.

9. Use of a CMP composition (Q) according to anyone of claims 1 to 8, wherein the oxidizer is hydrogen peroxide.

10. A chemical mechanical polishing (CMP) composition comprising:

    (A) colloidal silica particles in a total amount of from 0.01 wt.-% to 3 wt.-% based on the total weight of the respective CMP composition
    (B) at least one triazine derivative (B) selected from the group consisting of melamine, 6,6',6"-(1,3,5-Triazine-2,4,6-triyltriimino)trihexanoic acid, 2,4,6-trimethylmelamine, Pentamethylmelamine, {[bis(dimethylamino)-1,3,5-triazin-2-yl)](methyl)amino}-methanol, ({bis[(hydroxymethyl)amino)]-1,3,5-triazin-2-yl}amino)methanol, 2,4- diamino-6-diallylamino-1,3,5-triazine, ({bis[bis(hydroxymethyl)amino]-1,3,5-triazin-2-yl}(hydroxyl-methyl)amino)methanol, N2,N4-di-tert-butyl-1,3,5-triazine-2,4,6-triamine and N2,N4-bis(prop-2-en-1-yl)-1,3,5-triazine-2,4,6-triamine, in a total amount of from 0.003 wt.-% to 0.1 wt.-% based on the total weight of the respective CMP composition
    (C) at least one amino acids (C) selected from the group consisting of glycine, alanine, leucine, valine, cysteine, serine and proline or a salt thereof, in a total amount of from 0,2 wt.-% to 0,9 wt.-% based on the total weight of the respective CMP composition
    (D) hydrogen peroxide in a total amount of from 0,2 wt.-% to 2 wt.-% based on the total weight of the respective CMP composition.
    (E) an aqueous medium,

    wherein the CMP composition (Q) has a pH of from 7.2 to 9.4.

11. A process for the manufacture of a semiconductor device comprising the chemical mechanical polishing of a substrate (S) used in the semiconductor industry wherein the substrate (S) comprises
    (i) cobalt and/or
    (ii) a cobalt alloy
    in the presence of a CMP composition (Q) as defined in anyone of the claims 1 to 10.

12. The process according to claim 11, wherein the static etch rate (SER) of cobalt is below 100 Å/min.

13. The process according to anyone of the claims 11 to 12, wherein the cobalt material removal rate (MRR) is adjusted to a range of from 300 to 6000 Å/min.