What is claimed is:

1. A polishing composition for polishing a silicon-germanium alloy substrate, comprising:

abrasive particles;

a compound ~~having hexavalent molybdenum or a pentavalent vanadium~~ selected from the group consisting of molybdic acid, vanadium pentoxide, sodium metavanadate, and sodium vanadate, for carrying out a catalytic reaction and an oxidation reaction directly to the silicon-germanium alloy substrate; and

a carrier solvent, wherein a content of the abrasive particles is in a range from 0.01 wt% to 5 wt%, and a content of the compound having hexavalent molybdenum or pentavalent vanadium is in a range from 0.01 wt% to 1.0 wt%~~.~~;

wherein the polishing composition further comprises an anionic additive, a content of which is in a range from 0.01wt% to 1.0 wt%;

wherein the polishing composition further comprises a halogen oxides compound or salts thereof, and a content of the halogen oxides compound or salts thereof is in a range from 0.05 wt % to 5 wt%; and

wherein a static etching rate of the silicon-germanium substrate is 0 Å/min.

~~2. The polishing composition as claimed in claim 1, wherein the polishing composition further comprises an anionic additive, a content of which is in a range from 0.01wt% to1.0 wt%.~~

~~3. The polishing composition as claimed in claim 2, wherein the polishing composition further comprises a halogen oxides compound or salts thereof, wherein a content of the halogen oxides compound or salts thereof is in a range from 0.05 wt % to 5 wt%.~~

~~4~~2. The polishing composition as claimed in claim 1, wherein the abrasive particles are selected from colloidal silica or fumed silica.

~~5. The polishing composition as claimed in claim 2, wherein the abrasive particles are selected from colloidal silica or fumed silica.~~

~~6. The polishing composition as claimed in claim 3, wherein the abrasive particles are selected from colloidal silica or fumed silica.~~

~~7. The polishing composition as claimed in claim 1, wherein the compound having hexavalent~~

~~molybdenum or pentavalent vanadium is selected from the group consisting of molybdenum trioxide, molybdic acid, phosphomolybdic acid, vanadium pentoxide, sodium metavanadate, and sodium vanadate.~~

~~8. The polishing composition as claimed in claim 2, wherein the compound with hexavalent molybdenum or pentavalent vanadium is selected from the group consisting of molybdenum trioxide, molybdic acid, phosphomolybdic acid, vanadium pentoxide, sodium metavanadate, and sodium vanadate.~~

~~9. The polishing composition as claimed in claim 3, wherein the compound with hexavalent molybdenum or pentavalent vanadium is selected from the group consisting of molybdenum trioxide, molybdic acid, phosphomolybdic acid, vanadium pentoxide, sodium metavanadate, and sodium vanadate.~~

~~10~~3. The polishing composition as claimed in claim ~~2~~1, wherein the anionic additive is selected from the group consisting of potassium fluoride, sodium fluoride, ammonium fluoride, trifluoroacetic acid, potassium trifluoroacetate, and sodium trifluoroacetate.

~~11. The polishing composition as claimed in claim 3, wherein the anionic additive is selected from the group consisting of potassium fluoride, sodium fluoride, ammonium fluoride, trifluoroacetic acid, potassium trifluoroacetate, and sodium trifluoroacetate.~~

~~12~~4. The polishing composition as claimed in claim ~~3~~1, wherein the halogen oxides compound or salts thereof is selected from the group consisting of ~~potassium periodate, potassium iodate,~~ potassium perchlorate, sodium perchlorate, ~~potassium chlorate,~~ sodium chlorate, and sodium hypochlorite.

~~13~~5. The polishing composition as claimed in claim 1, wherein the carrier solvent comprises water.

~~14. The polishing composition as claimed in claim 2 wherein the carrier solvent comprises water.~~

~~15. The polishing composition as claimed in claim 3, wherein the carrier solvent comprises water.~~

~~16~~6. The polishing composition as claimed in claim 1, wherein the polishing composition has a pH value in a range of 7 to 12.

~~17. The polishing composition as claimed in claim 2, wherein the polishing composition has a pH value in a range of 7 to 12.~~

~~18. The polishing composition as claimed in claim 3, wherein the polishing composition has a pH value in a range of 7 to 12.~~

~~19~~7. The polishing composition as claimed in claim 1, wherein the polishing composition is used for a chemical mechanical polishing to a silicon-germanium substrate, a silicon substrate, and a silicon dioxide substrate.

~~20. The polishing composition as claimed in claim 2, wherein the polishing composition is used for a chemical mechanical polishing to a silicon-germanium substrate, a silicon substrate, and a silicon dioxide substrate.~~

~~21. The polishing composition as claimed in claim 3, wherein the polishing composition is used for a chemical mechanical polishing to a silicon-germanium substrate, a silicon substrate, and a silicon dioxide substrate.~~

~~22~~8. The polishing composition as claimed in claim ~~19~~7, wherein a content of germanium in the silicon-germanium substrate is in a range from 10% to 80%.

~~23. The polishing composition as claimed in claim 20, wherein a content of germanium in the silicon-germanium substrate is in a range from 10% to 80%.~~

~~24. The polishing composition as claimed in claim 21, wherein a content of germanium in the silicon-germanium substrate is in a range from 10% to 80%.~~

~~25. The polishing composition as claimed in claim 22, wherein a static etching rate of the silicon-germanium substrate is 0 Å/min.~~

~~26. The polishing composition as claimed in claim 23, wherein a static etching rate of the silicon-germanium substrate is 0 Å/min.~~

~~27. The polishing composition as claimed in claim 24, wherein a static etching rate of the silicon-germanium substrate is 0 Å/min.~~

9. A polishing composition for polishing a silicon-germanium alloy substrate, comprising:

abrasive particles;

a compound selected from the group consisting of molybdic acid, vanadium pentoxide,

sodium metavanadate, and sodium vanadate, for carrying out a catalytic reaction and an oxidation reaction directly to the silicon-germanium alloy substrate; and

a carrier solvent, wherein a content of the abrasive particles is in a range from 0.01 wt% to 5 wt%, and a content of the compound having hexavalent molybdenum or pentavalent vanadium is in a range from 0.01 wt% to 1.0 wt%;

wherein the polishing composition further comprises an anionic additive, a content of which is in a range from 0.01wt% to 1.0 wt%;

wherein the polishing composition further comprises a halogen oxides compound or salts thereof, and a content of the halogen oxides compound or salts thereof is in a range from 0.05 wt% to 5 wt%; and

wherein the polishing composition does not comprise hydrogen peroxide.