[CLAIMS]

[Claim 1]

A coating liquid for forming an oxide, the coating liquid comprising:

silicon (Si); ~~and~~

B element, which is at least one alkaline earth metal~~,~~; and

manganese (Mn),

wherein when a concentration of an element of the Si is denoted by C_A mg/L and a total of concentrations of the B element is denoted by C_B mg/L, a total of concentrations of sodium (Na) and potassium (K) in the coating liquid is $(C_A+C_B)/(1\times10^2)$ mg/L or less and a total of concentrations of chromium (Cr), molybdenum (Mo), manganese (Mn), iron (Fe), cobalt (Co), nickel (Ni), and copper (Cu) in the coating liquid is $(C_A+C_B)/(1\times10^2)$ mg/L or less.

[Claim 2]

The coating liquid for forming an oxide according to claim 1, wherein when the concentration of the element of the Si is denoted by C_A mg/L and the total of concentrations of the B element is denoted by C_B mg/L, the total of concentrations of sodium (Na) and potassium (K) in the coating liquid is $(C_A+C_B)/(1\times10^4)$ mg/L or less and the total of concentrations of chromium (Cr), molybdenum (Mo), manganese (Mn), iron (Fe), cobalt (Co), nickel (Ni), and copper (Cu) in the coating liquid is $(C_A+C_B)/(1\times10^4)$ mg/L or less.

[Claim 3]

The coating liquid for forming an oxide according to claim 1 or 2, wherein the coating liquid further comprises C element, which is at least one

selected from the group consisting of aluminium (Al) and boron (B).

[Claim 4]

The coating liquid for forming an oxide according to any one of claims 1 to 3, wherein the coating liquid comprises at least one selected from the group consisting of inorganic salts of the Si or the B element, oxides of the Si or the B element, hydroxides of the Si or the B element, halides of the Si or the B element, metal complexes of the Si or the B element, and organic salts of the Si or the B element.

[Claim 5]

The coating liquid for forming an oxide according to claim 4, wherein the inorganic salt comprises at least one selected from the group consisting of nitrates, sulfates, carbonates, acetates, and phosphates.

[Claim 6]

The coating liquid for forming an oxide according to claim 4, wherein the halide comprises at least one selected from the group consisting of fluorides, chlorides, bromides, and iodides.

[Claim 7]

The coating liquid for forming an oxide according to claim 4, wherein the organic salt comprises at least one selected from the group consisting of carboxylates, carbolic acid, and derivatives thereof.

[Claim 8]

A method for producing an oxide film, the method comprising:

coating and heat treating the coating liquid for forming an oxide according to any one of claims 1 to 7, to obtain the oxide film.

[Claim 9]

A method for producing a field-effect transistor, the method comprising: forming an oxide film using the coating liquid for forming an oxide according to any one of claims 1 to 7,

wherein the field-effect transistor comprises a gate insulating film, and the gate insulating film comprises the oxide film.

[Claim 10]

A method for producing a field-effect transistor, the method comprising: forming an oxide film using the coating liquid for forming an oxide according to any one of claims 1 to 7,

wherein the field-effect transistor comprises: a gate electrode; a source electrode and a drain electrode; a semiconductor layer; a gate insulating layer; and a passivation layer, and the passivation layer comprises the oxide film.