CLAIMS:

1. A method of manufacturing a solar cell, comprising ~~the~~ steps of:

(i) forming an SiNx film over ~~a second principal surface~~a back surface of an n-type semiconductor substrate;

(ii) forming a texture on a light-receiving surface of the n-type semiconductor substrate by immersion of the substrate in a heated alkali solution;

(iii) forming a p-type diffusion layer over ~~a first principal surface~~the light-receiving surface of the n-type semiconductor substrate ~~after the SiNx film forming step~~; and

(iv) forming over the p-type diffusion layer a passivation film composed of an SiO_2 film by a thermal oxidation method or an aluminum oxide film by an atomic layer deposition method,

wherein the SiNx film serves as a treatment mask during the texture formation in step (ii), and as an oxidation mask during the formation of the SiO_2 film or the aluminum oxide film in step (iv).

2. The method according to claim 1, wherein ~~the~~ a thickness of the SiNx film is at least 50 nm.

~~3. The method according to claim 1 or 2, further comprising a step of forming a texture on the first principal surface of the n-type semiconductor substrate, after the SiNx film forming step and before the diffusion layer forming step.~~

43. The method according to any one of claims 1 to ~~3~~2, further comprising a step of forming an anti-reflection film over the passivation film.

~~54~~. A method of manufacturing a solar cell, comprising ~~the~~ steps of:

(i) forming an n-type diffusion layer over ~~a second principal surface~~a back surface of a p-type semiconductor substrate;

(ii) forming an SiNx film over the n-type diffusion layer; ~~and~~

(iii) forming a texture on a light-receiving surface of the p-type semiconductor substrate by immersion of the substrate in a heated alkali solution; and

(iv) forming over ~~a first principal surface~~the light-receiving surface of the p-type semiconductor substrate a passivation film composed of an

SiO_2 film by a thermal oxidation method or an aluminum oxide film by an atomic layer deposition method, ~~after the SiNx film forming step.~~

wherein the SiNx film serves as a treatment mask during the texture formation in step (iii), and as an oxidation mask during the formation of the SiO_2 film or the aluminum oxide film in step (iv).

~~6~~5. The method according to claim ~~5~~4, wherein ~~the~~ a thickness of the SiNx film is at least 50 nm.

~~7. The method according to claim 5 or 6, further comprising a step of forming a texture on the first principal surface of the p-type semiconductor substrate, after the SiNx film forming step and before the passivation film forming step.~~

~~8~~6. The method according to any one of claims ~~5~~4 to ~~7~~5, further comprising a step of forming an anti-reflection film over the passivation film.

~~9~~7. A solar cell comprising:

an n-type semiconductor substrate having a texture only on a light-receiving surface;

an SiNx film formed over ~~a second principal surface~~a back surface of ~~an~~the n-type semiconductor substrate;

a p-type diffusion layer formed over ~~a first principal surface~~the light-receiving surface of the n-type semiconductor substrate; and

a passivation film formed over the p-type diffusion layer and composed of an SiO_2 film or an aluminum oxide film,

the solar cell being manufactured by the solar cell manufacturing method according to any one of claims 1 to ~~4~~3.

~~108~~8. A solar cell comprising:

a p-type semiconductor substrate having a texture only on a light-receiving surface;

an n-type diffusion layer formed over ~~a second principal surface~~a back surface of ~~a~~ the p-type semiconductor substrate;

an SiNx film formed over the n-type diffusion layer; and

a passivation film formed over ~~a first principal surface~~the light-receiving surface of the p-type semiconductor substrate and composed of an SiO_2 film or an aluminum oxide film,

the solar cell being manufactured by the solar cell manufacturing method according to any one of claims ~~5~~4 to ~~8~~6.