

ABSTRACT

There is provided a technique that includes (a) forming a first film having a first thickness on an underlayer by supplying a first process gas not including oxidizing gas to a substrate, wherein the first film contains silicon, carbon, and nitrogen and does not contain oxygen, and the underlayer is exposed on a surface of the substrate and is at least one selected from the group of a conductive metal-element-containing film and a nitride film; and (b) forming a second film having a second thickness larger than the first thickness on the first film by supplying a second process gas including oxidizing gas to the substrate, wherein the second film contains silicon, oxygen, and nitrogen, and wherein in (b), oxygen atoms derived from the oxidizing gas and diffuse from a surface of the first film toward the underlayer are absorbed by the first film and the first film is modified.

Figure 4