ABSTRACT

There is provided a technique that includes: loading a substrate having a tungsten film formed on a surface of the substrate into a process chamber; generating reactive species by plasma-exciting a processing gas containing hydrogen and oxygen; and modifying the tungsten film by supplying the reactive species to the substrate, wherein in the act of modifying the tungsten film, the tungsten film is modified such that a crystal grain size of tungsten constituting the tungsten film is larger than that before performing the act of modifying the tungsten.

FIG. 1