METHOD OF PROCESSING SUBSTRATE, METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE, SUBSTRATE PROCESSING APPARATUS, AND PROGRAM

ABSTRACT

There is provided a technique that includes: forming a multilayer film with a predetermined thickness on the substrate by performing a cycle a predetermined number of times, the cycle including: (a) depositing a primitive film by exposing the substrate to a precursor gas; and (b) exposing the substrate to a crystal growth inhibition gas or a predetermined gas that forms a film with a different film quality from the primitive film, wherein the predetermined number of times is set such that an absolute value or a gradient of a residual stress of the multilayer film after annealing the multilayer film is smaller than an allowable value.

FIGS. 4A and 4B