

ABSTRACT

There is provided a technique that includes: forming a film containing silicon, a predetermined element, and nitrogen on a substrate by performing a cycle a predetermined number of times, the cycle including: (a) forming a first layer by supplying a first gas containing silicon to the substrate; (b) forming a second layer by supplying a second gas containing silicon and differing in molecular structure from the first gas, to the substrate; (c) supplying a third gas containing the predetermined element to the substrate; and (d) modifying the first layer and the second layer by supplying a fourth gas containing nitrogen to the substrate, wherein an element capable of forming defects in the film is used as the predetermined element, and wherein in the cycle, (a) to (d) are performed in an order of: (a), (c), (b), and (d); (c), (a), (b), and (d); or (c), (a), (c), (b), and (d).

FIG. 4