

ABSTRACT

There is provided a configuration which improves an in-plane film thickness uniformity of a film formed on a substrate. There is included that a process gas nozzle configured to supply a process gas to a process chamber that processes a substrate; an inert gas nozzle arranged to be spaced apart by a predetermined distance from the process gas nozzle in a circumferential direction of the substrate and configured to supply an inert gas to the process chamber; and a reaction tube defining the process chamber therein and including a first protrusion protruding outward to accommodate the process gas nozzle and a second protrusion protruding outward to accommodate the inert gas nozzle, wherein the inert gas supplied from the inert gas nozzle is supplied toward the process gas nozzle to cause a flow direction of the process gas to be oriented toward the substrate.

FIG. 2