SUBSTRATE PROCESSING APPARATUS, METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE AND PROGRAM

[ABSTRACT]

Described herein is a technique capable of improving a film uniformity. According to one aspect thereof, there is provided a substrate processing apparatus including: a substrate retainer including a product wafer support region, an upper wafer support region and a lower wafer support region; a process chamber; a first gas supplier, a second gas supplier and a third gas supplier; and an exhaust system. The first gas supplier includes a first injector provided with a plurality of first supply holes capable of supplying a dilution gas therethrough at least to the upper wafer support region. The second gas supplier includes a second injector provided with a plurality of second supply holes capable of supplying a source gas therethrough to the product wafer support region. The third gas supplier includes a third injector provided with a plurality of third supply holes capable of supplying the dilution gas therethrough at least to the lower wafer support region. The first injector, the second injector and the third injector are provided in a gas supply area formed at a location in the process chamber facing the exhaust system, and the second injector is interposed between the first injector and the third injector.

FIGS. 4A and 4B