ABSTRACT

The present invention relates to the field of equipment in semiconductor production, and in particular to a substrate processing apparatus. The apparatus comprises a vacuum chamber, a process chamber, and a controller. A vacuum manipulator mechanism is arranged in the vacuum chamber, and the process chamber is arranged on the outer periphery of the vacuum chamber. The vacuum manipulator mechanism comprises at least two layers of first bearing portions stacked up and down, and the at least two layers of first bearing portions are used for taking and placing at least two substrates. At least two process treatment devices are arranged in the process chamber, each process treatment device comprises pins, and the pins are used for carrying the substrate. The controller is used for controlling the vacuum manipulator mechanism to sequentially take and place the at least two substrates according to different distance values between the top ends of the pins in each process treatment device and the bottom of the process chamber. The transportation efficiency of the substrates is thereby improved.