

WHAT IS CLAIMED IS:

1.

An ion implanting apparatus, comprising

5

a vacuum chamber;

an ion irradiating unit for irradiating ions into the
vacuum chamber;

a substrate holder for holding an object to be processed
in an irradiating range of ions inside the vacuum chamber in
10 which the ions are irradiated;

an object to be measured, which is arranged in the
irradiating range of ions inside the vacuum chamber;

a temperature measuring unit for measuring the
temperature of the object to be measured when the ions are
15 irradiated on the object to be measured and on the object to
be processed; and

a control unit which is connected to the temperature
measuring unit,

wherein a relationship between a temperature of the
20 object to be measured and a number of atoms to be implanted into
the object to be processed is stored in the control unit, when
the ions are irradiated,

wherein the number of atoms implanted into the object to
be processed is being determined from the temperature measured
25 by the temperature measuring unit, and when the determined

number of atoms reaches the predetermined number of the atoms,
irradiation of the ions on the object to be processed and the
object to be measured is being terminated.

2.

5 The ion implanting apparatus as set forth in claim 1,
wherein the object to be measured is arranged spaced apart from
the object to be processed.

3.

10 The ion implanting apparatus as set forth in claim 2,
wherein the temperature measuring unit includes a sensor
contacted with the object to be measured, and the temperature
of the object to be measured is being detected by the sensor.

What is claimed is:

1. An ion implanting apparatus, comprising
a vacuum chamber;
an ion irradiating unit for irradiating ions into the vacuum chamber;
a substrate holder for holding an object to be processed in an irradiating range of ions inside the vacuum chamber in which the ions are irradiated;
an object to be measured, which is arranged in the irradiating range of ions inside the vacuum chamber;
a temperature measuring unit for measuring the temperature of the object to be measured when the ions are irradiated on the object to be measured and on the object to be processed together; and
a control unit which is connected to the temperature measuring unit,
wherein the object to be measured and the object to be processed are both arranged in the ion irradiation range, when the ions are irradiated onto the object to be processed, the ions and neutralized particles are made incident to both of the object to be processed and the object to be measured, to raise temperatures,
wherein a relationship between a temperature of the object to be measured and a number of atoms to be implanted into the object to be processed is stored in the control unit, When the ions are irradiated,
wherein the number of atoms implanted into the object to be processed is being determined from the temperature measured by the temperature measuring unit, and when the determined number of atoms reaches the predetermined number of the atoms, irradiation of the ions on the object to be processed and the object to be measured is being terminated.
2. The ion implanting apparatus as set forth in claim 1, wherein the object to be measured is arranged spaced apart from the object to be processed.
3. The ion implanting apparatus as set forth in claim 2, wherein the temperature measuring unit includes a sensor contacted with the object to be measured, and the temperature of the object to be measured is being detected by the sensor.