

CLAIMS

1. An apparatus for processing a wafer, the apparatus
5 comprising:
a rotatable chuck for receiving and rotating a wafer;
a heating device arranged to heat a wafer received by the
rotatable chuck;
a plate that is transparent to radiation emitted by the
10 heating device; and
a plate holder that holds an outer periphery of the
plate, so as to mount the plate in the plate holder;
wherein the plate holder is mountable in the apparatus to
position the plate between the heating device and a wafer when
15 the wafer is received by the rotatable chuck.
2. The apparatus according to claim 1, wherein the plate
holder has a plurality of through holes or openings for
mounting the plate holder in the apparatus.
- 20 3. The apparatus according to claim 2, wherein the plate
holder is fastened to another part of the apparatus by
fasteners that pass through the plurality of through holes or
openings in the plate holder.
- 25 4. The apparatus according to claim 2 or 3, wherein the
plate and plate holder are parts of a housing that surrounds
the heating device.
- 30 5. The apparatus according to claim 4, wherein the plate
holder is fastened to another part of the housing by fasteners
that pass through the plurality of through holes or openings
in the plate holder.

6. The apparatus according to claim 4 or claim 5, wherein the housing comprises a lower shell positioned below the heating device, and wherein the plate holder is fastened to an upper surface of the lower shell to surround the heating device.

7. The apparatus according to one of claims 2 to 6, wherein the apparatus comprises holding pins for holding the wafer, and wherein the holding pins pass through the plurality of through holes or openings in the plate holder.

8. The apparatus according to any one of the previous claims, wherein the plate holder clamps the outer periphery of the plate.

9. The apparatus according to any one of the previous claims, wherein some or all of an outer edge of the plate is at an angle other than 90 degrees relative to a front surface of the plate.

10. The apparatus according to any of the previous claims, wherein the outer periphery of the plate is bevelled or chamfered or stepped.

11. The apparatus according to claim 10, wherein an angle of a bevelled or chamfered portion of the outer periphery is between 30 and 80 degrees relative to a top surface of the plate.

12. The apparatus according to claim 10 or 11, wherein:
the plate holder comprises upper and lower parts for clamping the outer periphery of the plate therebetween;
one of the upper part and the lower part has a first clamping surface that has a shape that is complementary to the

bevelled or chamfered or stepped outer periphery of the plate;
and

the first clamping surface contacts the bevelled or
chamfered or stepped outer periphery of the plate.

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13. The apparatus according to claim 12, wherein a groove is
located in the first clamping surface, and a sealing element
is located in the groove and forms a seal against the bevelled
or chamfered or stepped periphery of the plate.

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14. The apparatus according to claim 12 or claim 13, wherein
another one of the upper part and lower part has a second
clamping surface that contacts a surface of the plate, and the
plate is clamped between the first clamping surface and the
second clamping surface.

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15. The apparatus according to any one of claims 12 to 14,
wherein:

the lower part of the plate holder is made of metal;

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and/or

the upper part of the plate holder is made of plastic.

16. The apparatus according to any one of claims 12 to 15,
wherein the upper part and lower part of the plate holder are
fastened together using fasteners to clamp the bevelled or
chamfered or stepped outer periphery of the plate
therebetween.

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17. The apparatus according to any one of claims 12 to 16,
wherein a surface of the lower part on which radiation emitted
by the heating device is incident is reflective.

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18. The apparatus according to any previous claim, wherein a
surface of the plate is coated with an antireflective coating.

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19. A plate for use in an apparatus for processing a wafer, wherein the plate is transparent to one or more wavelengths of light, and wherein the plate has a bevelled or chamfered or stepped outer periphery.

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20. The plate according to claim 19, wherein an angle of a bevelled or chamfered portion of the outer periphery is between 30 and 80 degrees relative to a top surface of the plate.

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21. The plate according to claim 19 or 20, wherein the plate is transparent to light having a maximum intensity in a wavelength range from 380nm to 650nm.

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22. The plate according to any one of claims 19 to 21, wherein the plate is transparent to blue light.

23. The plate according to any one of claims 19 to 22, wherein the plate has a diameter of less than 300 mm.

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24. The plate according to any one of claims 19 to 23, wherein the plate comprises sapphire.

25. The plate according to any one of claims 19 to 24, wherein a surface of the plate is coated with an antireflective coating.

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26. A plate holder for use in an apparatus for processing a wafer, wherein the plate holder is configured to hold an outer periphery of a plate, so as to mount the plate in the plate holder, and wherein the plate holder is configured to be mounted in the apparatus.

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27. The plate holder according to claim 26, wherein the plate holder comprises a plurality of through holes or openings for mounting the plate holder in the apparatus.

5 28. The plate holder according to claim 26 or 27, wherein the plate holder comprises an upper part and a lower part for clamping the outer periphery of the plate therebetween.

10 29. The plate holder according to claim 28, wherein one of the upper part and lower part has a first clamping surface that is configured to contact a bevelled or chamfered or stepped outer periphery of the plate.

15 30. The plate holder according to claim 29, wherein the first clamping surface has an angle of between 30 and 80 degrees.

31. The plate holder according to claim 29 or 30, wherein a groove for receiving a first sealing element is located in the first clamping surface.

20 32. The plate holder according to any one of claims 28 to 31, wherein another one of the lower part and the upper part has a second clamping surface for contacting a surface of the plate.

25 33. The plate holder according to any one of claims 26 to 32, wherein:

the lower part of the plate holder is made of metal;
and/or

the upper part of the plate holder is made of plastic.

30 34. The plate holder according to any one of claims 28 to 33, wherein the upper part and the lower part of the plate holder are fastened together using fasteners.

35. The plate holder according to any one of claims 28 to 34,
wherein a surface of the lower part is reflective.