Claims

1. A batch processing chamber, comprising:

a chamber body enclosing an internal volume, the chamber body having an opening formed through a bottom wall thereof;

a slit valve door configured to sealably close a loading port formed through the chamber body, the slit valve door comprising seals which engage an inner surface of the chamber body;

a cassette moveably disposed within the internal volume, the cassette configured to be raised to a first position to load a plurality of substrates therein, and lowered into a second position beneath the first position for processing;

a shaft disposed through the opening formed in the chamber body and coupled to the cassette;

a plug coupled to a bottom wall of the cassette, the plug comprising a downward-facing seal configured to engage with a top surface of the bottom wall of the chamber body when the cassette is in the second position, the seal circumscribing the opening and the shaft, and sealable against the bottom wall of the chamber body when the cassette is in the second position; and

a heater disposed in a sidewall of the chamber body and operable to maintain the chamber body at a temperature of greater than 290°C.

2. The batch processing chamber of claim 1, further comprising a hollow cylindrical shell disposed within the internal volume and having one or more heaters disposed on an inner surface of the hollow cylindrical shell.

3. The batch processing chamber of claim 1, further comprising a lid disposed on the cassette, the lid having a diameter greater than an outer diameter of the hollow cylindrical shell.

4. The batch processing chamber of claim 1, wherein the bottom wall of the chamber body comprises a stepped opening to accommodate the plug.

5. The batch processing chamber of claim 1, further comprising a thermal break disposed between the bottom wall of the cassette and the plug.

6. The batch processing chamber of claim 1, further comprising a cooling channel disposed within the plug.

7. The batch processing chamber of claim 1, wherein the bottom wall of the cassette comprises openings configured to allow a fluid to pass therethrough.

8. A batch processing chamber, comprising:

a chamber body enclosing an internal volume;

a slit valve door configured to sealably close a loading port formed through the chamber body, the slit valve door comprising seals which engage an inner surface of the chamber body;

a cassette moveably disposed within the internal volume, the cassette movable between a first position and a second position beneath the first position;

a hollow cylindrical shell disposed within the internal volume and surrounding the cassette when the cassette is in the second position;

a heater disposed in a sidewall of the chamber body and operable to maintain the chamber body at a temperature of greater than 290°C; and

an additional heater disposed between an inner surface of the hollow cylindrical shell and the cassette when the cassette is in the second position.

9. The batch processing chamber of claim 8, further comprising:

a plug coupled to a bottom wall of the cassette and configured to move up and down within the internal volume, the plug comprising:

a downward-facing seal configured to engage with a top surface of a bottom wall of the chamber body.

10. The batch processing chamber of claim 8, further comprising a lid disposed on the cassette, the lid having a diameter greater than an outer diameter of the hollow cylindrical shell.

11. The batch processing chamber of claim 8, wherein a bottom wall of the cassette comprises openings formed therethrough to allow a fluid to pass therethrough.

12. The batch processing chamber of claim 8, wherein a bottom wall of the chamber body comprises a stepped opening to accommodate the plug.

13. The batch processing chamber of claim 8, further comprising a thermal break disposed between a bottom wall of the cassette and the plug.

14. The batch processing chamber of claim 8, further comprising a cooling channel disposed within the plug.

15. The batch processing chamber of claim 8, further comprising a thermal break disposed between the bottom wall of the cassette and the plug, the thermal break comprising a capsulated cup.

16. A batch processing chamber, comprising:

a chamber body enclosing an internal volume, the chamber body having an opening formed through a bottom wall thereof;

a slit valve door configured to sealably close a loading port formed through the chamber body, the slit valve door comprising seals which engage an inner surface of the chamber body;

a cassette moveably disposed within the internal volume, the cassette configured to be raised to a first position to load a plurality of substrates therein, and lowered into a second position beneath the first position for processing;

a plug coupled to a bottom wall of the cassette, the plug comprising a downward-facing seal configured to engage with a top surface of the bottom wall of the chamber body when the cassette is in the second position, the seal circumscribing the opening, and sealable against the bottom wall of the chamber body when the cassette is in the second position;

a heater disposed in a sidewall of the chamber body and operable to maintain the chamber body at a temperature of greater than 290°C; and

an additional heater disposed within the internal volume.

17. The batch processing chamber of claim 16, further comprising a shaft disposed through the opening formed in the chamber body and coupled to the cassette.

18. The batch processing chamber of claim 16, further comprising a hollow cylindrical shell disposed within the internal volume, wherein the additional heater is disposed on an inner surface of the hollow cylindrical shell.

19. The batch processing chamber of claim 16, further comprising a thermal break disposed between the bottom wall of the cassette and the plug.

20. The batch processing chamber of claim 16, further comprising a cooling channel disposed within the plug.