

For instance, the steps may be performed in a differing order, or steps may be added, deleted, or modified.

Although exemplary implementations of the invention have been depicted and described in detail herein, it will be apparent to those skilled in the relevant art that various modifications, additions, substitutions, and the like can be made without departing from the spirit of the invention and these are therefore considered to be within the scope of the invention as defined in the following claims.

What is claimed is:

- 1. An apparatus, comprising:
  - a die structure that comprises a middle layer, a first outside layer, and a second outside layer;
    - wherein the middle layer comprises a cavity that holds an alkali metal, and wherein one of the first outside layer and the second outside layer comprises a channel that leads to the cavity; and
    - wherein the middle layer, the first outside layer, and the second outside layer comprise dies from one or more wafer substrates; and
    - wherein the channel that leads to the cavity comprises an opening on a surface of the one of the first outside layer and the second outside layer, and wherein a compression bond attaches a metal ring around the opening of the channel with a metal plug that fits within the opening of the metal ring and the channel to seal the cavity.
- 2. The apparatus of claim 1, wherein the die structure comprises one of a plurality of die structures generated from the one or more wafer substrates by micro-electromechanical system batch fabrication.
- 3. The apparatus of claim 1, wherein the die structure comprises one or more components that serve to add functionality of a die structure application to the die structure, and wherein the one or more components are coupled with the die structure.
- 4. The apparatus of claim 3, wherein die structure comprises a cesium-filled die structure, and wherein the die structure application comprises an atomic clock.

- 5. The apparatus of claim 1, wherein the middle layer, the first outside layer, and the second outside layer are anodically bonded together.
- 6. The apparatus of claim 1, wherein the middle layer comprises silicon and the first outside layer and the second outside layer comprise glass.
- 7. The apparatus of claim 6, wherein the alkali metal comprises cesium, and wherein the middle layer comprises one or more outer surfaces oxidized by phosphorus doped silicon dioxide.
- 8. The apparatus of claim 1, wherein the middle layer, the first outside layer, and the second outside layer comprise silicon.
- 9. The apparatus of claim 8, wherein one or more of the first outside layer and the second outside layer comprise one or more windows to facilitate an entrance and an exit of a laser light.
- 10. The apparatus of claim 1, wherein the middle layer, the first outside layer, and the second outside layer comprise glass.
- 11. The apparatus of claim 10, wherein a metal layer couples the middle layer with the first and second outside layers to promote an anodic bond between the middle layer and the first and second outside layers.
- 12. The apparatus of claim 1, wherein the die structure comprises a cube with sides less than or equal to two millimeters.
- 13. The apparatus of claim 1, wherein the alkali metal comprises cesium, and wherein the metal ring and the metal plug comprise a metal that does not react with cesium.
- 14. The apparatus of claim 13, wherein the metal ring and the metal plug are composed of cooper.
- 15. The apparatus of claim 13, wherein the metal ring and the metal plug comprise a platinum coating.
- 16. The apparatus of claim 15, wherein the platinum coating prevents oxidation.

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