CLAIMS

1. An imprint apparatus for performing an imprint process to each of a plurality of fields on a substrate by using a template to form a pattern in a formable material on the substrate, the apparatus comprising:

a substrate holder including a chucking region for a substrate and zones extending to an exposed surface of the chucking region; and

a gas controller that controls gas pressure within the chucking zones,

wherein the gas controller is configured to adjust pressures within the chucking zones to induce a convex curvature of a partial field at a periphery of the substrate , and wherein only a portion of an imprint area of the template overlaps the partial field.

2. The imprint apparatus of claim 1, wherein, during an initial contact of the template with the formable material within the partial field, the gas controller is further configured to apply a template backside pressure to the template.

3. The imprint apparatus of claim 2, wherein, after the initial contact of the template with the formable material within the partial field, the gas controller is further configured to reduce the template backside pressure.

4. The imprint apparatus of claim 1, wherein:

the gas controller is further configured to apply a first pressure to an outer zone of the chucking region, and apply a second pressure to an intermediate zone of the chucking region, wherein the first pressure is a vacuum pressure, and the second pressure is a positive gauge pressure.

5. The imprint apparatus of any one of claims 1 to 4, wherein the substrate holder further includes a recessed land adjacent to a periphery of the chucking region.

6. A method for performing an imprint process to each of a plurality of fields on a substrate by using a template to form a pattern in a formable material on the substrate, the method comprising:

providing a workpiece within an imprint apparatus, wherein the workpiece includes a substrate and a formable material overlying the substrate;

modulating the substrate to form a convex shape of the substrate adjacent to a periphery of the substrate; and

contacting a template with the formable material within a partial field having a periphery, wherein only a portion of an imprint area of the template overlaps the partial field and wherein contacting includes initially contacting the template with the formable material at a location spaced apart from the periphery of the partial field.

7. The method of claim 6, further comprising dispensing the formable material over the substrate, wherein different areas of the substrate have different areal densities of formable material.

8. The method of claim 6, further comprising spreading the formable material within the partial field after initially contacting the template with the formable material.

9. The method of any one of claims 6 to 8, wherein modulating the substrate is performed after dispensing the formable material.