WHAT IS CLAIMED IS:

1. A downhole tool, comprising:

an elongated base pipe; and

an expandable element disposed on the base pipe and radially expandable from a first configuration to a second configuration;

wherein the expandable element comprises a first lattice structure comprising:

a first plurality of connecting members;

a second plurality of connecting members movable relative to the first plurality of connecting members to allow the expandable element to radially expand from the first configuration to the second configuration; and

a plurality of cells, each of the cells being defined between at least two connecting members;

wherein each of the at least two connecting members is part of either the first plurality of connecting members or the second plurality of connecting members;

wherein the expandable element further comprises a second lattice structure defining an exterior skin of the expandable element, the exterior skin having a circumference; and

wherein the second lattice structure comprises:

a third plurality of connecting members; and

a fourth plurality of connecting members movable relative to the third

plurality of connecting members to allow the circumference of the exterior surface to expand when the expandable element radially expands from the first configuration to the second configuration.

2. The downhole tool of claim 1, wherein the first lattice structure is at least partially manufactured using an additive manufacturing process.

3. The downhole tool of claim 1,

wherein the downhole tool is a packer assembly that is adapted to extend within a preexisting structure, the pre-existing structure defining a circumferentially extending inner surface;

wherein, when the packer assembly extends within the pre-existing structure and the expandable element is in the first configuration, one or more of the cells in the plurality of cells defines a first volume;

wherein, when the packer assembly extends within the pre-existing structure and the expandable element is in the second configuration, the one or more of the cells in the plurality of cells defines a second volume that is greater than the first volume;

wherein the expandable element further comprises a swellable elastomer accommodated in one or more of the cells in the plurality of cells, the swellable elastomer expandable from a third volume that corresponds to the first volume to a fourth volume that

corresponds to the second volume; and wherein, when the packer assembly extends within the pre-existing structure and the expandable element is in the second configuration, the swellable elastomer is adapted to expand to the fourth volume to sealingly engage the inner surface.

4. The downhole tool of claim 1,

wherein, when the expandable element is in the first configuration, one or more of the cells in the plurality of cells defines a first volume;

wherein, when the expandable element is in the second configuration, one of more of the cells in the plurality of cells defines a second volume that is greater than the first volume;

wherein the expandable element further comprises a swellable elastomer

accommodated in one or more of the cells in the plurality of cells, the swellable elastomer expandable from a third volume that corresponds to the first volume to a fourth volume that corresponds to the second volume; and wherein the swellable elastomer is adapted to expand from the third volume to the fourth volume to cause the expandable element to radially expand from the first configuration to the second configuration.

5 The downhole tool of claim 1, wherein the downhole tool is a packer assembly and further comprises:

a first blocking member and a second blocking member, each of the first blocking member and the second blocking member adapted to exert an axial compression force on the expandable element; and

wherein the expandable element is adapted to radially expand from the first

configuration to the second configuration in response to the respective compression forces exerted by the first blocking member and the second blocking member.

6. The downhole tool of claim 1, wherein the first lattice structure comprises at least one of: a uniform lattice structure; a non-uniform lattice structure; and a conformal lattice.

7. The downhole tool of claim 1, wherein the elongated based pipe is adapted to extend within a pre-existing structure, the pre-existing structure defining a circumferentially extending inner surface; wherein an interior surface of the expandable element is in contact with the base pipe and an exterior surface of the expandable element is adapted to be in contact with the inner surface; and

wherein the expandable element is an anchor and the first lattice structure expands from the first configuration to the second configuration in response to an axial shear force applied to the expandable element.

8. The downhole tool of claim 1, wherein the first lattice structure is composed of a metal.

9. The downhole tool of claim 1, wherein the downhole tool is any one of: an expansion joint; a travel joint; an anchor; a screen filter; a seal bore; and a bridge plug.

10. A method comprising:

positioning a packer assembly between first and second zones of a wellbore, the packer assembly comprising:

an expandable element disposed on a base pipe, the expandable element comprising a first lattice structure that comprises:

a first plurality of connecting members;

a second plurality of connecting members movable relative to the first plurality of connecting members to allow the expandable element to radially expand from a first configuration to a second configuration; and

a plurality of cells, each of the cells within the plurality of cells being defined between at least two connecting members;

wherein each of the at least two connecting members is part of either the first plurality of connecting members or the second plurality of connecting members; and

expanding the expandable element in a radially outward direction to move the first plurality of connecting members relative to the second plurality of connecting members;

wherein the expandable element further comprises a second lattice structure defining an exterior skin of the expandable element, the exterior skin having a circumference;

wherein the second lattice structure comprises:

a third plurality of connecting members; and

a fourth plurality of connecting members movable relative to the third plurality of connecting members to allow the circumference of the exterior surface to expand when the expandable element radially expands from the first configuration to the second configuration; and wherein, in response to expanding the expandable element in the radially outward direction:

the circumference of the exterior skin expands; and

the third plurality of connecting members moves relative to the fourth plurality of connecting members.

11. The method of claim 10, wherein the first lattice structure is at least partially manufactured using an additive manufacturing process.

12. The method of claim 10, wherein, when the expandable element is in the first configuration, one of the cells in the plurality of cells defines a first volume;

wherein, when the expandable element is in the second configuration, the one of the cells in the plurality of cells defines a second volume that is greater than the first volume;

wherein the expandable element further comprises a swellable elastomer in one or more of the cells in the plurality of cells, the swellable elastomer expandable from a third volume that corresponds to the first volume to a fourth volume that corresponds to the second volume; and

wherein the method further comprises expanding the swellable elastomer from the third volume to the fourth volume to sealingly engage the inner surface of the wellbore.

13. The method of claim 10, wherein the packer assembly further comprises a first blocking member and a second blocking member, each of the first blocking member and the second blocking member being adapted to exert an axial compression force on the expandable element; and

wherein expanding the expandable element in a radially outward direction comprises axially compressing the expandable element using the first and second blocking member such that the expandable element expands radially outward.

14. The method of claim 10, wherein, when the expandable element is in the first configuration, one of the cells in the plurality of cells defines a first volume;

wherein, when the expandable element is in the second configuration, the one of the cells in the plurality of cells defines a second volume that is greater than the first volume;

wherein the expandable element further comprises a swellable elastomer in one or more of the cells in the plurality of cells, the swellable elastomer being

expandable from a third volume that corresponds to the first volume to a fourth volume that corresponds to the second volume; and

wherein expanding the expandable element in a radially outward direction comprises expanding the swellable elastomer from the third volume to the fourth volume.

15. The method of claim 10, wherein the first lattice structure is an auxetic lattice.

16. The method of claim 10, wherein the first lattice structure is composed of a metal.

17. The method of claim 10, wherein expanding the expandable element in a radially outward direction comprises capturing debris from downhole fluids within one or more of the cells in the plurality of cells.

18. The method of claim 10, wherein the first lattice structure comprises at least one of: a uniform lattice structure; a non-uniform lattice structure; and a conformal lattice.