What is claimed is:

1. An apparatus comprising:

a substrate supporting a plurality of meta-atoms each of which has at least one respective outer sidewall,

wherein an upper portion of the at least one sidewall of each of the meta-atoms is perpendicular to a surface of the substrate supporting the meta-atoms, and wherein a lower portion of the at least one sidewall of each of the meta-atoms slopes outwardly, the lower portion being adjacent an interface between the meta-atom and the surface of the substrate,

wherein the plurality of meta-atoms includes a first grouping of meta-atoms and a second grouping of meta-atoms, wherein an extent of an outward slope of each meta-atom in the first grouping is different from an extent of an outward slope of each meta-atom in the second grouping.

2. The apparatus of claim 1 wherein the lower portion of the at least one sidewall of each of the meta-atoms slants outwardly.

3. The apparatus of claim 1 wherein the lower portion of the at least one sidewall of each of the meta-atoms curves outwardly.

4. The apparatus of claim 1 wherein the lower portion of the at least one sidewall of each of the meta-atoms is concave-shaped.

5. The apparatus of claim 1 wherein a diameter of each respective one of the meta-atoms at the lower portion is greater than a diameter of the meta-atom at the upper portion of the meta-atom.

6. The apparatus of claim 1 wherein the lower portion of the at least one sidewall of each one of the meta-atoms extends less than fifty percent of the height of the meta-atom.

7. The apparatus of claim 6 wherein the lower portion of the at least one sidewall of each one of the meta-atoms extends no more than five percent of the height of the meta-atom.

8. The apparatus of any one claims 1-7 wherein the plurality of meta-atoms includes a first grouping of meta-atoms whose respective upper portions have a first diameter and a second grouping of meta-atoms whose respective upper portions have a second diameter that differs from the first diameter.

9. The apparatus of any one claims 1-7 wherein the plurality of meta-atoms includes a first grouping of meta-atoms arranged in a first density and a second grouping of meta-atoms arranged in a second density that differs from the first density.

10. The apparatus of any one of claims 1-9 wherein:

the substrate is composed of glass or fused silica, and

the meta-atoms are composed of silicon, titanium oxide, zinc oxide, aluminum zinc oxide, or a niobium oxide.

11. A method comprising:

providing a structure that includes a layer of a stratum material on a substrate, the structure further including a mask on the stratum material, the mask defining areas of the stratum material where meta-atoms are to be formed, each of the respective meta-atoms having at least one sidewall; and

performing an etch process that includes:

a first etch stage that removes portions of the stratum material such that trenches are etched into the stratum material to form an upper section of the at least one sidewall of each of the meta-atoms, the upper section being perpendicular to a surface of the substrate; and

a second etch stage that removes further portions of the stratum material to form a lower portion of the at least one sidewall of each of the

meta-atoms, the lower portion being adjacent an interface between the meta-atom and the surface of the substrate and sloping outwardly.

12. The method of claim 11 wherein each of the first and second etch stages is part of a plasma etch process.

13. The method of claim 11 wherein the first etch stage includes a plasma etch having an average flow of a passivation gas and an average flow of an etchant gas, and wherein the second etch stage includes a plasma etch in which at least one of an average flow of the passivation gas or an average flow of the etchant gas differs from the first etch stage.

14. The method of claim 13 wherein, in the second etch stage, the average flow of the passivation gas is greater than the average flow of the passivation gas during the first etch stage.

15. The method of claim 13 wherein, in the second etch stage, the average flow of the etchant gas is less than the average flow of the etchant gas during the first etch stage.

16. The method of any one of claims 12-15 wherein at least one of a plasma power or a bias toward the substrate during the second etch stage is less than during the first etch stage.

17. The method of claim 11 wherein the first etch stage includes a plasma etch and the second stage includes an isotropic etch.

18. The method of any one claims 11-17 wherein the meta-atoms include a first grouping of meta-atoms whose respective upper portions have a first diameter and a second grouping of meta-atoms whose respective upper portions have a second diameter that differs from the first diameter.

19. The method of any one claims 11-17 wherein the meta-atoms include a first grouping of meta-atoms arranged in a first density and a second grouping of meta-atoms arranged in a second density that differs from the first density.

20. The method of any one of claims 11-19 wherein:

the substrate is composed of glass or fused silica, and

the meta-atoms are composed of silicon, titanium oxide, zinc oxide, aluminum zinc oxide, or a niobium oxide.

21. The method of any one of claims 11-20 further including removing the mask.

22. The apparatus of claim 1, wherein a density of the first grouping of meta-atoms is lower than a density of the second grouping of meta-atoms.

23. The apparatus of claim 1, wherein a diameter of each meta-atom in the first grouping of meta-atoms is smaller than a diameter of each meta-atom in the second grouping of meta-atoms.

24. The apparatus of claim 1, wherein a density of the first grouping of meta-atoms is higher than a density of the second grouping of meta-atoms.

25. The apparatus of claim 1, wherein a diameter of each meta-atom in the first grouping of meta-atoms is larger than a diameter of each meta-atom in the second grouping of meta-atoms.