THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A synthetic biocidal surface comprising an array of disordered nanospikes, wherein said nanospikes are from 20nm to 150nm in diameter at half maximum height.

2. The surface of claims 1, wherein said surface is hydrophilic.

3. The surface of claim 1 or claim 2 wherein said nanospikes are from about 100 nm to about 600 nm in height.

4. The surface of any one of claims 1 to 3 wherein diameter of said nanospikes is greater at a base thereof than at a free end thereof.

5. The surface of any one of claims 1 to 4 wherein tips of said nanospikes are from about 4 nm to about 50 nm in diameter.

6. The surface of any one of claims 1 to 5 wherein the nanospikes are spaced from about 200 nm to about 700 nm apart from centre to centre.

7. The surface of any one of claims 1 to 6 wherein said nanospikes are relatively flexible to allow tips of adjacent nanospikes within said array to come together.

8. The surface of any one of claims 1 to 6 wherein Young's modulus of elasticity of the nanospikes is from about 10 GPa to about 300 GPa.

9. The surface of any one of claims 1 to 7 wherein at least some of the nanospikes are branched.

10. The surface of any one of claim 9 wherein branching is at or towards a free end of said nanospikes.

11. The surface of any one of claims 1 to 10 wherein a substrate from which said surface is formed comprises silicon and/or boron-doped silicon.

12. The surface of claim 11, wherein said surface comprises black silicon (b-Si).

13. The surface of any one of claims 1 to 10 wherein a substrate from which the surface is formed comprises a metal alloy.

14. The surface of any one of claims 1 to 13 wherein the surface comprises a composite material.

15. A method of producing a synthetic surface comprising an array of disordered nanospikes wherein said nanospikes are from 20nm to 150nm in diameter at half maximum height, the method comprising exposing a silicon comprising substrate surface to reactive-ion etching.

16. The method of claim 15 wherein the substrate comprises boron-doped silicon.

17. The method of either claim 15 or claim 16 wherein said reactive-ion etching (RIE) is carried out in SF_6 and O_2; and/or

carried out at a process pressure of from about 30mTorr to about 40mTorr and RIE power of from about 80W to about 120W.

18. A synthetic biocidal surface produced by the method of any one of claims 15 to 17.

19. A method of lysing, eliminating cells or reducing cellular survival wherein cells are exposed to a synthetic biocidal surface of any one of claims 1 to 14.

20. A device, tool, fitting or apparatus comprising a surface of any one of claims 1 to 14.