CLAIMS

1. A mesh assembly comprising:

a first mesh sheet and a second mesh sheet, wherein the second mesh sheet is stacked and rotated on top of and attached to the first mesh sheet;

the first mesh sheet comprising a plurality of first holes arranged according to a first pattern, wherein the first pattern comprises a plurality of first centric holes with a first surrounding holes;

the second mesh sheet comprising a plurality of second holes arranged according to a second pattern, wherein the second pattern comprises a plurality of second centric holes with a second surrounding holes; and

wherein the first and second centric holes are fully aligned and unobstructed and wherein the first surrounding holes are at least partially obstructed by the second mesh sheet for noise attenuation.

2. The mesh assembly of claim 1, wherein the first and second patterns further comprise patterns in which each hole is provided at a pre-determined distance from all neighboring holes.

3. The mesh assembly of claim 1, wherein each hole of the first mesh sheet and each hole of the second mesh sheet has a diameter in a range of 0.01 mm to 0.1 mm.

4. The mesh assembly of claim 1, wherein the first and second patterns comprise patterns in which an angle between a center of a hole and two corresponding centers of two neighboring holes of the hole is in a range of 30 degrees to 90 degrees.

5. The mesh assembly of claim 1, wherein the first and second patterns comprise repetitive pattern.

6. The mesh assembly of claim 1, wherein the first pattern and second pattern are identical.

7. The mesh assembly of claim 1, wherein the first surrounding holes comprise a first ring of holes surrounding the first centric hole that is fully obstructed by the second mesh sheet and a second ring of holes that is at least partially obstructed by the second mesh sheet forming marquis-shaped through holes with the second surrounding holes of the second pattern; and wherein the first mesh sheet and the second mesh sheet are rotated by a pre-determined angle with respect to the first and second patterns.

8. The mesh assembly of claim 7, wherein the pre-determined angle is in a range of -150 degrees to 150 degrees.

9. The mesh assembly of claim 1, wherein the first mesh sheet and/or the second mesh sheet are made from metal or polyethylene.

10. A computing system comprising:

an ultra-thin housing with an opening;

a fan; and

a mesh assembly provided between the fan and the opening for noise attenuation, the mesh assembly comprises:

a first mesh sheet and a second mesh sheet, wherein the second mesh sheet is stacked and rotated on top of and attached to the first mesh sheet;

the first mesh sheet comprising a plurality of first holes arranged according to a first pattern, wherein the first pattern comprises a plurality of first centric holes with a first surrounding holes;

the second mesh sheet comprising a plurality of second holes arranged according to a second pattern, wherein the second pattern comprises a plurality of second centric holes with a second surrounding holes; and

wherein the first and second centric holes are fully aligned and unobstructed and wherein the first surrounding holes are at least partially obstructed by the second pattern of the second mesh sheet.

11. A method for manufacturing a mesh assembly, the method comprising:

forming a first mesh sheet comprising a plurality of first holes arranged according to a first pattern, wherein the first pattern comprises a plurality of first centric holes with a first surrounding holes;

forming a second mesh comprising a plurality of second holes arranged according to a second pattern, wherein the second pattern comprises a plurality second centric holes with a second surrounding holes;

stacking and rotating the second mesh sheet on top of the first mesh sheet so that the first and second centric holes are fully aligned and unobstructed and wherein the first surrounding holes are at least partially obstructed by the second pattern of the second mesh sheet.

12. The method of claim 11, wherein the first and second patterns comprise patterns in which each hole is provided at a pre-determined distance from all neighboring holes.

13. The method of claim 11, wherein each hole of the first mesh sheet and each hole of the second mesh sheet has a diameter in a range of 0.01 mm to 0.1 mm.

14. The method of claim 11, wherein the first and second patterns comprise patterns in which an angle between a center of a hole and two corresponding centers of two neighboring holes of the hole is in a range of 30 degrees to 90 degrees.

15. The method of claim 11, wherein the first and second patterns comprise repetitive patterns.

16. The method of claim 11, wherein the first and second patterns are identical.

17. The method of claim 11, wherein the stacking of the second mesh sheet on top of the first mesh sheet causes the first surrounding holes of the first pattern and the second surrounding holes of the second pattern to form a first ring of holes of the plurality of first holes surrounding the first centric hole that is fully obstructed by the second mesh sheet and a second ring of holes that is at least partially obstructed by the second mesh sheet forming marquis-shaped through holes with the second surrounding holes of the second pattern; and wherein the first mesh sheet and the second mesh sheet are rotated by a pre-determined angle with respect to the first and second patterns.

18. The method of claim 17, wherein the pre-determined angle is in a range of -150 degrees to 150 degrees.