

What is claimed is:

1. A method for producing a porous, non-woven, polymeric nanofiber-containing, liquid filtration medium, the method comprising heating the porous, non-woven, nanofiber-containing liquid filtration medium to at least the glass transition temperature (T_g) but no more than the melting temperature (T_m) of the nanofibers for at least 1 hour.
2. The method of claim 1, wherein the liquid filtration medium is made by electrospinning a polymer solution or melt to produce a porous, non-woven, polymeric nanofiber mat.
3. The method of claim 1, wherein the liquid filtration medium resists changes in liquid permeability post-sterilization relative to a corresponding filtration medium that has not been heated to at least the glass transition temperature (T_g) but no more than the melting temperature (T_m) of the nanofibers for at least 1 hour prior to sterilization.
4. The method of claim 1, wherein the liquid filtration medium exhibits a bubble point pressure of 5 psi to 150 psi.
5. The method of claim 1, wherein the liquid filtration medium exhibits a log reduction value (LRV) of *Brevundimonas diminuta* of at least 1 as measured in accordance with ASTM F838-83.
6. The method of claim 1, wherein the liquid filtration medium has a porosity from about 80% to about 95%.
7. The method of claim 1, wherein the liquid filtration medium exhibits a liquid permeability greater than about 1000 LMH/psi.
8. The method of claim 1, wherein the liquid filtration medium exhibits no more than a 40% reduction in liquid permeability post-sterilization.
9. The method of claim 1, wherein the nanofibers have a fiber diameter from about 5 nm to about 1,000 nm.
10. The method of claim 1, wherein the liquid filtration medium comprises either 1) a symmetric nanofiber mat or 2) an asymmetric nanofiber mat that exhibits a varying fiber diameter across the thickness of nanofiber

mat such that the mean fiber diameter of one layer of the nanofiber mat is different than the other layers of nanofiber mat.

11. The method of claim 10, wherein the mean fiber diameter changes continuously from one layer of the asymmetric nanofiber mat to the other layer.
12. The method of claim 10, wherein the ratio of mean fiber diameter of one layer of the asymmetric nanofiber mat to the other layer is at least 1.15.
13. The method of claim 10, wherein the mean fiber diameter is about 5 nm to about 1,000 nm on at least one layer of the asymmetric nanofiber mat.
14. The method of claim 2, wherein the polymer is selected from: thermoplastic polymers, thermoset polymers, nylon, polyimide, aliphatic polyamide, aromatic polyamide, polysulfone, cellulose acetate, polyether sulfone, polyurethane, poly(urea urethane), polybenzimidazole, polyetherimide, polyacrylonitrile, poly(ethylene terephthalate), polypropylene, polyaniline, poly(ethylene oxide), poly(ethylene naphthalate), poly(butylene terephthalate), styrene butadiene rubber, polystyrene, poly(vinyl chloride), poly(vinyl alcohol), poly(vinylidene fluoride), poly(vinyl butylene) and copolymers, derivative compounds, or blends thereof.
15. The method of claim 14, wherein the polymer is aliphatic polyamide.
16. The method of claim 14, wherein the polymer is selected from: nylon-6, nylon-6,6, nylon 6,6-6,10, nylon-6 copolymers, nylon-6,6 copolymers, nylon 6,6-6,10 copolymers, and any mixture thereof.
17. The method of claim 14, wherein the polymer is nylon-6,6.
18. The method of claim 1, comprising heating the nanofiber mat from about 1°C to about 80°C below T_m .
19. The method of claim 18, comprising heating the nanofiber mat to about 56°C below T_m .
20. The method of claim 18, comprising heating the nanofiber mat to about 75°C below T_m .

21. The method of claim 1, comprising heating the nanofiber mat by about 100°C to about 200°C above T_g .
22. The method of claim 1, comprising heating the nanofiber mat in a non-oxidizing environment such as in an inert atmosphere oven.
23. The method of claim 1, comprising heating the nanofiber mat for at least about 1 hour to at least about 24 hours.
24. The method of claim 1, wherein the porous, non-woven, nanofiber-containing, liquid filtration medium is electrospun onto a surface of the porous or non-porous support.
25. A liquid filtration media made by the method of claim 1.
26. A liquid filtration device comprising the liquid filtration media of claim 25.