CLAIM(S):

1. A porous polymeric membrane comprising:
   (a) a first microporous surface;
   (b) a second microporousporous surface; and,
   (c) a bulk between the first surface and the second surface, wherein the bulk comprises at least a first set of a plurality of fibers and a second set of a plurality of fibers, wherein at least some fibers from the first set are continuous with some fibers from the second set, wherein the first set of fibers has a first average fiber diameter, and the second set of fibers has a second average fiber diameter, wherein the first average fiber diameter is at least 10% larger than the second average fiber diameter.

2. A porous polymeric membrane comprising:
   (a) a first microporous surface;
   (b) a second microporous surface; and,
   (c) a bulk between the first surface and the second surface, wherein the bulk comprises a reticulate network of at least first and second sets of a plurality of continuous fibers, wherein, in a cross-sectional view vertical to the porous surfaces, the first set of fibers has a first average fiber diameter, and the second set of fibers has a second average fiber diameter, wherein the first average fiber diameter is at least 10% larger than the second average fiber diameter.

3. The membrane of claim 1 or 2, wherein the first microporous skin surface and the second microporous skin surface are continuous with some of the first and second sets of fibers.

4. The membrane of any one of claims 1-3, wherein the first microporous skin surface has a surface porosity of at least about 17%.

5. The membrane of any one of claims 1-4, wherein the second microporous skin surface has a surface porosity of at least about 35%.

6. The membrane of any one of claims 3-5, wherein the first microporous skin surface and the second microporous skin surface each have a thickness of at least about 4 micrometers.

7. The membrane of any one of claims 3-6, wherein the first microporous skin surface and the second microporous skin surface each have a thickness of about 14 micrometers or less.

8. The membrane of any one of claims 1-7, wherein at least the set of fibers having the larger average fiber diameter are porous.

9. The membrane of any one of claims 1-8, wherein the first set of fibers has an average fiber diameter in the range of from about 8 μm to about 20 μm.

10. The membrane of any one of claims 1-9, wherein the first set of fibers has an average fiber diameter in the range of from about 10 μm to about 15 μm.

11. The membrane of any one of claims 1-10, wherein the second set of fibers has an average fiber diameter in the range of from about 0.1 μm to about 3 μm.

12. The membrane of any one of claims 1-11, having a mean flow pore size in the range of from about 3 to about 20 μm.

13. A method for processing a fluid comprising:
passing the fluid through the membrane of any one of claims 1-12.

14. The method of claim 13, wherein the fluid is an ink-containing fluid.

15. A method for making porous polymeric membranes including fibers comprising:
    (a) casting a polymer solution on a support;
    (b) inducing thermal phase inversion of the solution; and,
    (c) quenching the solution, including quenching an upper portion of the solution before the solution reaches thermal equilibrium.

CLAIM(S):

1. A porous polymeric membrane comprising:
   (a) a first microporous surface;
   (b) a second microporous surface; and,
   (c) a bulk between the first surface and the second surface, wherein the bulk comprises at least a first set of a plurality of fibers and a second set of a plurality of fibers, wherein at least some fibers from the first set are continuous with some fibers from the second set, wherein the first set of fibers has a first average fiber diameter and the fibers are porous, and the second set of fibers has a second average fiber diameter, wherein the first average fiber diameter is at least 10% larger than the second average fiber diameter.

2. The membrane of claim 1, wherein the bulk comprises a reticulate network of at least first and second sets of a plurality of continuous fibers.

3. The membrane of claim 1 or 2, wherein the first microporous surface and the second microporous surface are continuous with some of the first and second sets of fibers.

4. The membrane of any one of claims 1-3, wherein the first microporous surface has a surface porosity of at least about 17%.

5. The membrane of any one of claims 1-4, wherein the second microporous surface has a surface porosity of at least about 35%.

6. The membrane of any one of claims 3-5, wherein the first microporous surface and the second microporous surface each have a thickness of at least about 4 μm.

7. The membrane of any one of claims 3-6, wherein the first microporous surface and the second microporous surface each have a thickness of about 14 μm or less.

8. The membrane of any one of claims 1-7, wherein the first set of fibers has an average fiber diameter in the range of from about 8 μm to about 20 μm.

9. The membrane of any one of claims 1-8, wherein the first set of fibers has an average fiber diameter in the range of from about 10 μm to about 15 μm.

10. The membrane of any one of claims 1-9, wherein the second set of fibers has an average fiber diameter in the range of from about 0.1 μm to about 3 μm.

11. The membrane of any one of claims 1-10, having a mean flow pore size in the range of from about 3 to about 20 μm.

12. A method for processing a fluid comprising:
passing the fluid through the membrane of any one of claims 1-11.

13. The method of claim 12, wherein the fluid is an ink-containing fluid.

14. A method for making porous polymeric membranes including fibers comprising:
(a) casting a polymer solution on a support using a first air gap;
(b) inducing thermal phase inversion of the solution; and, after using a second air gap,
(c) quenching the solution, including quenching an upper portion of the solution before the solution reaches thermal equilibrium.