CLAIM(S):

1. A filter for removing undesirable material from ultra pure water comprising:

(a) a microporous cationically charged membrane having an upstream surface and a downstream surface, and a pore size in the range of 50 nm to 100 nm; and

(b) a porous asymmetric membrane having a critical wetting surface tension of 50 dynes/cm to 60 dynes/cm and a first surface and an upstream portion and a downstream portion and a second surface, and a bulk between the first surface and the second surface including the upstream portion and the downstream portion, the porous asymmetric membrane having decreasing pore sizes in a direction from the first surface and the upstream portion to the downstream portion and the second surface, the second surface comprising a skin having a nanoporous average pore size of 3 nanometers or less, wherein the first surface of the porous asymmetric membrane contacts the downstream surface of the microporous cationically charged membrane.

~~2. The filter of claim 1, wherein the nanoporous average pore size is about 3 nanometers or less.~~

~~3~~ 2. The filter of claim 1 ~~or 2~~, wherein the porous asymmetric membrane has pore sizes having an average diameter of from ~~about~~ 5 times to ~~about~~ 100 times the diameter of the nanoporous average pore size in the skin.

~~4~~ 3. The filter of ~~any one of claims 1-3~~ claim 1 or 2, wherein the porous asymmetric membrane comprises a sulfone membrane.

~~5~~ 4. The filter of claim ~~4~~ 3, wherein the sulfone membrane comprises a polyarylsulfone membrane or a polyethersulfone membrane or a polysulfone membrane.

~~6~~ 5. The filter of any one of claims 1-~~5~~ 4, having a colloidal silica log retention value (LRV) of particles having a mean diameter size in the range of from ~~about~~ 10 nm to ~~about~~ 12 nm of at least ~~about~~ log 2 (~~about~~ 99%).

~~7~~ 6. The filter of any one of claims 1-~~6~~ 5, further comprising an upstream support and/or drainage medium contacting the upstream surface of the microporous cationically

charged membrane, and a downstream support and/or drainage medium contacting the downstream portion of the porous asymmetric membrane.

~~8~~ 7. The filter of any one of claims 1-~~7~~ 6, comprising a hollow cylindrical filter.

~~9~~ 8. The filter of claim ~~8~~ 7, comprising a pleated filter.

~~10~~ 9. A filter device, comprising the filter of any one of claims 1-~~9~~ 8 arranged in a housing having an outer cage and an inner core.

~~11~~ 10. A method of filtering ultra pure water, the method comprising:

passing ultra pure water through a filter comprising

(a) a microporous cationically charged membrane having an upstream surface and a downstream surface, and a pore size in the range of 50 nm to 100 nm; and

(b) a porous asymmetric membrane having a critical wetting surface tension of 50 dynes/cm to 60 dynes/cm and a first surface and an upstream portion and a downstream portion and a second surface, and a bulk between the first surface and the second surface including the upstream portion and the downstream portion, the porous asymmetric membrane having decreasing pore sizes in a direction from the first surface and the upstream portion to the downstream portion and the second surface, the second surface comprising a skin having a nanoporous average pore size of 3 nanometers or less, wherein the first surface of the porous asymmetric membrane contacts the downstream surface of the microporous cationically charged membrane, the method including passing the ~~UPW~~ ultra pure water through the microporous cationically charged membrane before passing the ~~UPW~~ ultra pure water through the porous asymmetric membrane.