What is claimed is:

1. A gas purifier, comprising:

a housing having a fluid inlet and a fluid outlet, the inlet and outlet fluidly connected through a purifier bed contained in the housing, the purifier bed comprising:

a first bed of purification media;

a second bed of purification media downstream of the first bed of purification media; and

a media-retaining, porous, gas-permeable membrane separating the first bed of purification media and the second bed of purification media, wherein the media-retaining, porous, gas-permeable membrane has a pore size to prevent particles of purification media from passing therethrough, the media-retaining, porous, gas-permeable membrane being secured at its edges to an inner surface of the housing; and

an expandable ring comprising an inner circumference, an outer circumference and a locking mechanism for expanding and retaining the ring by radial force against an inner wall of the housing when the locking mechanism is engaged,

wherein the first bed of purification media and the second bed of purification media are compositionally different and wherein the media-retaining, porous, gas-permeable membrane is secured to the inner housing at its edges by the expandable ring.

2. The gas purifier of Claim 1, wherein the media-retaining, porous, gas-permeable membrane is in intimate and retaining contact with the second bed of purification media.

3. The gas purifier of Claim 1, wherein the media-retaining, porous, gas-permeable membrane is fixed between a surface of the expandable ring and a surface of the second bed of purification media.

4. The gas purifier of Claim 1, wherein the first bed of purification media and the second bed of purification media each independently comprises a metal catalyst on high surface area support media, dessicant material, molecular sieves, zeolites, an organometallic reagent on support media, getter material, or carbon-based media.

5. The gas purifier of Claim 1, wherein the media-retaining, porous, gas-permeable membrane comprises a material that is metallic, semi-metallic, carbon based, ceramic, polymeric, or thermally conductive.

6. The gas purifier of Claim 1, wherein the media-retaining, porous, gas-permeable membrane is a felt, a wire mesh, sintered particles, electro-blown fibers, woven membrane, or non-woven membrane.

7. The gas purifier of Claim 1, wherein the locking mechanism is spring-locking mechanism.

8. The gas purifier of Claim 1, wherein the expandable ring comprises metal, plastic, or metal alloy.

9. The gas purifier of Claim 1, wherein the expandable ring has a thickness of from about 1.5 millimeters to about 3.0 millimeters.

10. The gas purifier of Claim 1, wherein the media-retaining, porous, gas-permeable membrane has a pore size of from about 0.05 microns to about 1.0 microns.

11. The gas purifier of Claim 1, further comprising one or more additional beds of purification media and one or more additional media-retaining, porous, gas-permeable membranes, wherein the additional membrane, if present, separates any two beds of purification media.

12. The gas purifier of Claim 1, wherein the media-retaining, porous, gas-permeable membrane is a porous felt membrane.

13. The gas purifier of Claim 1, wherein the housing does not include a groove for the expandable ring.