CLAIMS

1) A **microporous sheet** of polyolefin grafted with a preformed poly(4-ethenyl benzene sulfonic acid).

2) The microporous sheet of claim 1 where the polyolefin is poly(ethylene).

3) An **asymmetric composite membrane** comprising a film of partially crosslinked poly(ethenol) adhered to one side of a microporous sheet of polyolefin grafted with a preformed poly(4-ethenyl benzene sulfonic acid).

4) The asymmetric composite membrane of claim 3 where the polyolefin is poly(ethylene).

5) A **method** of preparing a hydrophilicitized microporous sheet of polyolefin comprising the steps of:

   a) Contacting a microporous sheet of polyolefin with a dispersion comprising a preformed poly(4-ethenylbenzenesulfonic acid) in an aqueous solvent to provide a contacted microporous sheet;

   b) Curing the contacted microporous sheet at a temperature and for a time sufficient for at least a portion of the poly(4-ethenylbenzenesulfonic acid) to be grafted onto the polyolefin substrate to provide a cured microporous sheet; and then

   c) Washing the cured microporous sheet to provide the hydrophilicitized microporous sheet of polyolefin.

6) The method of claim 5 where the polyolefin is is poly(ethylene).

7) The method of claim 5 or 6 where the aqueous solvent is acetone-water.

8) The method of any one of claims 5 to 7 where the curing the contacted microporous sheet is by irradiating with ultraviolet light in the presence of a photoinitiator.

9) A **hydrophilicitized microporous sheet** of polyolefin prepared according to the method of any one of claims 5 to 8.

10) A **method** of preparing an asymmetric composite membrane comprising the steps of:

   a) Contacting one side of a hydrophilicitized microporous sheet of polyolefin with a solution in a first solvent of partially cross-

linked poly(ethenol) in the presence of a radical initiator to provide a contacted sheet;

b) Drying the contacted sheet at a temperature and for a time sufficient to allow the partially cross-linked poly(ethenol) to adhere to the one side of the hydrophilicitized microporous sheet of polyolefin and evaporate substantially all the solvent to provide a dried contacted sheet; and then

c) Washing the dried contacted sheet in a second solvent to provide the asymmetric composite membrane.

11) The method of claim 10 where the drying the contacted sheet is by applying a positive thermal gradient across the thickness of the sheet from the contacted one side of the hydrophilicitized microporous sheet to the other side.

12) An **asymmetric composite membrane** prepared according to the method of claim 10 or 11.

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2) The microporous sheet of claim 1 where the polyolefin is poly(ethylene).

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   c) Washing the cured microporous sheet to provide the hydrophilicitized microporous sheet of polyolefin.

6) The method of claim 5 where the polyolefin is is poly(ethylene).

7) The method of claim 5 or 6 where the aqueous solvent is acetone-water.

8) The method of any one of claims 5 to 7 where the curing the contacted microporous sheet is by irradiating with ultraviolet light in the presence of a photoinitiator.

9) A **hydrophilicitized microporous sheet** of polyolefin prepared according to the method of any one of claims 5 to 8.