CLAIMS

1. A porous polymer membrane comprising a fluoropolymer (A) that includes a vinylidene fluoride unit and a tetrafluoroethylene unit, wherein the membrane is a hollow fiber membrane.

2. The porous polymer membrane according to claim 1, wherein the fluoropolymer (A) includes the vinylidene fluoride unit and the tetrafluoroethylene unit in a molar ratio of the vinylidene fluoride unit/tetrafluoroethylene unit of 50 to 90/50 to 10.

3. The porous polymer membrane according to claim 1 or 2,

wherein the porous polymer membrane has a surface that has a ratio of oxygen/fluorine content (O/F) on the surface of not less than 0.050 but less than 0.150 when measured by X-ray photoelectron spectroscopy (XPS).

4. The porous polymer membrane according to claim 1, 2, or 3,

wherein the porous polymer membrane has a surface that has a (C-F/C-H) ratio representing a ratio of C-F bonds to C-H bonds on the surface of larger than 0.50 when measured by X-ray photoelectron spectroscopy (XPS).

5. The porous polymer membrane according to claim 1, 2, 3, or 4,

wherein the fluoropolymer (A) has a unit represented by the following formula (1):

$-CHX^1-CX^2(OR)-$ (1)

wherein one of X^1 and X^2 is a hydrogen atom, and the other is a fluorine atom; and R is a hydrogen atom or a C_1-C_8 alkyl group.

6. The porous polymer membrane according to claim 5, wherein the R in the formula (1) is a hydrogen atom, a methyl group, or an ethyl group.

~~7. The porous polymer membrane according to claim 1, 2, 3, 4, 5, or 6, wherein the membrane is a hollow fiber membrane.~~

~~8.~~7. The porous polymer membrane according to claim 1, 2, 3, 4, 5, or 6~~, or 7,~~ wherein the membrane is for treating water.

~~9.~~8. A method of producing the porous polymer membrane according to claim 1, 2, 3, 4, 5, 6, or 7, ~~or 8~~, comprising at least a step of forming a porous membrane from a fluoropolymer (A') that includes a vinylidene fluoride unit and a tetrafluoroethylene unit.

~~10.~~9. The method of producing the porous polymer membrane according to claim ~~9~~8, wherein the step of forming a porous membrane produces a porous membrane-shaped product through a non-solvent induced phase separation method and/or a thermally induced phase separation method.

~~11.~~10. The method of producing the porous polymer membrane according to claim ~~9~~ 8 or ~~10~~9, further comprising a step of performing an alkali treatment in the presence of water and/or a C_1-C_8 alcohol.

~~12.~~11. The method of producing the porous polymer membrane according to claim ~~11~~10, wherein the alcohol is ethanol or methanol.

~~13.~~12. The method of producing the porous polymer membrane according to claim 9, 10, or 11, ~~or 12,~~

wherein the fluoropolymer (A') includes the vinylidene fluoride unit and the tetrafluoroethylene unit in a molar ratio of the vinylidene fluoride unit/tetrafluoroethylene unit of 50 to 90/50 to 10.