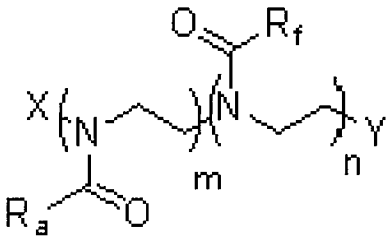


(I)



(II)

wherein the copolymer of formula (I) or (II) is independently a random or block copolymer, Rf is a perfluoro-substituted group, whereas Rh is a hydrophilic group or chlorine, Ra is methyl or ethyl, m and n are independently from 10 to 1000, X is an alkyl group, and Y is reactive functional group,

(iii) drying the coated support from (ii) to remove at least some of the solvent from the coating comprising a solvent and the copolymer; and optionally

(iv) crosslinking the copolymer present in the coating.

15. The method of claim 14, wherein, the Rf of the copolymer is a perfluoro-substituted alkyl, where alkyl chain may optionally contain oxygen atom.

16. The method of 14 or 15, wherein the Rf of the copolymer is C_pF_{2p+1} -$(CH_2)_q$ $(OCH_2)_r$, wherein p is 1 to 12, q is 0 to 3, and r is 0 to 2.

17. The method of claim 16, wherein Rf is selected from $C_8F_{17}CH_2$, $C_6F_{13}(CH_2)_2OCH_2$, $C_4F_9CH_2$ and CF_3 for Formula I and C_pF_{2p+1}-CH_2CH_2 for Formula II.

18. The composite hydrophilic porous membrane of any one of claims 1-13, wherein the porous fluoropolymer support is selected from PTFE (polytetrafluoroethylene), PVDF (polyvinylidene fluoride), PVF (polyvinyl fluoride), PCTFE (polychlorotrifluoroethylene), FEP (fluorinated ethylene-propylene), ETFE (polyethylenetetrafluoroethylene), ECTFE (polyethylenechlorotrifluoroethylene), PFPE (perfluoropolyether), PFSA (perfluorosulfonic acid), and perfluoropolyoxetane.

19. A method of filtering a fluid, the method comprising passing the fluid through the composite hydrophilic porous membrane of any one of claims 1-13 or claim 18.

20. The method of any one of claims 14-17, wherein the porous fluoropolymer support is selected from PTFE (polytetrafluoroethylene), PVDF (polyvinylidene fluoride), PVF (polyvinyl fluoride), PCTFE (polychlorotrifluoroethylene), FEP (fluorinated ethylene-propylene), ETFE (polyethylenetetrafluoroethylene), ECTFE (polyethylenechlorotrifluoroethylene), PFPE (perfluoropolyether), PFSA (perfluorosulfonic acid), and perfluoropolyoxetane.