CLAIMS

1) An **asymmetric composite membrane** comprising a film of cross-linked sulfonated poly(ether ether ketone) adhered to a sheet of hydrophilic microporous polyolefin where the sheet of hydrophilic microporous polyolefin is a graft polymer.

2) The membrane of claim 1 where the side chains of the graft polymer are derived from one or more of 2-acrylamido-1-methyl-2-propanesulfonic acid, 2-propen-1-ol, 2-propenoic acid, 2-hydroxyethyl 2-methyl-2-propenoic acid ester and 4-ethenyl-benzenesulfonic acid.

3) The membrane of claim 2 where the side chains of the graft polymer are derived from 2-acrylamido-1-methyl-2-propanesulfonic acid.

4) The membrane of any one of claims 1 to 3 where the cross-linking agent of the cross-linked sulfonated poly(ether ether ketone) is a diethenyl compound.

5) The membrane of claim 4 where the cross-linking agent is selected from the group consisting of: *o*-divinylbenzene, *m*-divinylbenzene, *p*-divinylbenzene and ethylene glycol dimethacrylate.

6) The membrane of claim 5 where the cross-linking agent is *p*-divinylbenzene.

7) The membrane of any one of claims 1 to 6 where the film of cross-linked sulfonated poly(ether ether ketone) is an interpenetrating film of cross-linked sulfonated poly(ether ether ketone).

8) The membrane of any one of claims 1 to 7 where the sheet of hydrophilic microporous polyolefin is a sheet of hydrophilic microporous poly(ethylene).