Title: **PVdF-HFP/PVP blend polymer ternary electrolyte membranes for fuel cells**

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Ternary blend polymer electrolyte membranes are important and can be used as fuel cell membrane electrolytes due to their flexibility in tailoring their properties and better properties than the single polymer alone. Polymer electrolyte membranes has been synthesized in the present work by blending polyvinylidene fluoride-co-hexafluoropropylene (PVdF-HFP) and polyvinylpyrolidone (PVP) used as base with triflic acid (TA) as the acid. Membranes are synthesized with different blend ratios and with different acid concentration and the effects of acid concentration and blend ratio is studied on various thermal, morphological and electrical properties. Good thermal stability is observed with DSC/TGA studies and good conductivity of the order of 10^{-3} to 10^{-2} S/cm is observed for these blends systems. SEM studies suggest good morphology of the blend membranes.