

**Temperature triggered antifouling property of Poly(vinylidene fluoride) graft copolymers
with tunable hydrophilicity**

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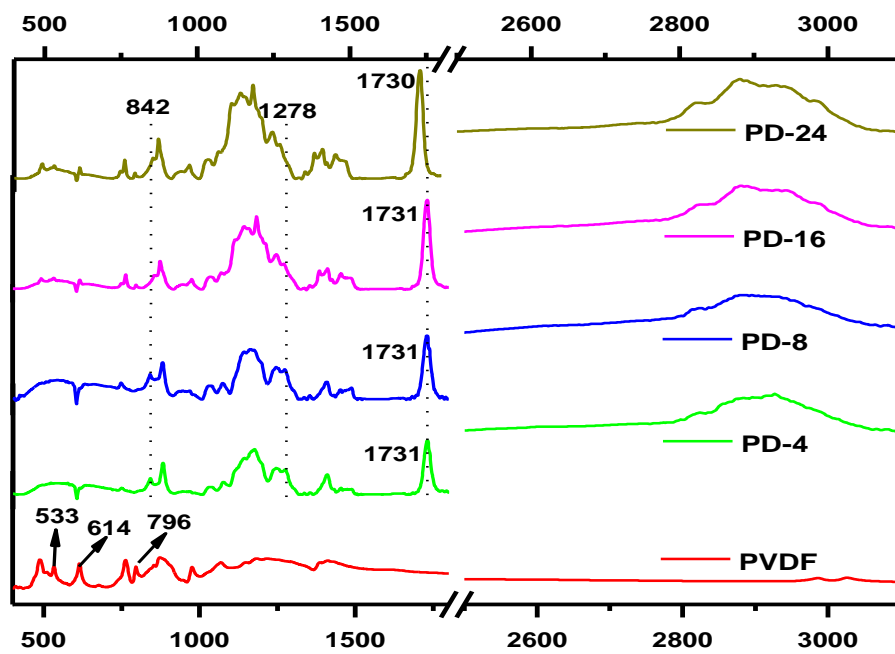


Figure S1: FTIR spectra of PVDF and different PD samples.

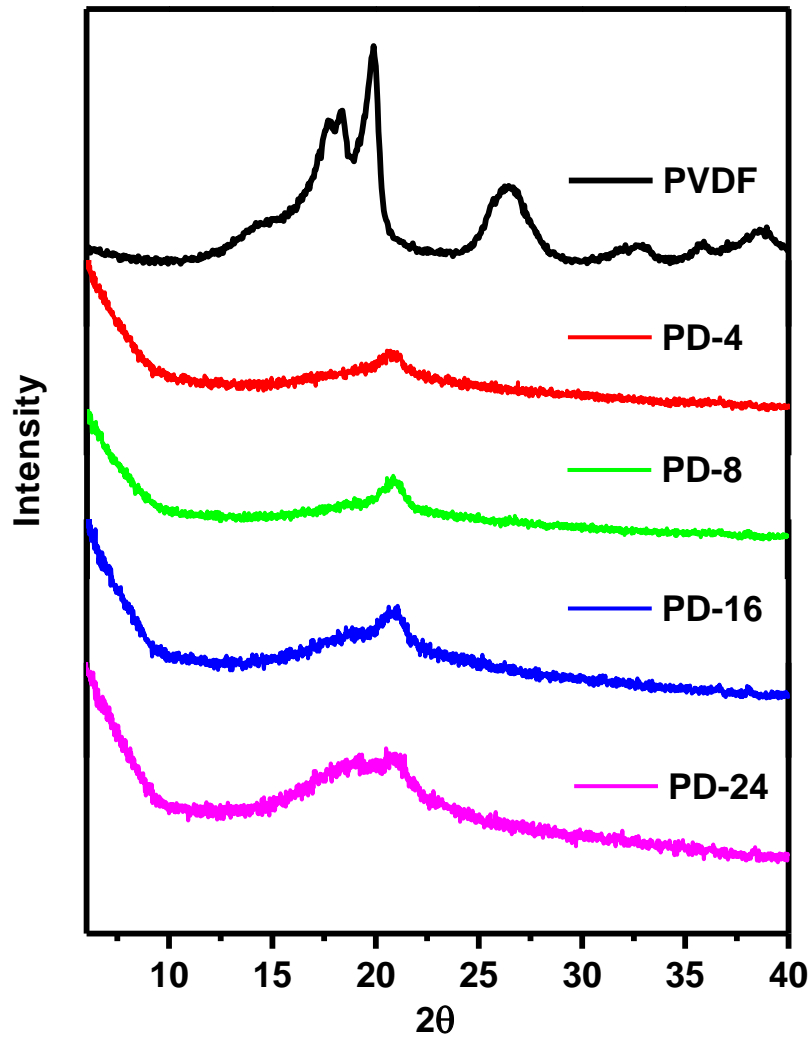


Figure S2: WAXS patterns of PVDF and PD graft copolymers.

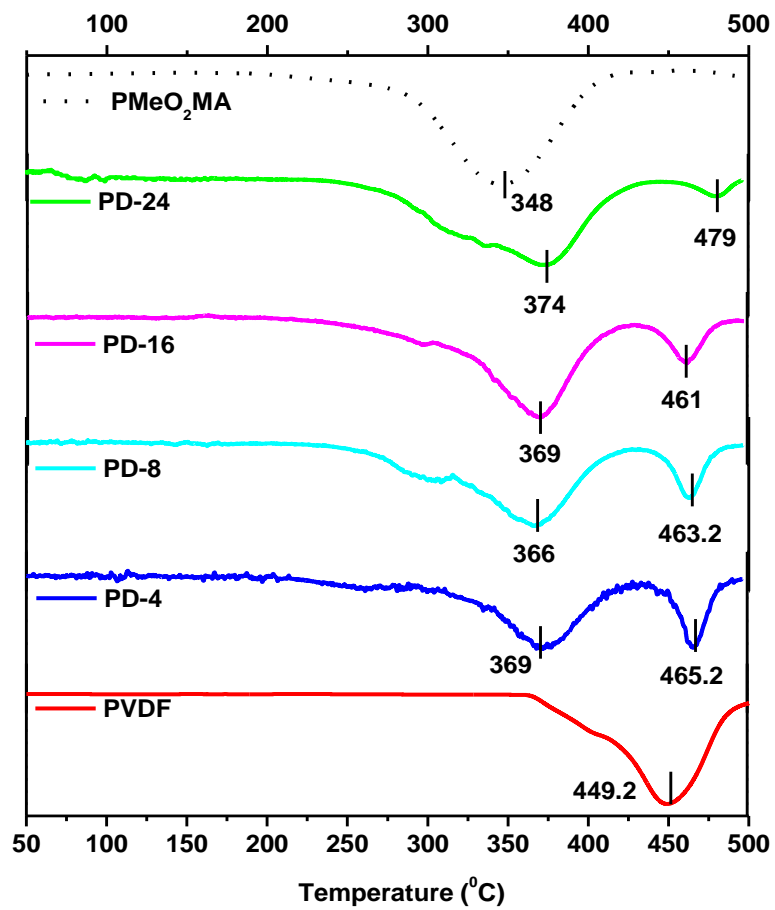


Figure S3: Derivatograms of TGA analysis of PVDF, different PD and PMeO₂MA.

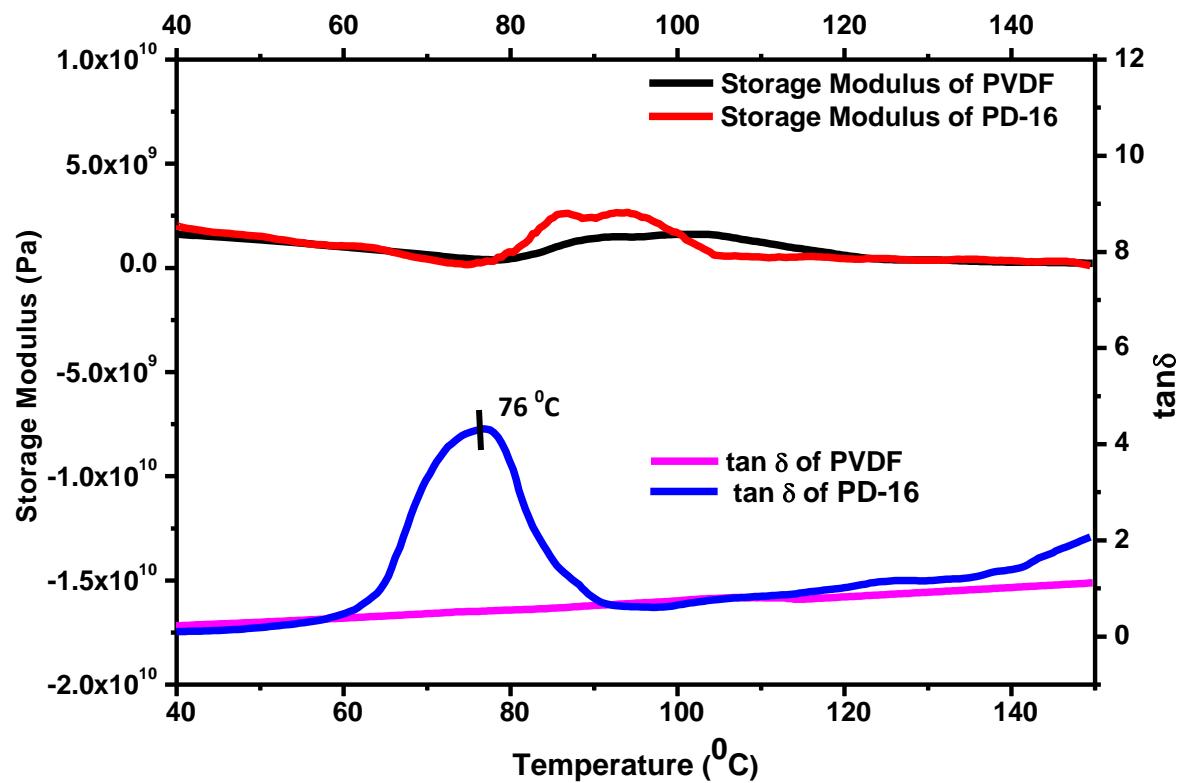


Figure S4: Dynamic mechanical property (storage modulus and $\tan \delta$) vs. temperature plots of PVDF and PD-16 films.

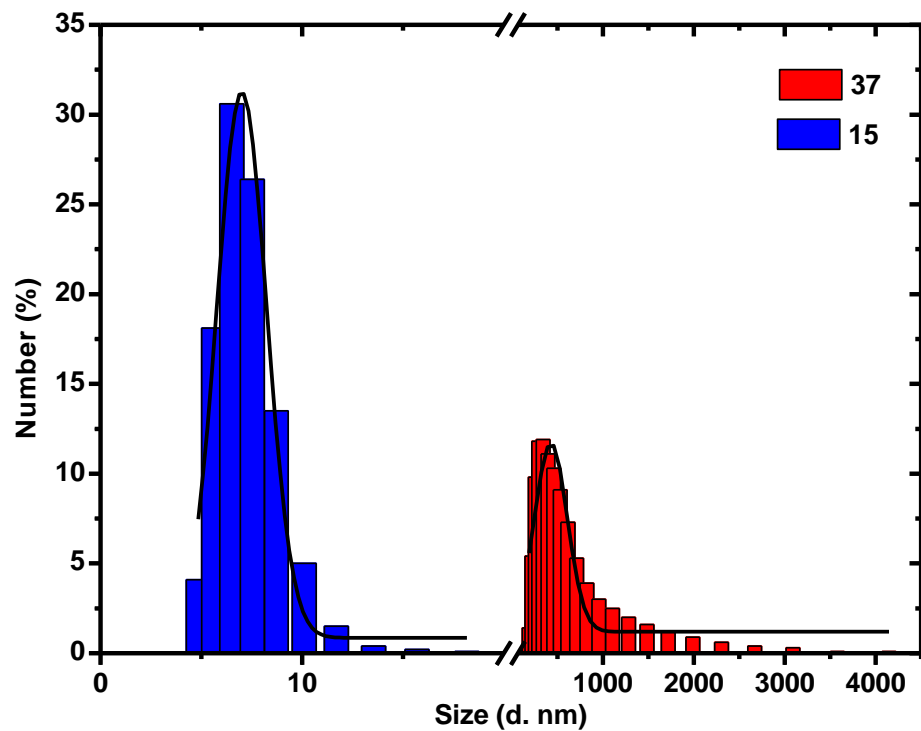


Figure S5: Number (%) vs. size distribution plot for PD-24 with Gaussian fit curves.

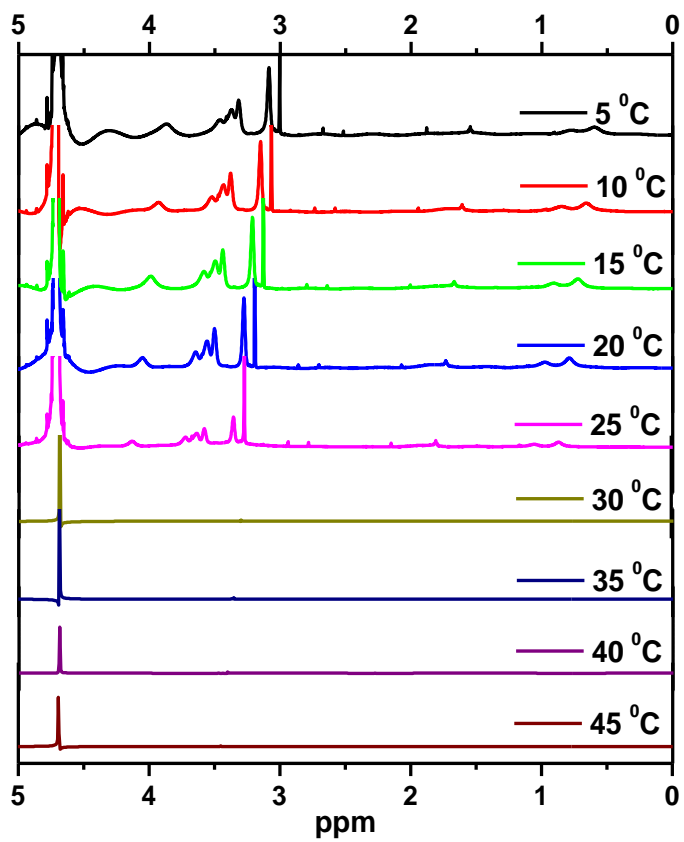


Figure S6: Temperature-dependent ^1H NMR spectra of the PD-24 in D_2O

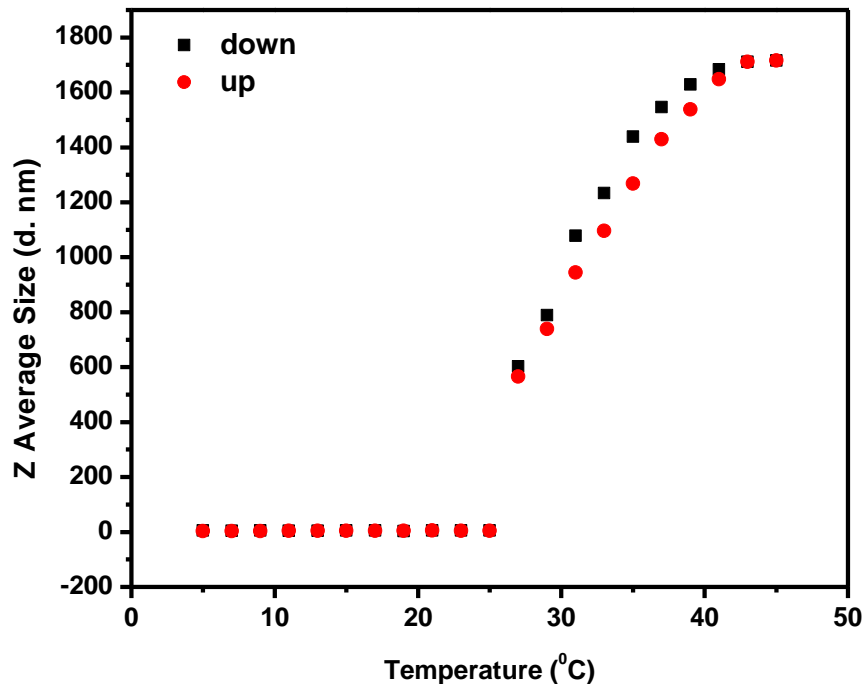


Figure S7: Z average size vs. temperature plot of PD-16 graft copolymer obtained from DLS study in aqueous solution (0.1%, w/v).

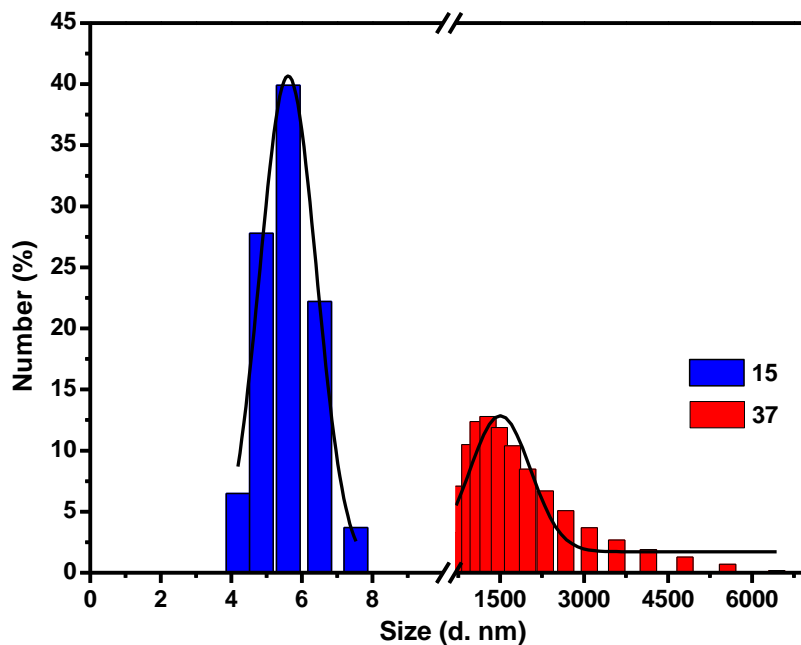


Figure S8: Number (%) vs. size distribution plot for PD-16 with Gaussian fit curves.

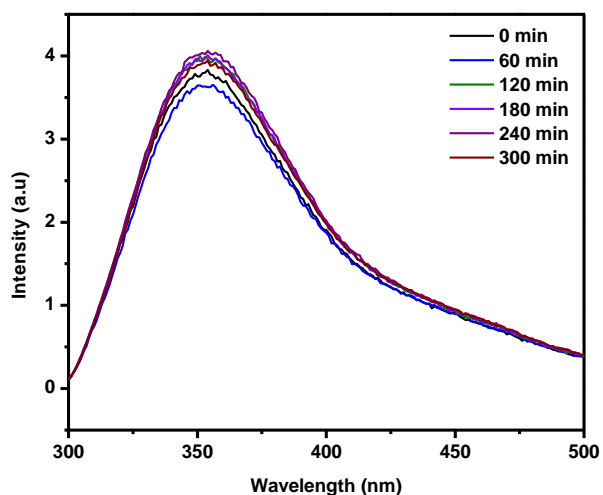


Figure S9a: Fluorescence spectra of BSA solution with time into which PVDF film is dipped.

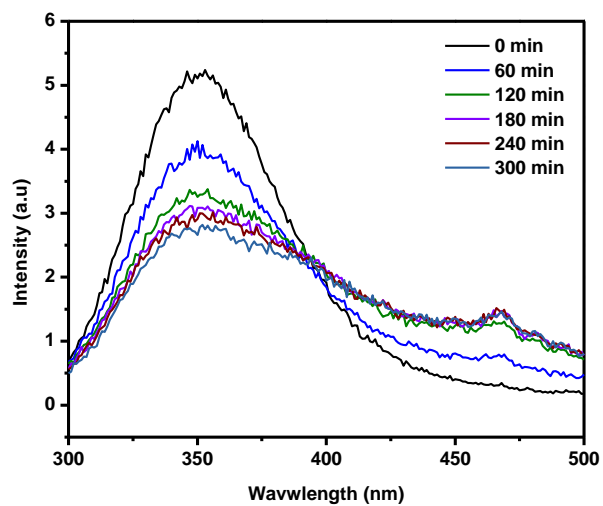


Figure S9b: Fluorescence spectra of BSA solution with time into which PD-24-15 film is dipped at 15 °C.

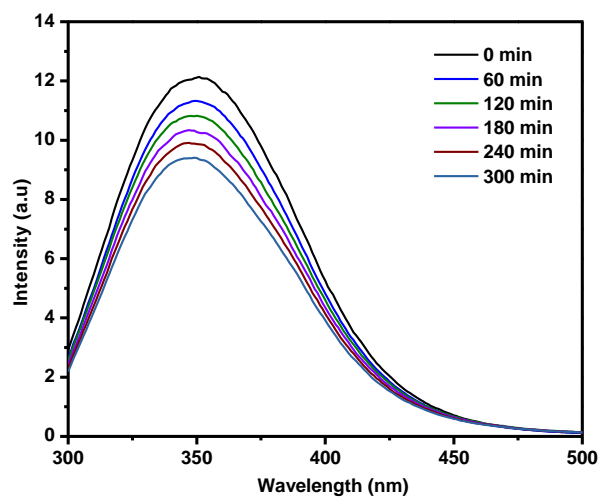


Figure S9c: Fluorescence spectra of BSA solution with time into which PD-24-37 film is dipped at 37 °C.

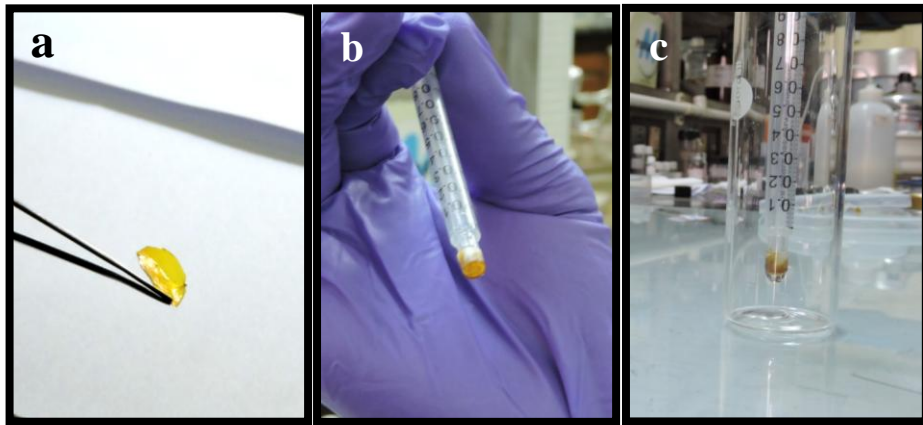


Figure S10: (a-c) Digital images of filtering set up for PD-24

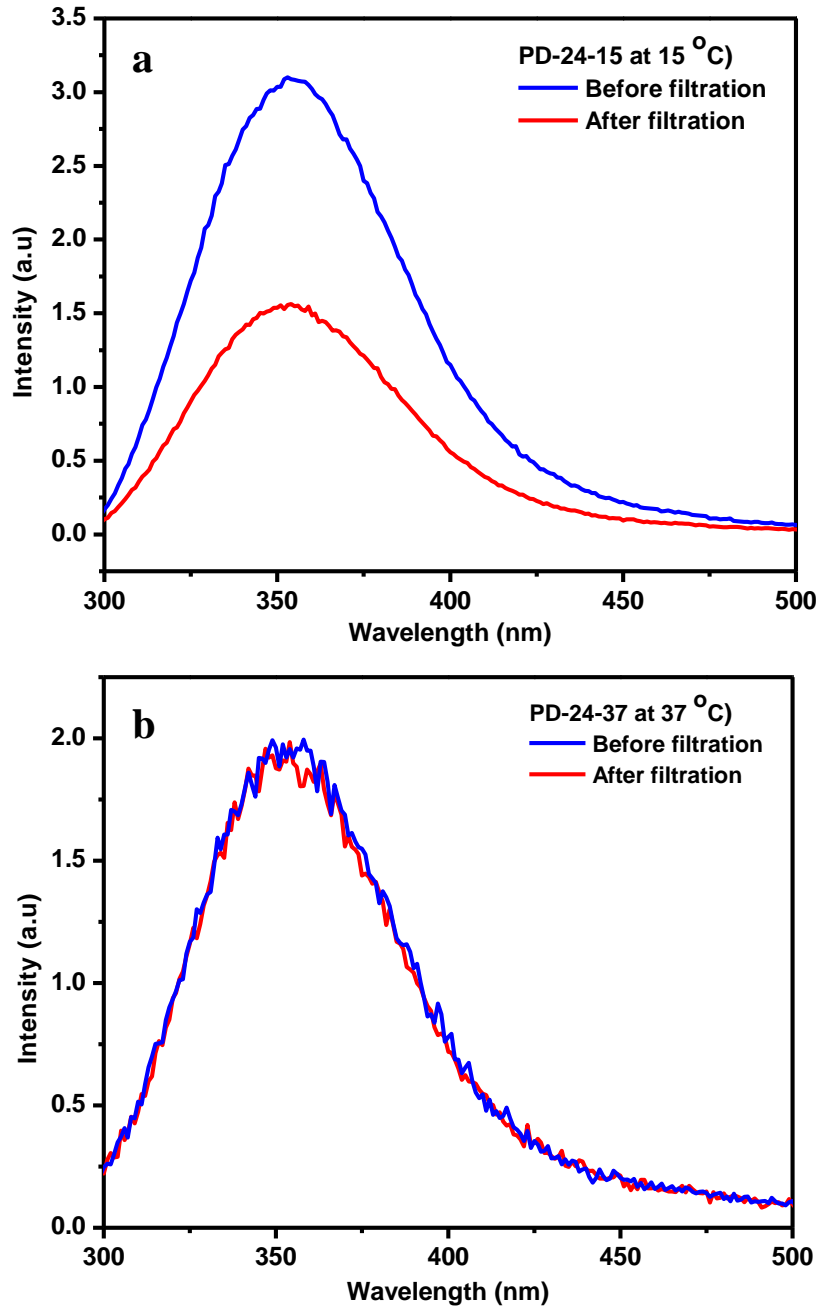


Figure S11: (a) Fluorescence spectra of BSA solution before and after filtration through PD-24-15 film at 15 °C and (b) through PD-24-37 film at 37 °C (filtration using the same membrane after storing at 30° for 10 days)

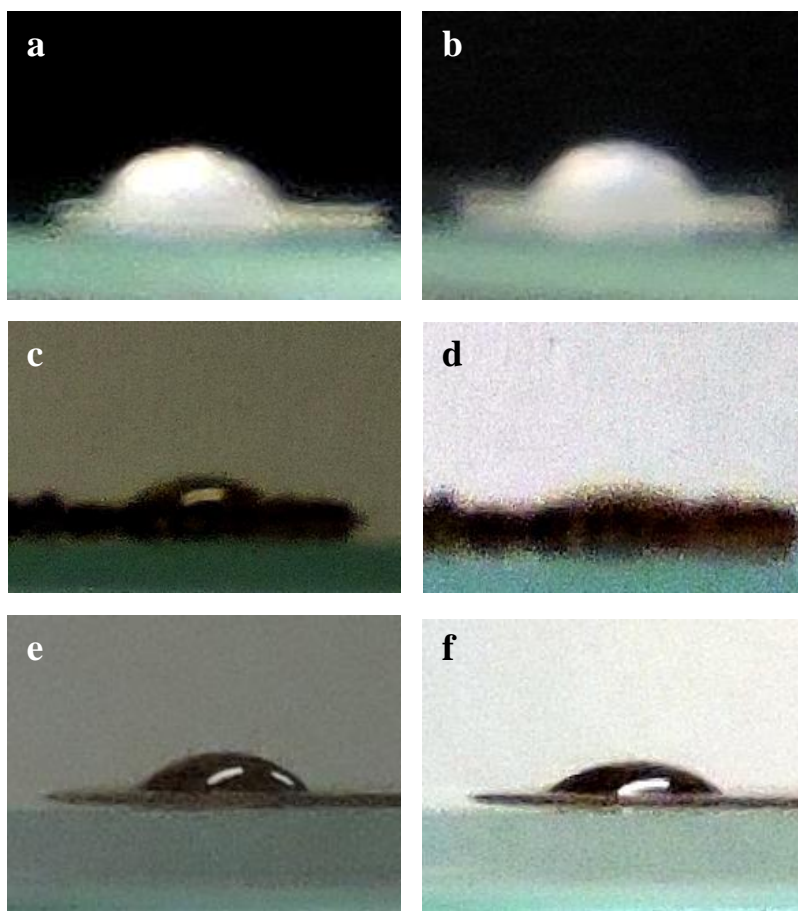


Figure S12: Digital images of side view of the water drops on (a) PVDF film at 0 min, (b) PVDF film after 2 min, (c) PD-24-15 film at 0 min, (d) PD-24-15 film after 2 min, (e) PD-24-37 film at 0 min and (f) PD-24-37 film after 2 min.