Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting information for article:

Vapor-based grafting of crosslinked poly(N-vinyl pyrrolidone) coatings with tuned hydrophilicity and anti-biofouling properties

Min Sun,[1] Qingyun Wu,[1] Juan Xu,[2] Fang He,[3] Alexander P. Brown,[4] Yumin Ye[1,*]

* yeyumin@nbu.edu.cn

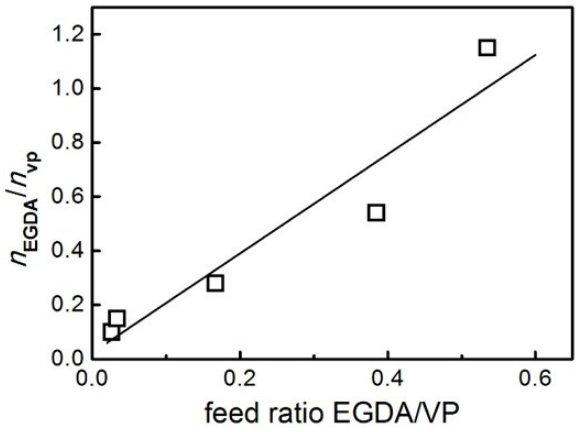

Fig. S1 The content ratio of EGDA to VP moiety in the coatings (n_{EGDA}/n_{VP}) as calculated from FTIR plotted against their feed ratio.

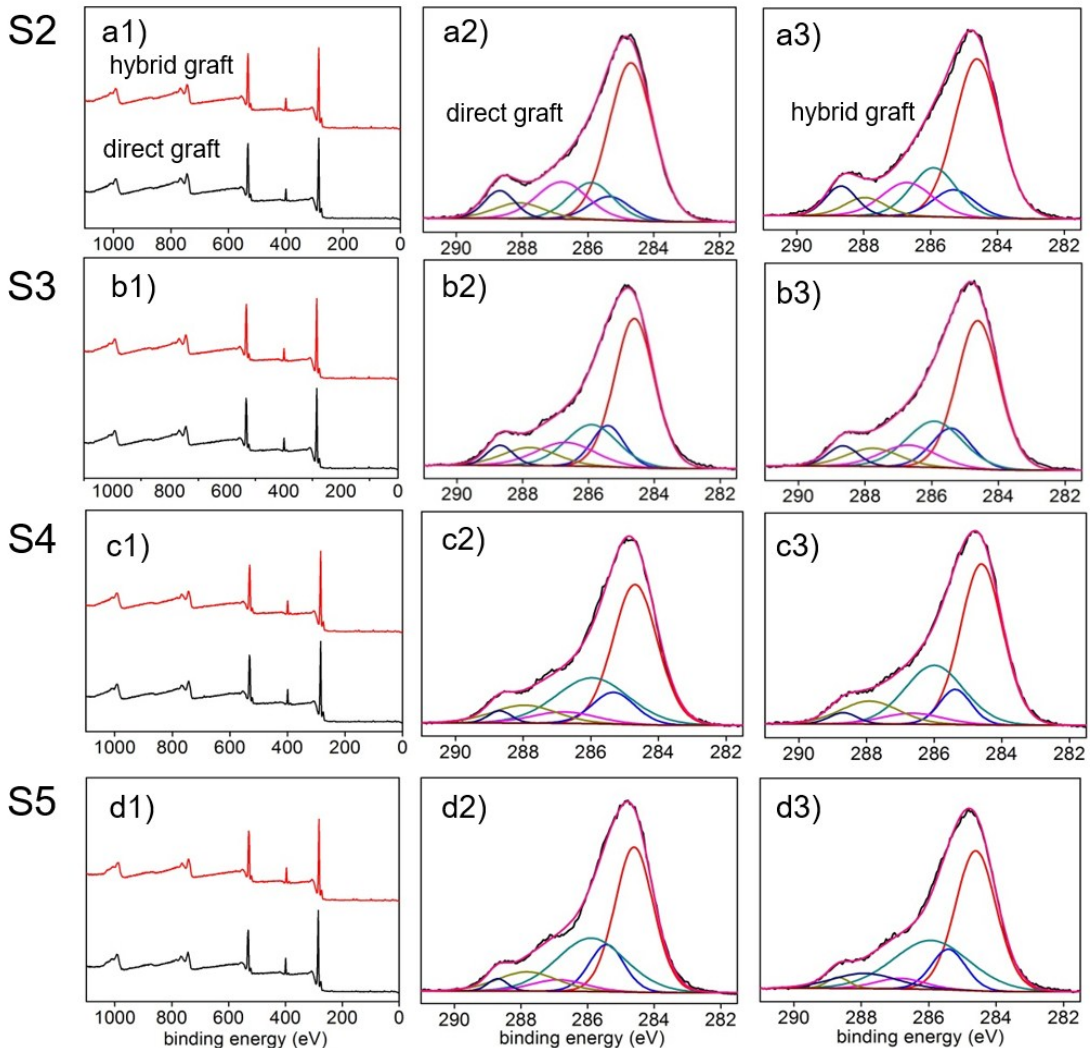

Fig. S2 XPS wide scan spectra of direct and hybrid graft P(VP-*co*-EGDA) coatings (a1)-d1) for S2-S5 respectively). High-resolution scans of C 1s core level of a2) - d2) direct graft and a3) – d3) hybrid graft P(VP-*co*-EGDA) coatings. Both wide scan and high resolution scan spectra for each set of hybrid and direct graft coatings are almost identical, suggesting similar composition of the surfaces.

Table S1. Quantitative comparison between the XPS C 1s core level high-resolution scans of hybrid graft and direct graft P(VP-*co*-EGDA) coatings.

Peak	Origin		Hybrid graft coating		Direct graft coating	
	VP	EGDA	Binding energy (eV)	Area (%)	Binding energy (eV)	Area (%)
1	—CH_x—C^*H_2—CH_x—	—CH_x—C^*H_2—CH_x—	284.71	52	284.7	51
2	—C^*H_2—(C=O)—	—C^*H_2—(C=O)—	285.32	6	285.31	6
3	—C^*H_x—N—		286.01	13	285.91	13
4		C^*H_2—O—	286.77	15	286.79	15
5	—C^*=O		288.19	4	288.19	5
6		O—C^*=O	288.73	10	288.75	10