Electronic Supplementary Material (ESI) for RSC Advances.

SUPPORTING INFORMATIONS

Nitroxide-mediated polymerization of pentaflurorostyrene initiated by PS-DEPN through the surface of APTMS modified fumed silica : Towards functional nanohybrids.

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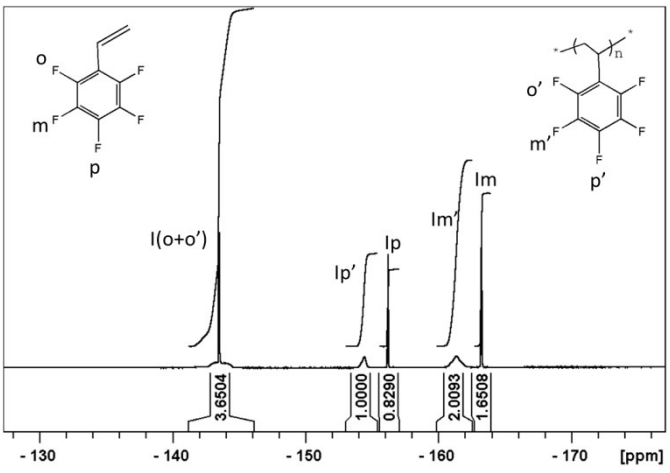

Fig. S1 ^{19}F NMR of spectrum of the reaction mixture for calculation of the conversion PFS (presented spectrum corresponds to 55% conversion in MP after 4 hours).

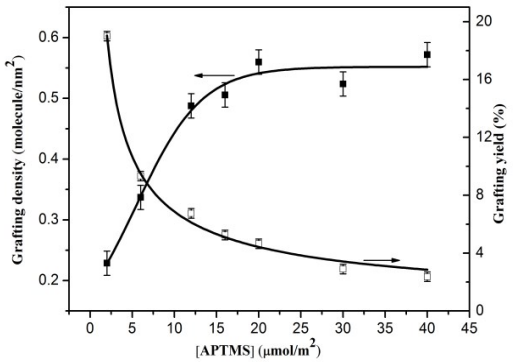

Fig. S2 Grafting density (filled symbols) and grafting yield (hollow symbols) of APTMS as a function of the concentration of APTMS. Silica concentration 3.8 wt % in Toluene. Temperature 110 °C. Reaction time 24 h.

Table S1 Characteristics of free PS-PPFS block copolymers synthesized in presence of APTMS-grafted silica as a function of solvent.

Solvent	Time (h)	Conversion (%)	Mn (theo) (g/mol)	Mn (NMR) (g/mol)	Mn (SEC) (g/mol)	Đ
MP	0.5	17	10700	10500	8900	1.29
	1	31	16100	17800	12600	1.18
	2	48	22700	24300	15100	1.15
	4	74	32800	30900	18000	1.14
	6	76	33600	31600	18900	1.15
DMF	0.5	17	9900	10500	11000	1.28
	1	19	10700	11100	12200	1.23
	2	34	16300	18200	16800	1.17
	4	47	21500	22500	19900	1.13
	6	62	27300	28500	23000	1.11
TOLUENE	1	2.2	5300	5400	4600	1.57
	2	4.3	6100	6500	5300	1.5
	4	7	7100	7300	5800	1.48
	6	12.2	9100	8700	7700	1.36

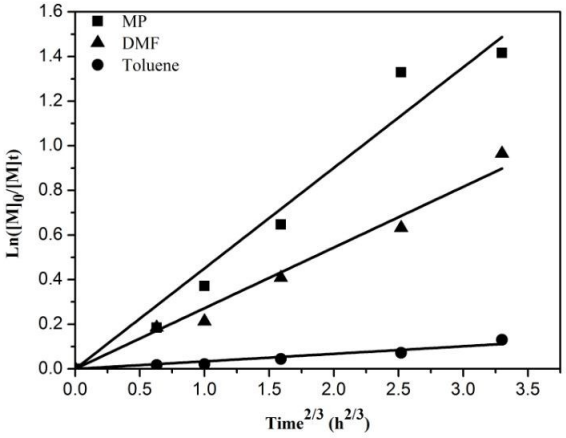

Fig. S3 Kinetic plot for the polymerization of PFS in the presence of APTMS modified silica (4.3 wt.%).

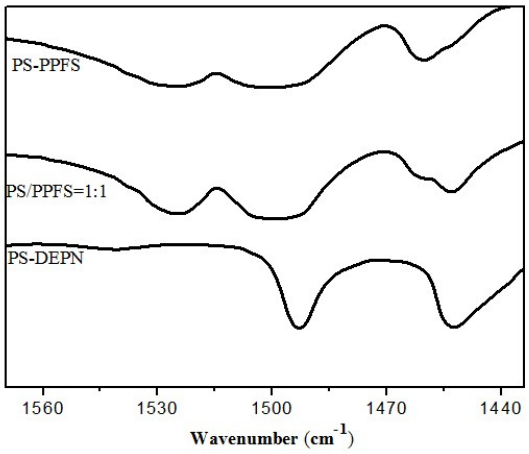

Fig. S4 FT-IR spectra of free PS-b-PPFS copolymer, PS/PPFS homopolymers mixture ((1/1, w/w) and PS-DEPN macroinitiator

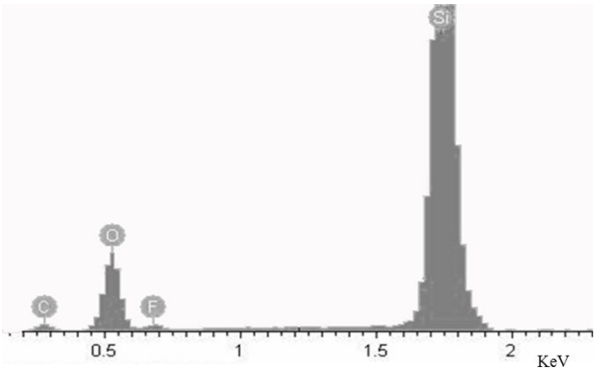

Fig. S5 EDX analysis from TEM image for PS-b-PPFS grafted silica.

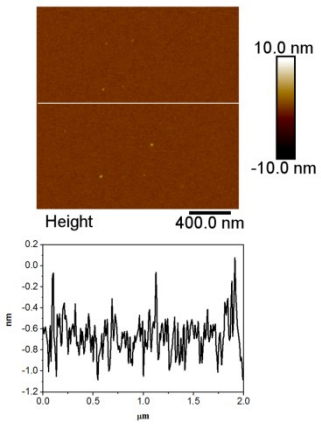

Fig. S6 AFM topographic images of deposition resulting from neat silicon wafer.