Electronic Supplementary Information

One-step preparation of surface modified electrospun microfibers as suitable supports for protein immobilization

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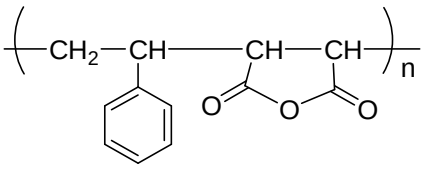

Figure S1. Chemical structure of poly(styrene-alt-maleic anhydride) (PSMA).

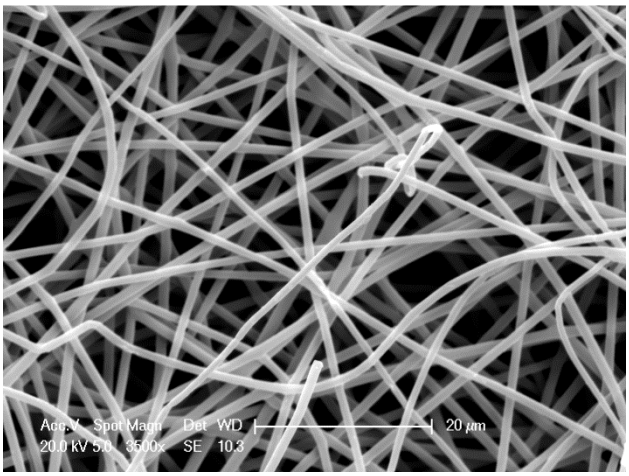

Figure S2. Scanning electron microscopy of the PSMA fibers obtained from conventional electrospinning.

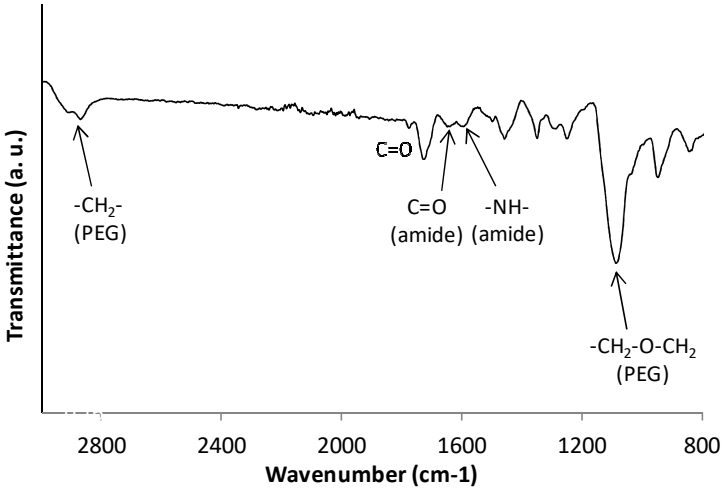

Figure S3. ATR-FTIR spectrum of PSMA-PEG fibers (prepared from 1 mg.mL^{-1} PEG in PBS), to which spectrum of reference PSMA was subtracted.

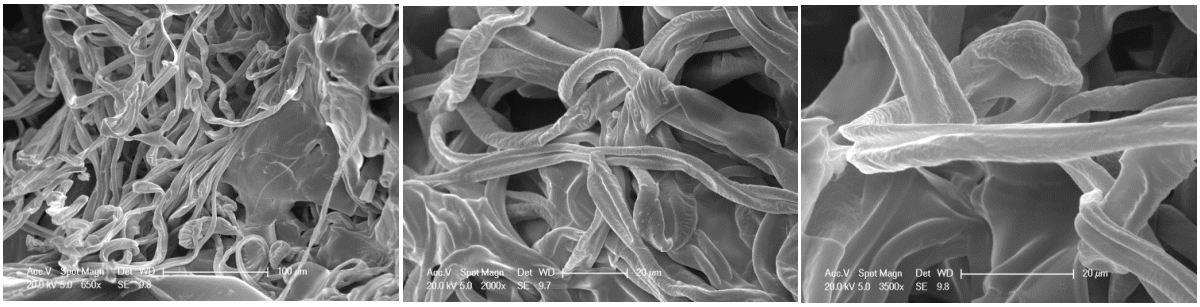

Figure S4. Scanning electron microscopy of the PSMA-hex-NH_2 fibers obtained from wet electrospinning.

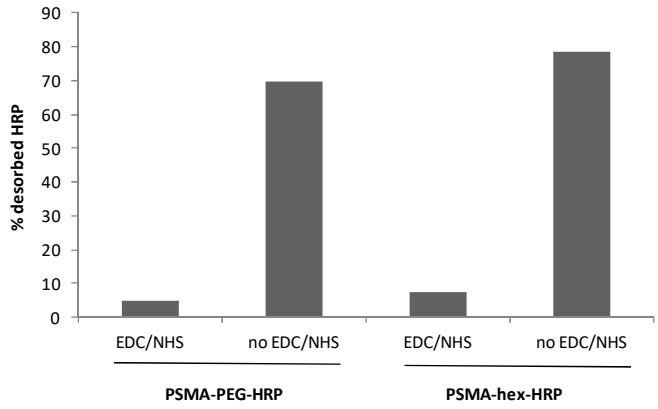

Figure S5. % of desorption of HRP enzyme from the PEG- and hexyl-functionalized fibers (prepared in absence or presence of EDC/NHS coupling agents), in SDS medium (5% in water).

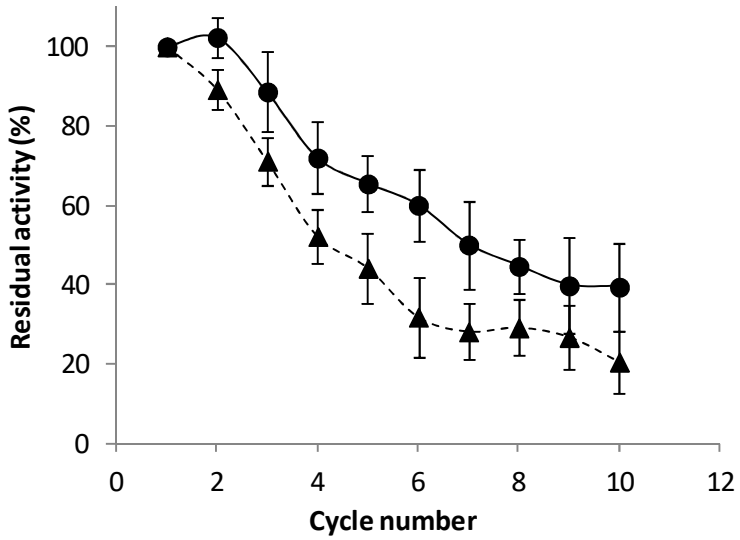

Figure S6. Reusability of the HRP enzyme immobilized on hexyl- (▲) and PEG- (●) functionalized fibers over 10 repeated cycles.

Table S1. Energy dispersive X-ray (EDX) analysis of the fibers.

Element	Reference PSMA (PBS)		PSMA-PEG-NH_2		PSMA-hex-NH_2	
	Wt %	**At %**	Wt %	**At %**	Wt %	**At %**
C	68.8±1.47	**75.64±1.38**	67.01±0.08	**73.04±0.10**	64.85±0.33	**71.74±0.31**
N	1.42±0.26	**1.34±0.24**	2.19±0.25	**2.05±0.23**	2.56±0.11	**2.43±0.10**
O	23.94±1.71	**19.77±1.47**	29.64±0.13	**24.26±0.1**	28.12±0.5	**23.35±0.42**
Na	5.38±0.31	**3.09±0.16**	1.16±0.03	**0.66±0.02**	4.08±0.09	**2.36±0.05**