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

Supporting information for

A hemocompatible polyurethane surface having dual fibrinolytic and nitric oxide generating functions

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1 The chemical compositions of three different PU-POL surfaces

Table S1 Composition of copolymers in solution.

Surface	Molar monomer feed ratio (%) f_{Lys}	Molar copolymer composition determined by ^{1}H NMR (%) F_{Lys}	$M_{n,\,GPC}$ (g mol^{-1})	M_w/M_n (GPC)
PU-POL	9.09	6.30	1.0×10^5	1.71
PU-POL-1	4.76	4.99	2.3×10^5	1.75
PU-POL-2	3.23	3.99	3.8×10^5	1.74

2 The lysine density and water contact angle results of three PU-POL surfaces with different chemical compositions

Table S2 Lysine density and water contact angle of PU and PU-POL surfaces. Contact angle data are mean ± standard error (n = 6).

Surface	Lysine density (nmol/cm^2)	Water contact angle (°)
PU	0	75.8 ± 1.1
PU-POL	11.9	44.9 ± 3.1
PU-POL-1	8.6	52.6 ± 2.7
PU-POL-2	4.9	58.9 ± 2.6

3 FTIR spectra of PU, PU-POL and PU-POL-Se surfaces

Compared with the PU surface, the spectra of PU-POL showed characteristic POEGMA absorption bands, located at 2850 cm^{-1} (-CH_2-) and 1104 cm^{-1} (C-O-C).[1] After immobilizing the selenocystamine onto the PU-POL surface, the spectra did not change significantly.

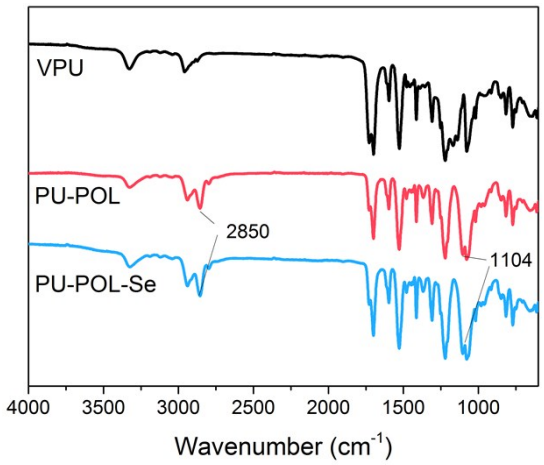

Fig. S1 FTIR spectra of PU, PU-POL and PU-POL-Se surfaces.

4 Plasminogen adsorption on three PU-POL surfaces with different chemical compositions

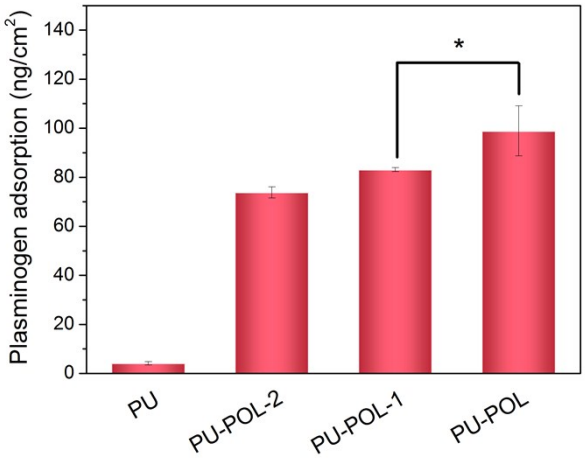

Fig. S2 Adsorption of plasminogen from human plasma on PU, PU-POL, PU-POL-1 and PU-POL-2 surfaces (mean ± SD, n = 3,* $p < 0.05$).

5 Fibrinogen adsorption on three PU-POL surfaces with different chemical compositions

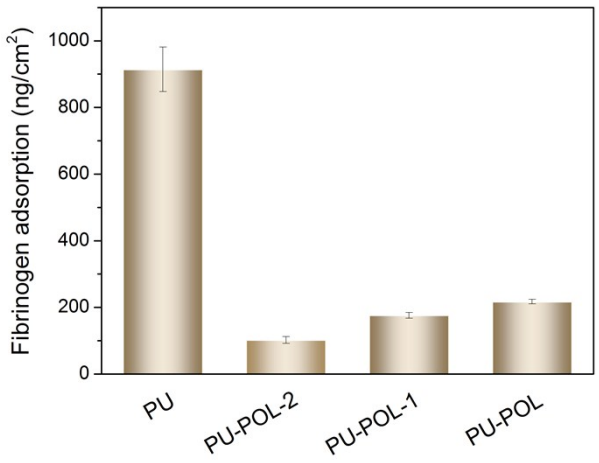

Fig. S3 Adsorption of fibrinogen from PBS (3 h exposure) on PU, PU-POL, PU-POL-1 and PU-POL-2 surfaces (mean ± SD, n = 3).

To measure fibrinogen adsorption from PBS to the surfaces, we mixed radiolabeled protein and un-radiolabeled protein (the quality ratio of radiolabeled protein and un-radiolabeled protein was 1/49) with PBS at a concentration of 1 mg/mL. The following procedures are the same as the plasminogen adsorption protocol. As shown in Fig. S3, the level of fibrinogen adsorption on the PU-POL surfaces (＜200 ng/cm^2) decreased significantly compared with the PU surfaces (~914 ng/cm^2), and decreased with the increasing content of poly (OEGMA) on the surface.

6 The standard curve of Griess reagent

A series of different concentration of $NaNO_2$ solutions (1, 2, 5, 10, 20, 40, and 60 μM) were prepared by diluting the 1 M $NaNO_2$ solution with deionized water. 60 μL of $NaNO_2$ solution was added to 96 well microplate respectively. Then 60 μL of Griess reagent I and 60 μL of Griess reagent II were added to the well. Absorbance at 540 was measured. Set the concentration as X axis and the absorbance as Y axis. As shown in Fig. S4, the standard curve is Y=0.05718+0.01339X.

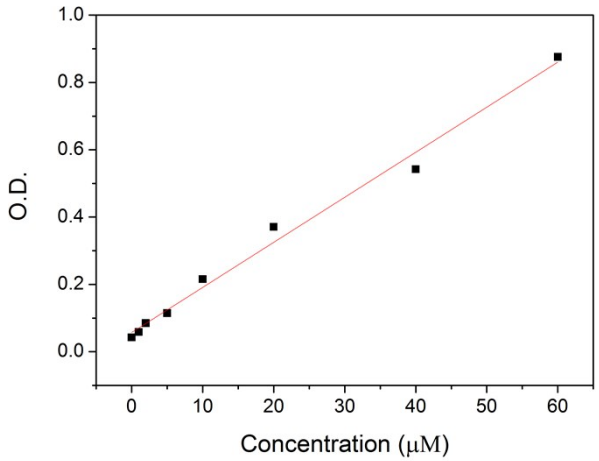

Fig. S4 The standard curve of Griess reagent.

References

1 X. Li, M. Wang, L. Wang, X. Shi, Y. Xu, B. Song and H. Chen, *Langmuir*, 2013, **29**, 1122-1128.