## Supporting Information

## Mixed Poly(dopamine)/Poly(L lysine) (Composite) Coatings: From Assembly to Interaction with Endothelial Cells

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**Figure S1.** Dissipation changes ( $\Delta D$ ) of QCM-D crystals upon polymer adsorption (a) and the subsequent protein deposition (b) using different ratios of DA/PLL<sub>s</sub> or DA/PLL<sub>L</sub>. The dashed line in a) indicates  $\Delta D$  of crystals exposed to DA only.





Figure S2. Bright field images of capsules assembled from different  $DA/PLL_s$  (a) or  $DA/PLL_L$  (b) ratios. The scale bars are 20  $\mu$ m.



**Figure S3.** Bright field (top) and fluorescent (bottom) microscopy images of HUVECs adhering to  $PLL_s$  (a) or  $PLL_L$  (b) coated glass slides for 24, 48 and 96 h. The scale bars are 25  $\mu$ m.



Figure S4. Bright field (images of endothelial cells adhering to PDA (a) or PDA/PLL<sub>s</sub> (b) coated glass slides for 24, 48 and 96 h. The scale bars are 25  $\mu$ m.



**Figure S5.**  $\Delta D$  of crystals upon deposition of  $M^{zw,PLLs}$ ,  $M^{n,PLLs}$  and  $M^{p,PLLs}$  onto either silica crystals or crystals pre-coated with either PLL or PLL/PMA<sub>c</sub> (stripy bars), and  $\Delta D$  of PLL or PLL/PMA<sub>c</sub> pre-coated crystals upon sequential deposition of  $L^{zw/-/+}$  and PDA/PLL<sub>s</sub>.



**Figure S6.** a) QCM-D adsorption kinetics of PDA (full) and PDA/PLL<sub>s</sub> (dashed) sequentially deposited onto PLL/L<sup>n</sup> represented at the third (black), fifth (red) and seventh (blue) harmonics. b) QCM-D adsorption kinetics of the deposition of either  $M^n$  (full) or  $M^{n,PLLs}$  (dashed) onto PLL/PMA<sub>c</sub> represented at the third (black), fifth (red) and seventh (blue) harmonics.



**Figure S7.** a) Representative microscopy images of HUVECs adhering to different composite coating deposited either in one-step using  $L^n$  mixed with DA or DA/PLL<sub>s</sub> or sequentially using  $L^n$  followed by DA or DA/PLL<sub>s</sub>. Scale bar is 25 µm. b) Uptake efficiency of endothelial cells adhering to different composite coating deposited either in one-step using  $L^n$  mixed with DA or DA/PLL<sub>s</sub> or sequentially using  $L^n$  followed by DA or DA/PLL<sub>s</sub>. (n = 6, \*\* p < 0.01)