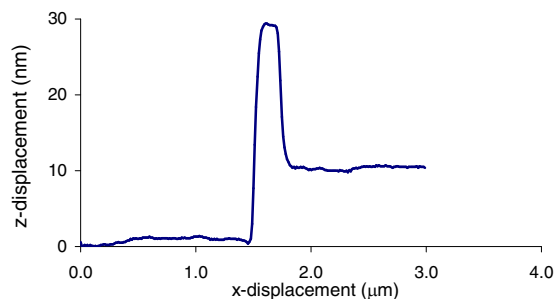


## Supporting Information



**Supporting Information Figure 1.** Representative AFM height measurement on crosslinked aECM-RGD. The film was scratched to reveal the underlying glass substrate. The dry height of the film was 8–10 nm. The edge of the film is deformed by the scratch.

Substrates	Number	C/N Ratio				PEGylation	
		Theor.	Avg.	Std. Dev.	Ratio Above Baseline	fraction of amines	# of amines per protein
aECM-RGD	3	3.75	4.67	0.05			
aECM-RGD-PEG	7	10.57	5.65	0.56	0.98	0.11	1.8
aECM-RGD + PEG 4600	4	3.75	4.76	0.11	0.08	0.01	0.2

**Supporting Information Table 1.** XPS data for crosslinked aECM-RGD, aECM-RGD-PEG, and aECM-RGD + PEG 4600 with no reactive ends. The numbers of substrates and the theoretical and measured carbon to nitrogen (C/N) ratios are shown. The theoretical C/N ratio for the aECM-RGD-PEG films was determined by assuming that 4.25 amines per protein are consumed in the BS<sup>3</sup> crosslinking reaction and that all remaining amines are PEGylated. To account for the fact that the C/N ratio for aECM-RGD is higher than the theoretical value, the measured C/N ratio of aECM-RGD was taken as the baseline value and subtracted from the measured values of all PEGylated samples.