Supporting information

Anionic Polymer Brushes for Biomimetic Calcium Phosphate Mineralization–A Surface with Application Potential in Biomaterials

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Table S1: Surface roughness analysis of the polymer brushes.

		Brush1	Brush2	Brush3-30nm	Brush3-300nm
Roughness average	(R_a):	0.3 nm	0.1 nm	0.1 nm	26.6 nm
Root mean square roughness	(R_q):	0.3 nm	0.1 nm	0.1 nm	32.2 nm

X-ray photoelectron spectroscopy (XPS) results

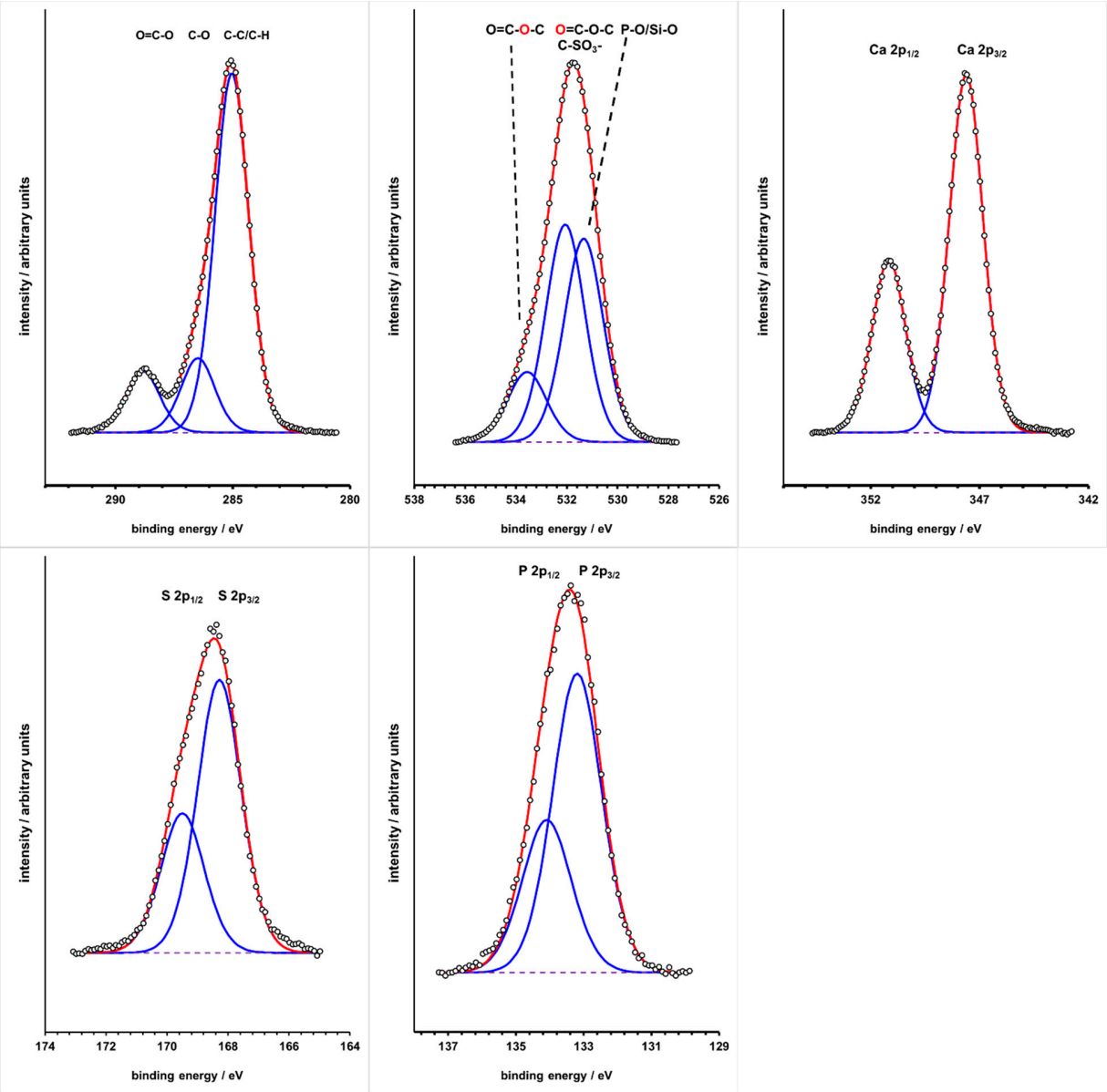

Figure S1. C 1s. O 1s. Ca 2p. S 2p. and P 2p XPS spectra of a Min1 surface

Table S2. Chemical composition of the polymer brushes after mineralization.

Sample	Si0	SiO_x	PO_4^{3-}	SO_4^{2-}	C-H	C–O / C–N	COO	Ca^{2+}	SiO_x. C=O. PO_4^{3-}		O=C–O
	Si-2p3	Si-2p	P-2p3	S-2P3	C-1s	C-1s	C-1s	Ca-2p3	O-1s	O-1s	O-1s
At%											
Min1			4.95	6.02	27.63	6.75	4.47	9.48	16.85	18.31	5.54
Min2			6.68	4.55	25.81	6.58	4.14	10.04	18.85	17.84	5.50
Min3	4.17	1.41	4.59	5.23	24.50	7.05	4.65	8.85	15.59	18.39	5.56
Peak BE [eV]											
Min1			133.3	168.4	285.1	286.4	289.0	347.7	531.3	532.3	533.6
Min2			133.4	168.5	285.2	286.5	289.0	347.7	531.3	532.3	533.6
Min3	99.2	102.9	133.2	168.5	285.2	286.5	289.0	347.7	531.3	532.3	533.6

Cell Cytotoxicity Tests

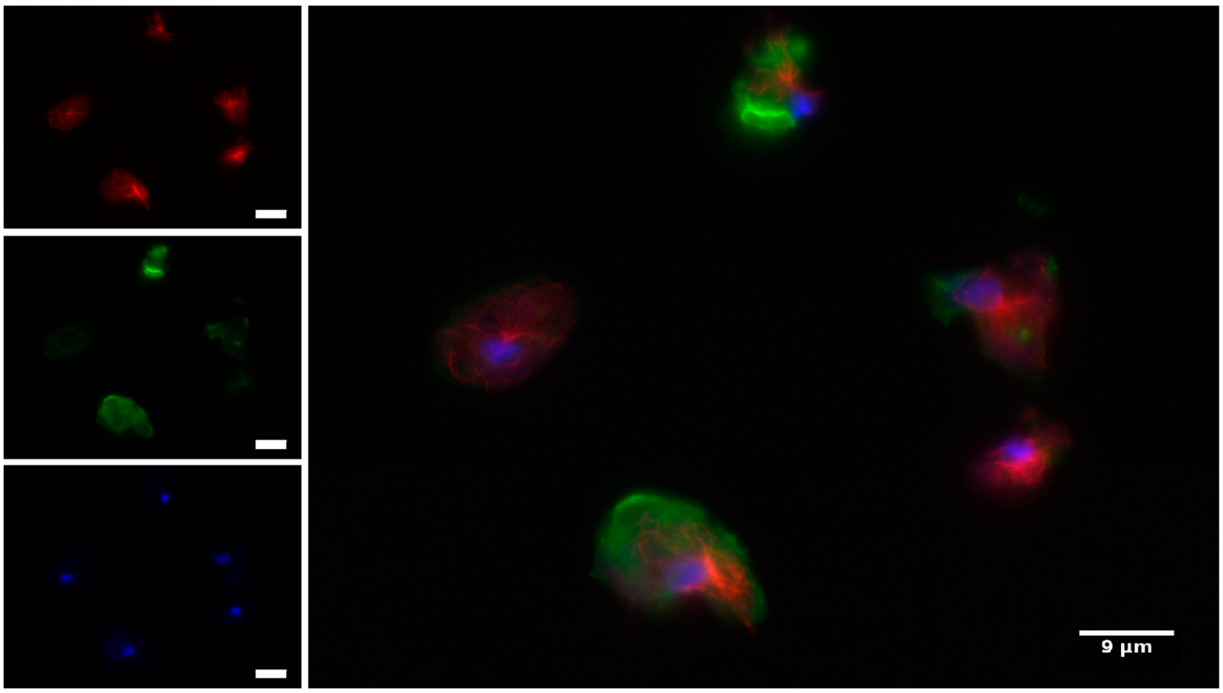

Figure S2. Fluorescence micrographs of *Dictyostelium discoideum* amoeba on a Brush1 surface. Small images to the left show the individual RGB channels for the composite image showing microtubules (red). actin (green) and nuclei (blue).

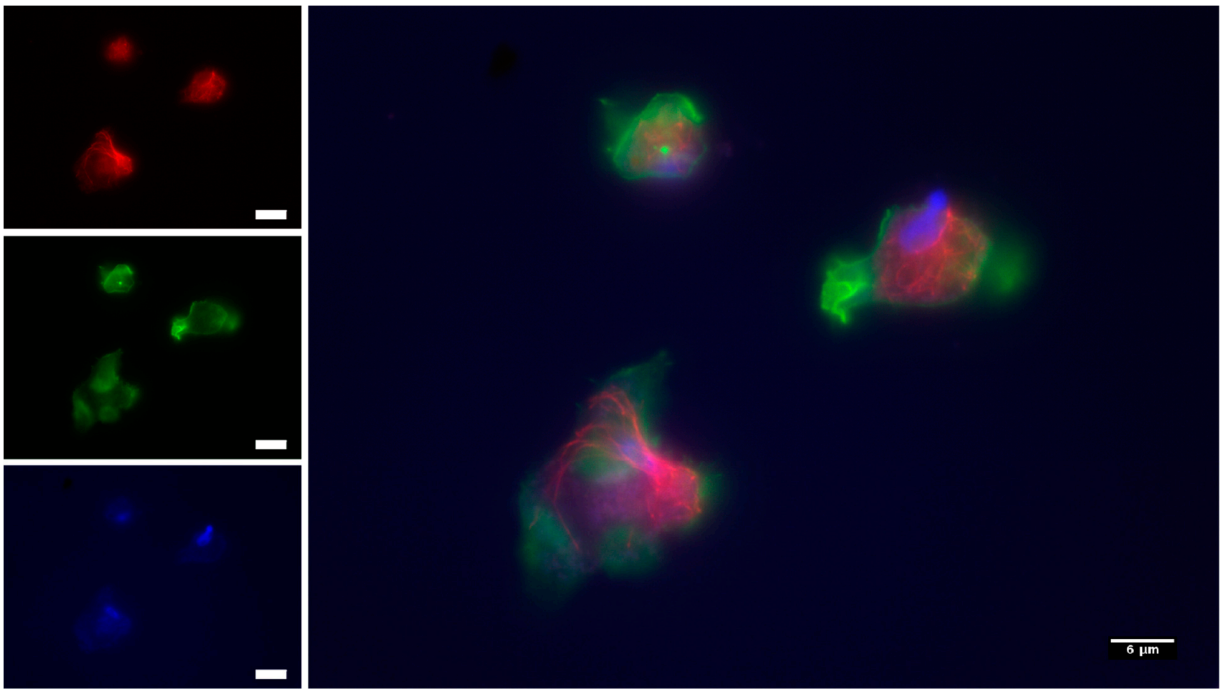

Figure S3. Fluorescence micrographs of *Dictyostelium discoideum* amoeba on a Brush2 surface. Small images to the left show the individual RGB channels the composite image showing microtubules (red), actin (green), and nuclei (blue).

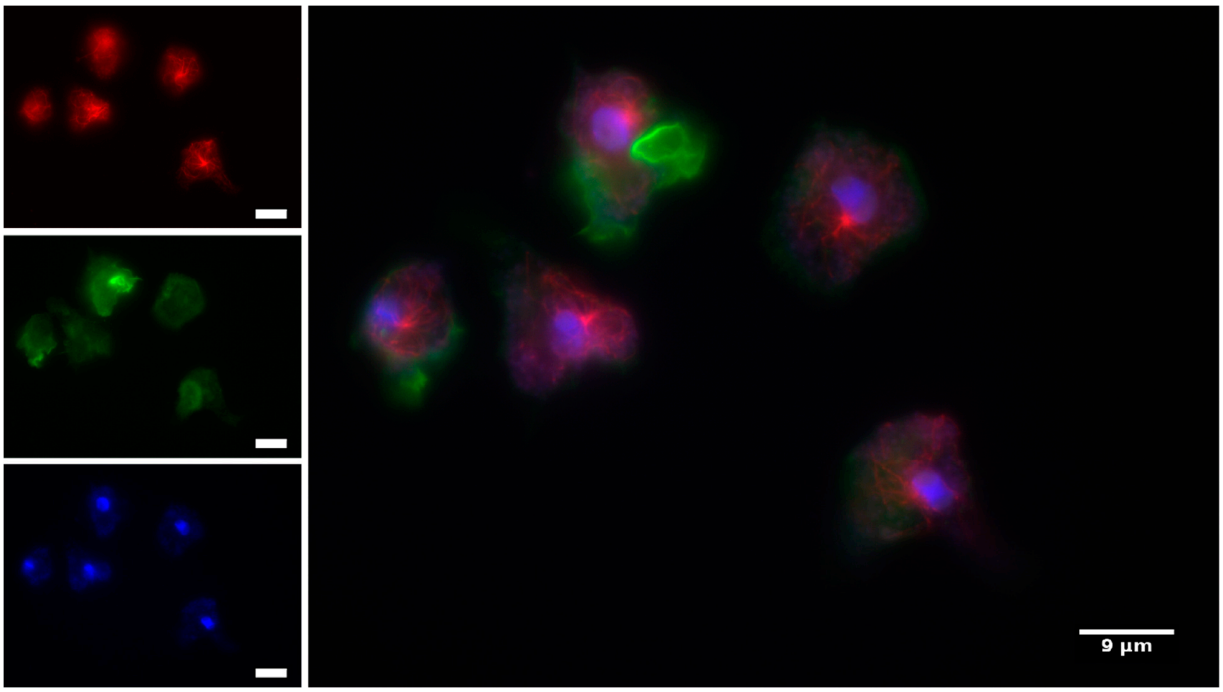

Figure S4. Fluorescence micrographs of *Dictyostelium discoideum* amoeba on a Brush3 surface. Small images to the left show the individual RGB channels for the composite image showing microtubules (red). actin (green) and nuclei (blue).

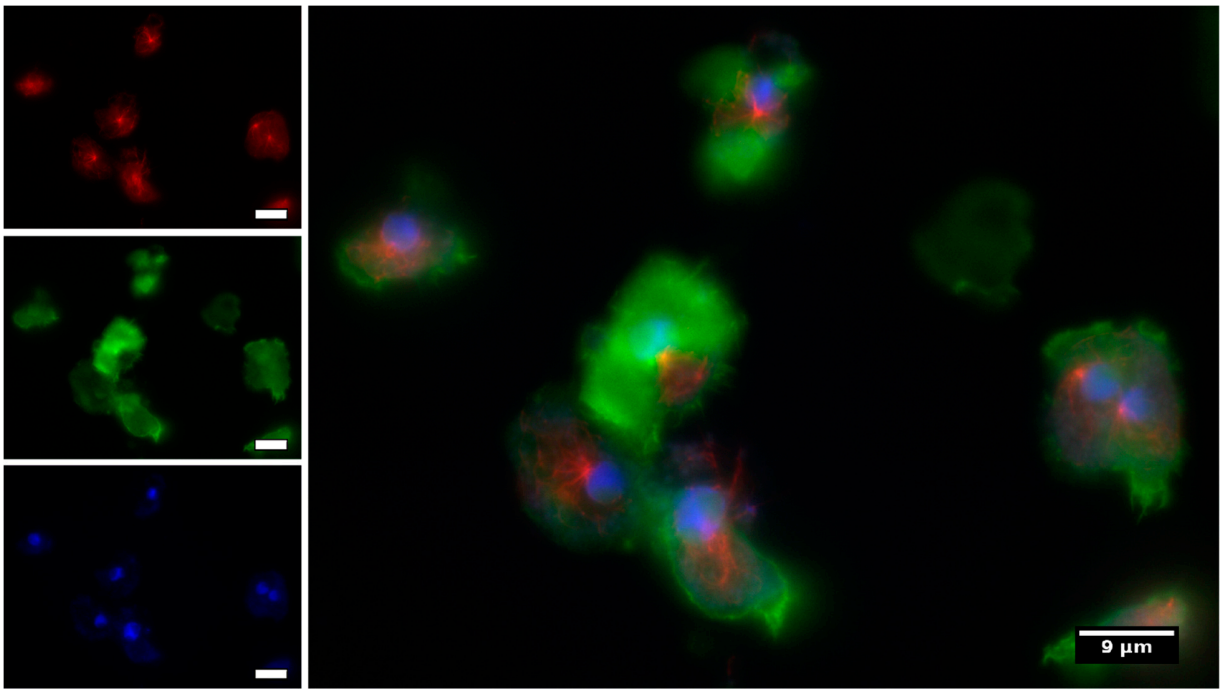

Figure S5. Fluorescence micrographs of *Dictyostelium discoideum* amoeba on a Min1 surface. Small images to the left show the individual RGB channels for the composite image showing microtubules (red). actin (green) and nuclei (blue).

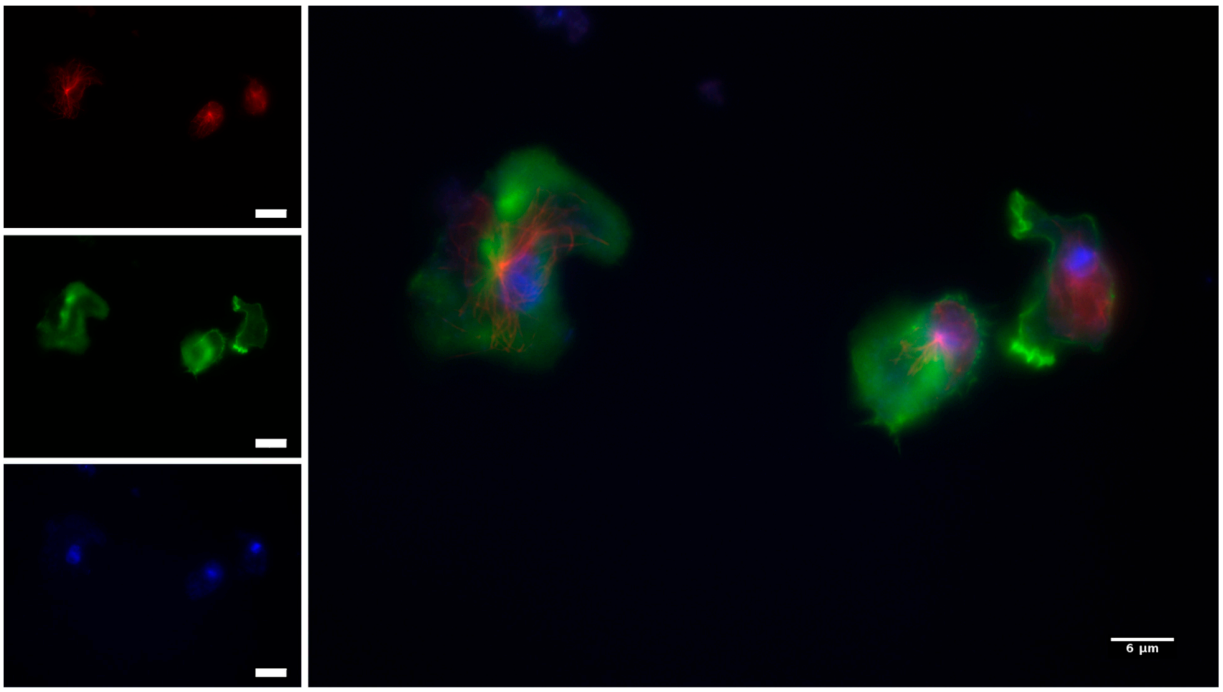

Figure S6. Fluorescence micrographs of *Dictyostelium discoideum* amoeba on a Min2 surface. Small images to the left show the individual RGB channels for the composite image showing microtubules (red). actin (green) and nuclei (blue).

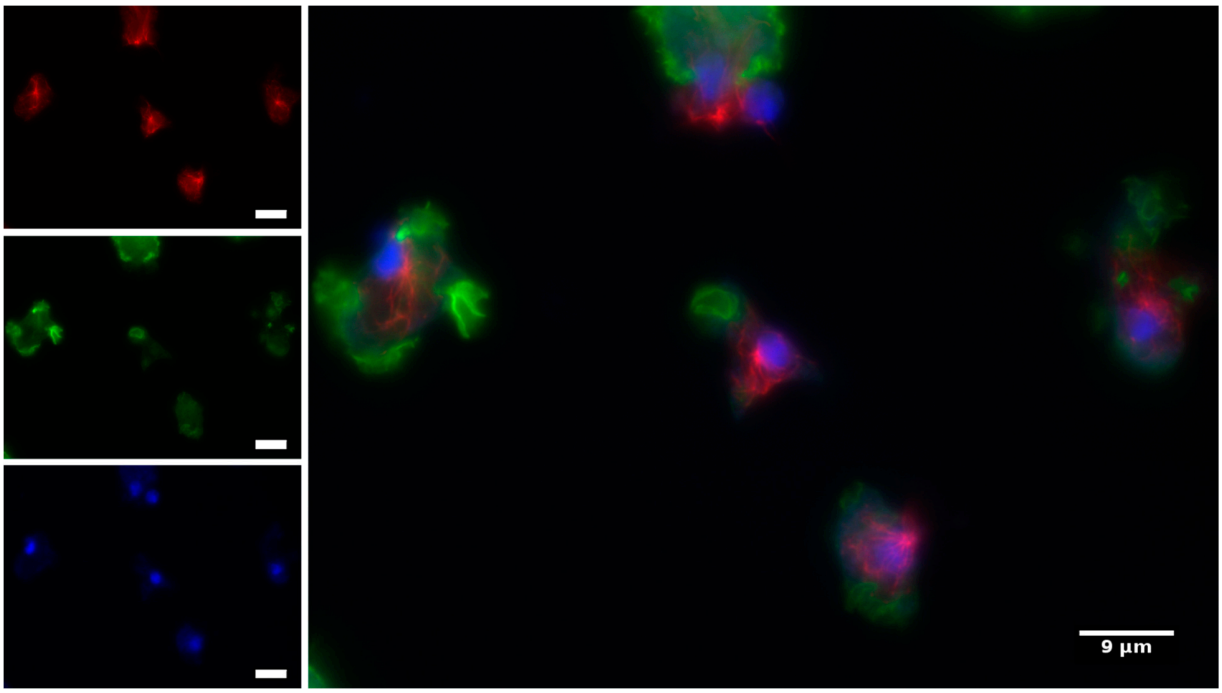

Figure S7. Fluorescence micrographs of *Dictyostelium discoideum* amoeba on a Min3 surface. Small images to the left show the individual RGB channels the upper right of the composite image showing microtubules (red), actin (green), and nuclei (blue).