

Nano- and micro-patterned S-, H- and X-PDMS for cell-based applications: Comparison of wettability, roughness and cell-derived parameters

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Supplementary information

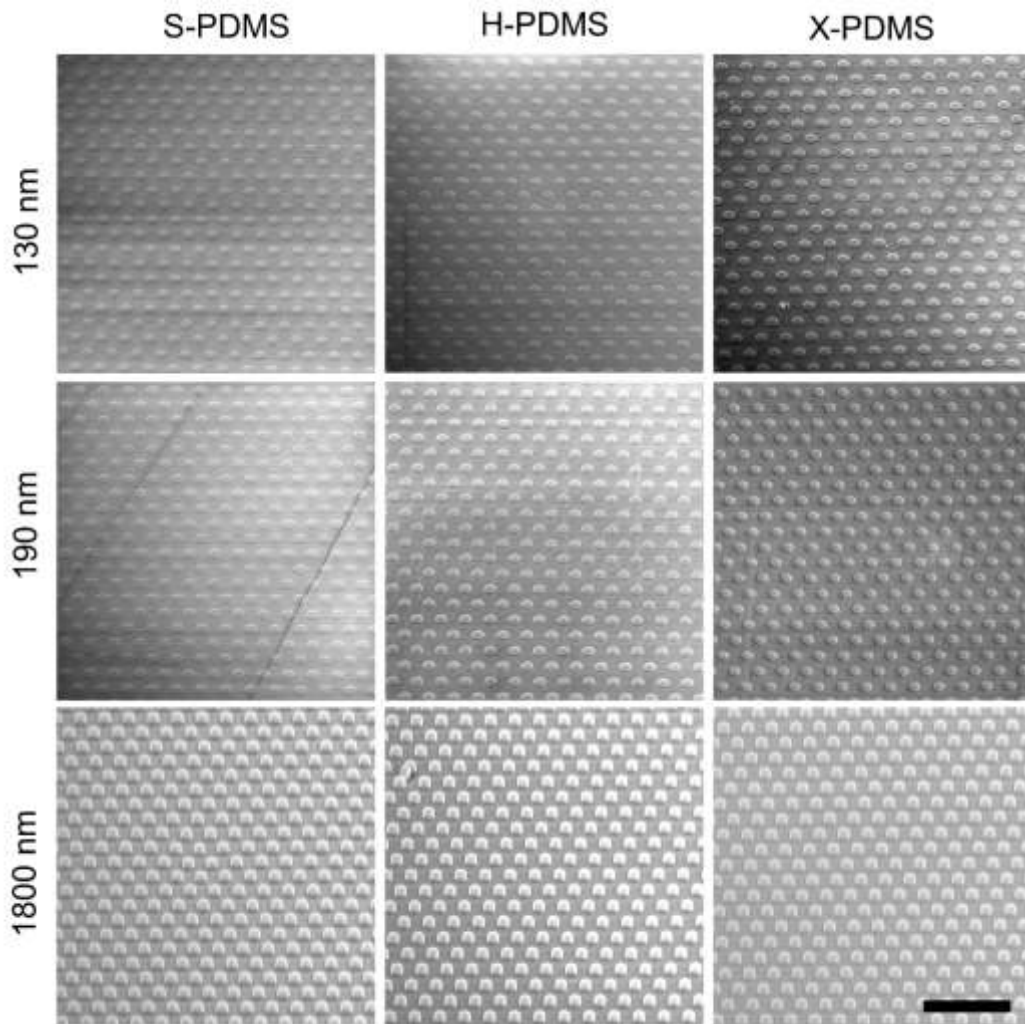


Figure S1. Scanning electron microscopy images of S-, H- and X-PDMS substrates. The displayed pillars are of constant diameter (2 μm) and pitch (6 μm) but of varying height as indicated. Scar bar: 20 μm.

Table S1. R_q mean values and standard errors for plane PDMS samples.

PDMS type	Untreated			Plasma treated		
	Mean	S.E.M	N	Mean	S.E.M	N
S	0.75	0.58	5	112	6	5
H	0.5	0.03	5	62	1	5
X	0.5	0.01	5	27	1	5

Table S2. Mean contact angles and standard errors.

PDMS type	Untreated			Plasma treated		
	Mean	S.E.M	N	Mean	S.E.M	N
S	113.5	1	10	4.7	3.5	10
H	109.1	0.5	10	3.6	2.6	10
X	105.9	0.6	10	2	1.5	10

Table S3. Mean cell number and standard error.

PDMS type	Untreated			Plasma treated		
	Mean	S.E.M	N	Mean	S.E.M	N
S	114.1	9	10	208	15.4	10
H	48.1	3.5	12	119.1	17.1	9
X	71.1	8.5	10	117	15.8	10

Table S4. Mean cell area and standard error.

PDMS type	Untreated			Plasma treated		
	Mean	S.E.M	N	Mean	S.E.M	N
S	472	11	1141	452	8	2080
H	314	8	577	642	20	1072
X	477	14	711	762	19	1170

Table S5. Mean cellular elongation factor and standard error.

PDMS type	Untreated			Plasma treated		
	Mean	S.E.M	N	Mean	S.E.M	N
S	3.4	0.1	1141	3.8	0.1	2080
H	3.6	0.1	577	4.3	0.1	1072
X	3.5	0.1	711	4.2	0.1	1170

Table S6. Mean pillar height and standard error.

PDMS type	130 nm				190 nm				1800 nm			
	Mean	S.E.M	% Deviation	N	Mean	S.E.M	% Deviation	N	Mean	S.E.M	% Deviation	N
S	96	1	25.9	5	157	1	17.4	5	1585	11	11.9	5
H	104	5	19.9	5	169	2	11.1	5	1616	11	10.2	5
X	131	1	0.5	5	171	1	9.8	5	1659	3	7.8	5

Table S7. Mean contact angles and standard error.

PDMS type	130 nm			190 nm			1800 nm		
	Mean	S.E.M	N	Mean	S.E.M	N	Mean	S.E.M	N
S	114.3	0.2	10	115.3	0.4	10	138.5	2.9	10
H	109.5	0.4	10	109	1.1	10	135.5	1.4	10
X	108.9	0.7	10	109	0.6	10	137.5	0.3	10

Table S8. Mean cell number and standard error.

PDMS type	130 nm			190 nm			1800 nm		
	Mean	S.E.M	N	Mean	S.E.M	N	Mean	S.E.M	N
S	54	9	10	57	4	10	38	3	10
H	37	3	12	45	2	12	61	7	10
X	77	13	11	64	2	10	61	4	10

Table S9. Mean cell area and standard error.

PDMS type	130 nm			190 nm			1800 nm		
	Mean	S.E.M	N	Mean	S.E.M	N	Mean	S.E.M	N
S	473	18	394	374	12	576	335	17	388
H	339	10	445	290	7	551	316	9	614
X	543	19	847	467	14	648	429	13	614

Table S10. Mean cellular elongation factor and standard error.

PDMS type	130 nm			190 nm			1800 nm		
	Mean	S.E.M	N	Mean	S.E.M	N	Mean	S.E.M	N
S	3.1	0.01	394	2.8	0.1	576	2.3	0.1	388
H	3.2	0.1	445	3.3	0.1	551	3.3	0.1	614
X	3.4	0.1	847	3.4	0.1	648	3.3	0.1	614