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

Supporting information

Non-equilibrium organosilane plasma polymerization for modulating the surface of PTFE towards potential blood contact applications

Vineeth M. Vijayan[a,b], Bernabe S. Tucker[b], Patrick T.J. Hwang[d], Pratheek S. Bobba [c], Ho-Wook Jun [c], Shane A. Catledge[a] , Yogesh K. Vohra[a,], Vinoy Thomas[a,b]*

[a]Center for Nanoscale Materials and Biointegration,
[b]Department of Material Science and Engineering,
[c] Department of Biomedical Engineering,
The University of Alabama at Birmingham, Birmingham, AL 35294, United States
[d] Endomimetics, LLC, Birmingham, Alabama, 35203, United States.

Samples	Carbon (%)	Fluorine (%)	Oxygen (%)	Silicon (%)
PTFE	42.1	56.0	1.9	-
PTFE-Air 10	36.6	62.5	0.9	-
PTFE-Air 20	37.0	62.2	0.8	-
PTFE-Air 30	38.8	60.2	1	-
PTFE-t10	31.2	50.5	12.4	5.9
PTFE-t20	23.8	25.4	34.8	16
PTFE-t30	26.7	34.9	26.1	12.4

Table S1: Table showing the surface elemental percentage (obtained from the X ray photoelectron spectroscopy) of pristine PTFE, silane plasma polymerized PTFE and air plasma treated PTFE surfaces.

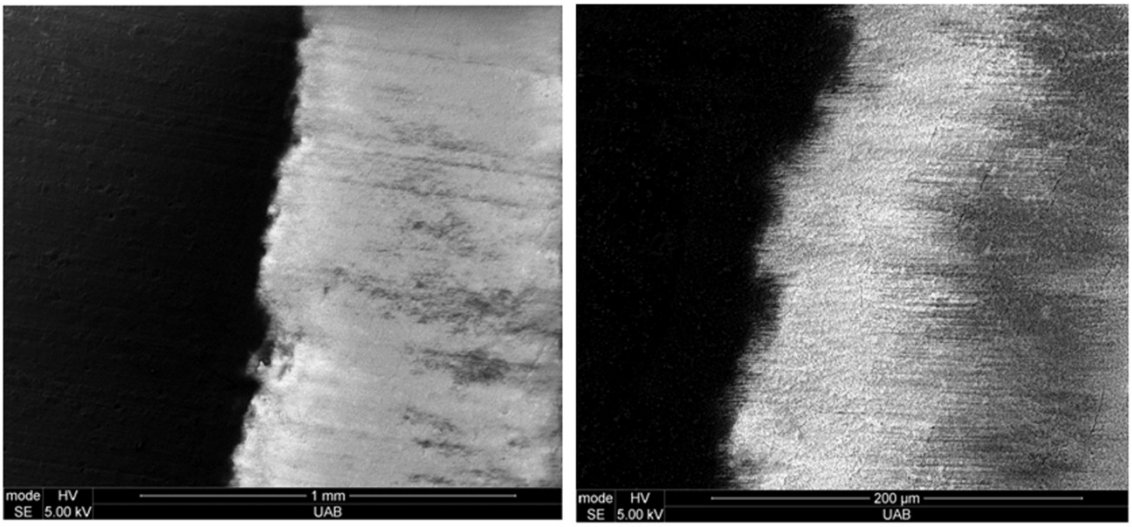

Fig S2: Scanning electron microscopy images of two different areas of PTFE-t10 one region exposed to silane plasma polymerization and the other region without any plasma polymerization.

No	Composition	Elastic Modulus, GPa	Hardness, GPa
1	PTFE	0.073 ± 0.009	0.013±0.003
2	PTFE-T10	0.056±0.01	0.01±0.003
3	PTFE-T20	0.447±0.1	0.033±0.012
4	PTFE-T30	0.336±0.124	0.024±0.009

Table S3: Nanoindendation Results of PTFE, PTFE-t10,PTFE-t20 and PTFE-t30

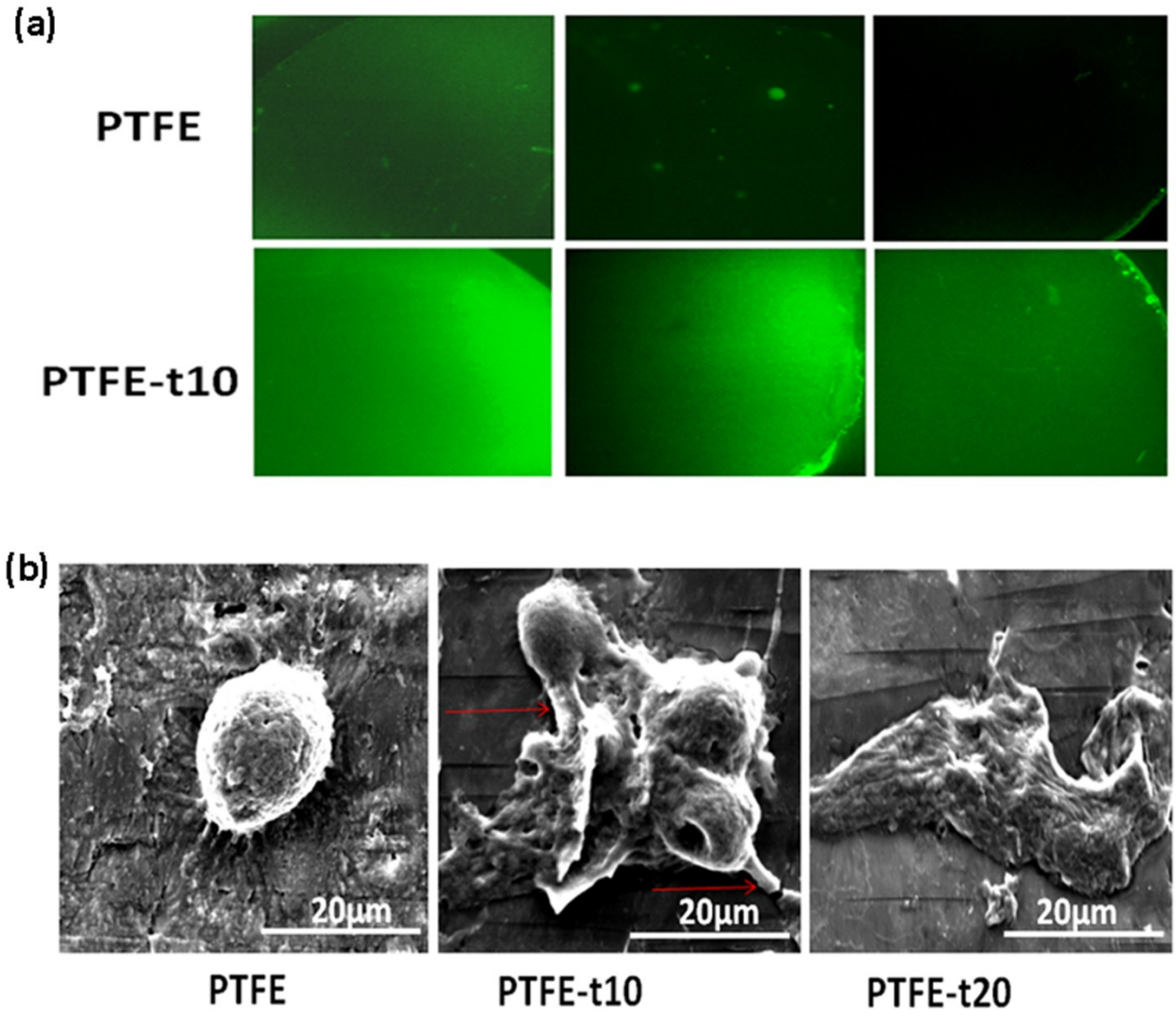

Fig S4: Fluorescent Bovine serum albumin (BSA) adsorption studies on pristine PTFE and PTFE-t10 (a), Scanning electron microscopy images of endothelial cell attached pristine PTFE, PTFE-t10 and PTFE-t20 (the arrows were pointing towards the pseudopods formation)(b).