Supporting Information

Covalently Layer-by-Layer Assembled Homogeneous Nanolayers

with Switchable Wettability

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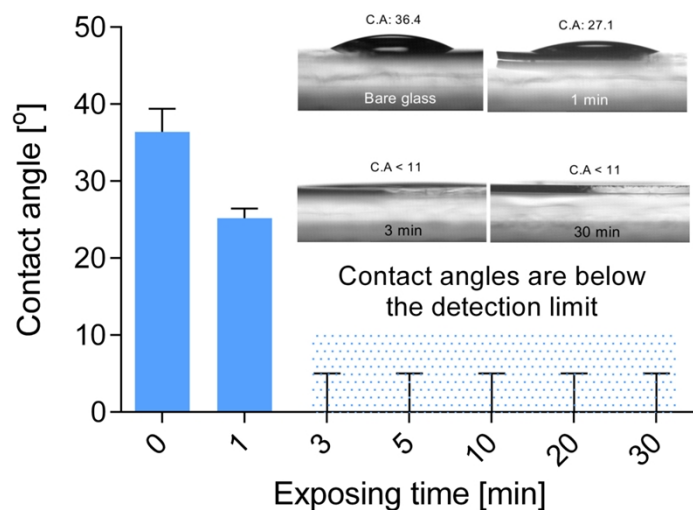* Fuat Topuz; Tel: +492418026443, E-mail: fuat.topuz@rwth-aachen.de

Figure S1. Contact angle analysis of UV-ozone activated glass surfaces with different exposure times.
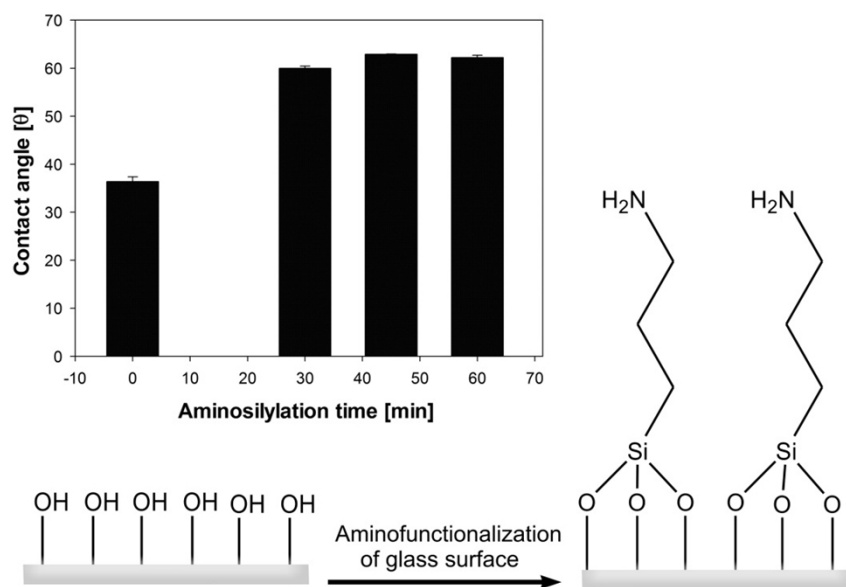

Figure S2. Cartoon illustration of aminosilylation of the glass surface with 3-aminopropyl-trimethoxysilane. Inset figure shows changes in contact angles as a function of aminosilylation time.

Table S1. Thickness, contact angle and XPS data of the NCO-sP(EO-*stat*-PO) (M_w = 12 kDa) layers.

		Thickness (nm)	Water contact angle (°)	C 1s (%) from XPS	O 1s (%) from XPS	N 1s (%) from XPS	Si 2p (%) from XPS
Ref 1	Monolayer	1.3	-	-	-	-	-
	sP(EO-stat-PO) (1 mg/mL in THF(1)/water(9))	2.3	-	56	28.5	1.8	13.7
	sP(EO-stat-PO) (10 mg/mL in THF(1)/water(9))	30.9	-	70.8	27	2.2	0
This study	1st Layer	11.93	45.1	66.47	25.83	2.94	4.76
	2nd Layer	13.80	37.91	67.75	26.05	4.74	2
	3rd Layer	25.46	45.04	70.45	26.67	2.85	0
	4rt Layer	27.50	37.31	-	-	-	-
	5th layer	40.2	46.1	-	-	-	-
	6th layer	42.3	37.61	-	-	-	-

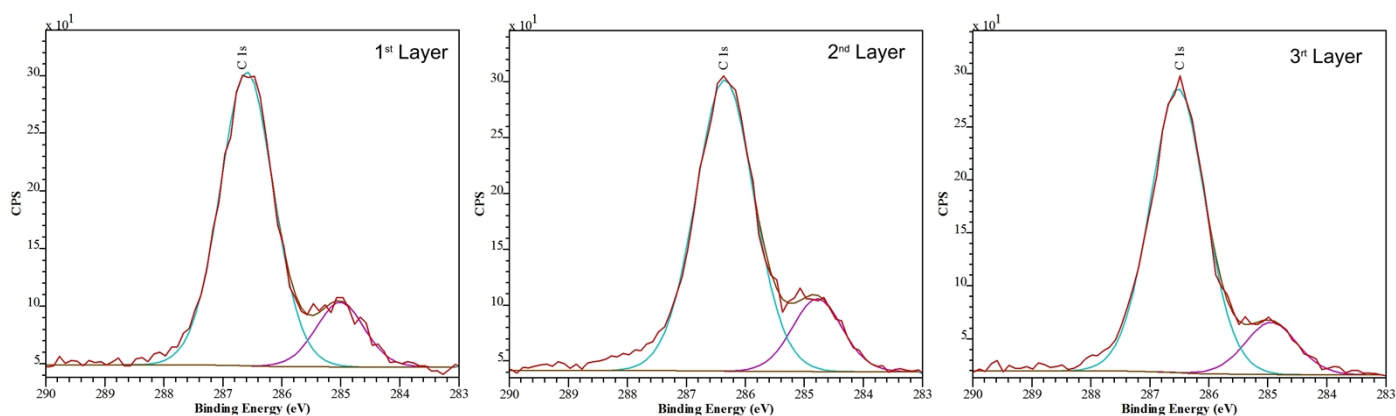*Ref 1.* Groll et al. Biomacromolecules 2005, 6, 956-962.

Figure S3. XPS C 1s narrow spectra of the layers.

Table S2. C 1s atomic composition of the layers obtained by XPS analysis.

		C 1s (%) 285 C-C C-H	C 1s (%) 286.5 C-O C-N
Ref 1	Silicon-aminofunctionalized	80.0	20.0
	sP(EO-*stat*-PO) 12000 (2.3 nm)	15.5	84.4
	sP(EO-*stat*-PO) 12000 (30.9 nm)	14.9	84.8
This study	1st Layer	18.5	81.5
	2nd Layer	20.4	79.5
	3rd Layer	14.7	85.2

Ref 1. Groll et al. Biomacromolecules 2005, 6, 956-962.