

Supporting Information

Spatially Controlled Photochemical Peptide and Polymer Conjugation on Biosurfaces

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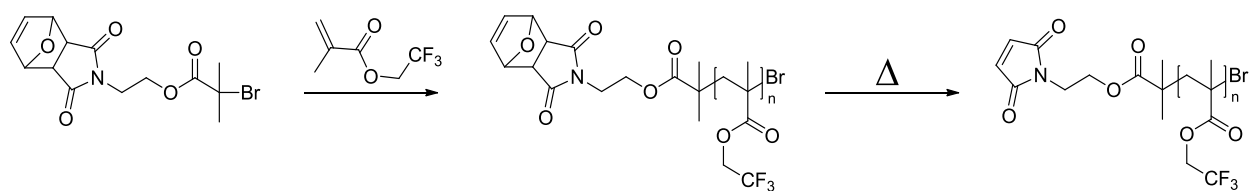


Figure S1. Synthetic route for the synthesis of MI-PTFEMA.

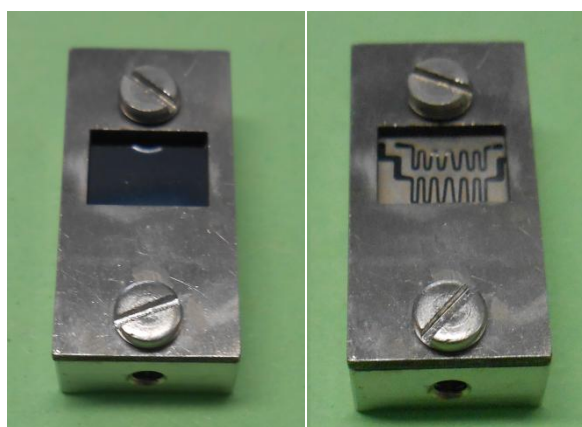


Figure S2. Optical images of the employed sample holder (left) including the employed meander mask (right).

Table S1. Elemental composition of the biosurfaces determined via XPS analysis

Substrate/At. %	C1s	N1s	O1s	F1s
Si-NH ₂	43.90	8.1	25.5	-
1	32.5	3.8	39.6	-
2	60.6	4.8	29.0	-
PTFEMA-HA non irradiated	40.8	3.5	33.5	-
PTFEMA-HA irradiated	43.0	3.1	30.7	1.4
GIGKFLHS-g-HA irradiated	64.2	7.8	27.6	-
GIGKFLHS-g-HA non irradiated	63.2	8.0	28.8	-
1'	57.3	-	42.7	-
2'	62.8	1.0	36.2	-
PTFEMA-Cel non irradiated	59.3	-	40.7	-
PTFEMA-Cel irradiated	57.1	0.4	34.4	8.1
GIGKFLHS-g-Cel irradiated	60.2	3.1	36.7	-
GIGKFLHS-g-Cel non irradiated	58.9	-	41.1	-

Table S2 Layer thicknesses of **2** determined via ellipsometry

Layer	Thickness [nm]
SiO ₂	6.6 ± 0.8
APTES	6.8 ± 0.4
HA	7.2 ± 1.0

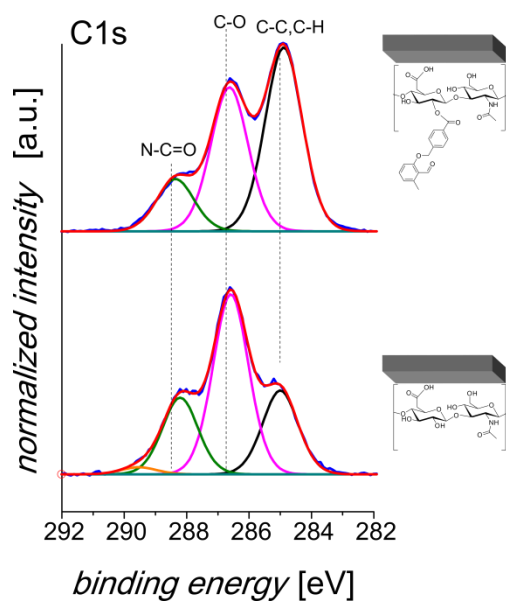


Figure S3.Top: C1s spectrum of PE-HA Bottom: C1s spectrum of the control experiment without PE present, clearly evidencing the introduction of PE moieties on the surface due to the increase of C-C/C-H species at 285.0 eV

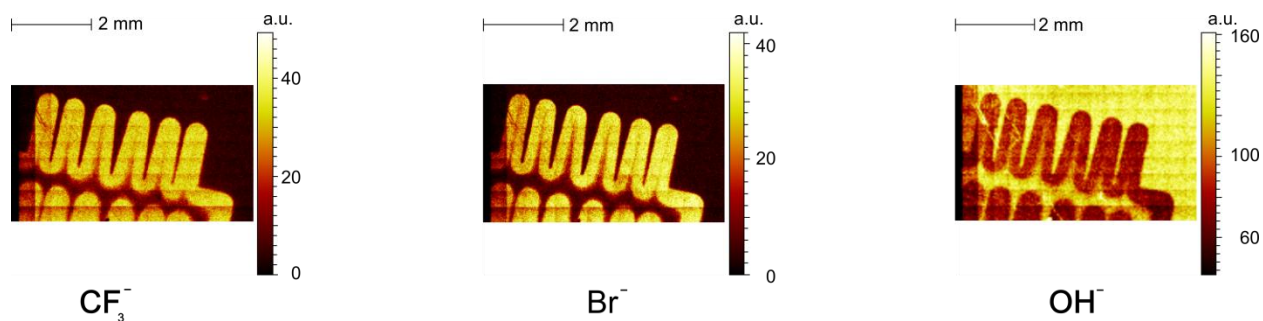


Figure S4. ToF-SIMS images of PTFEMA-g-HA (spincoated): Mapping of $-\text{CF}_3$ associated with the TFEMA monomer unit (left), mapping of bromine associated with the end functionality of PTFEMA (middle), mapping of hydroxy groups associated with hyaluronic acid (right) clearly evidencing the spatially controlled functionalization of the PE-HA film.

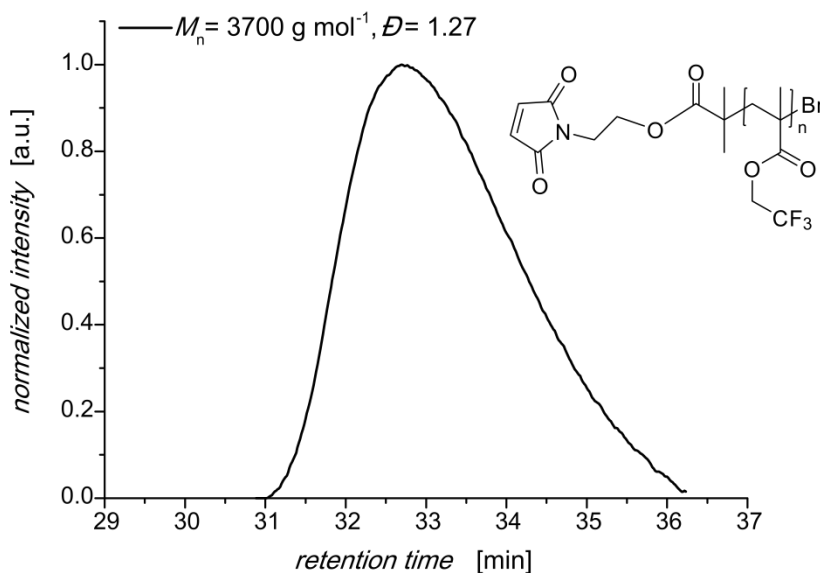


Figure S5. Molecular weight distribution of maleimide terminated PTFEMA in an SEC experiment employing THF as eluent. The values obtained for M_n and the polydispersity correspond to a PMMA calibration.

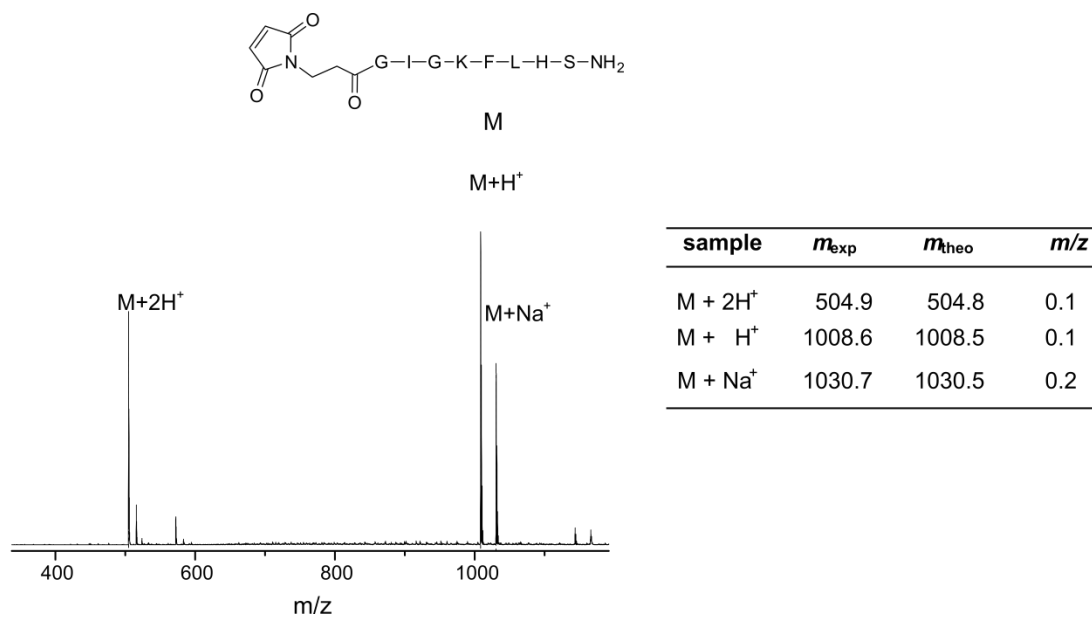


Figure S5. Left: ESI-MS spectra of the model peptide (M, m/z = 1007.5 Da); Right: Table of theoretical and experimental m/z corresponding to the model peptide.