Supporting Information

Virus adsorption and elution using cationic polymer brushes: potential applications for passive sampling in wastewater-based epidemiology

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1. Synthesis

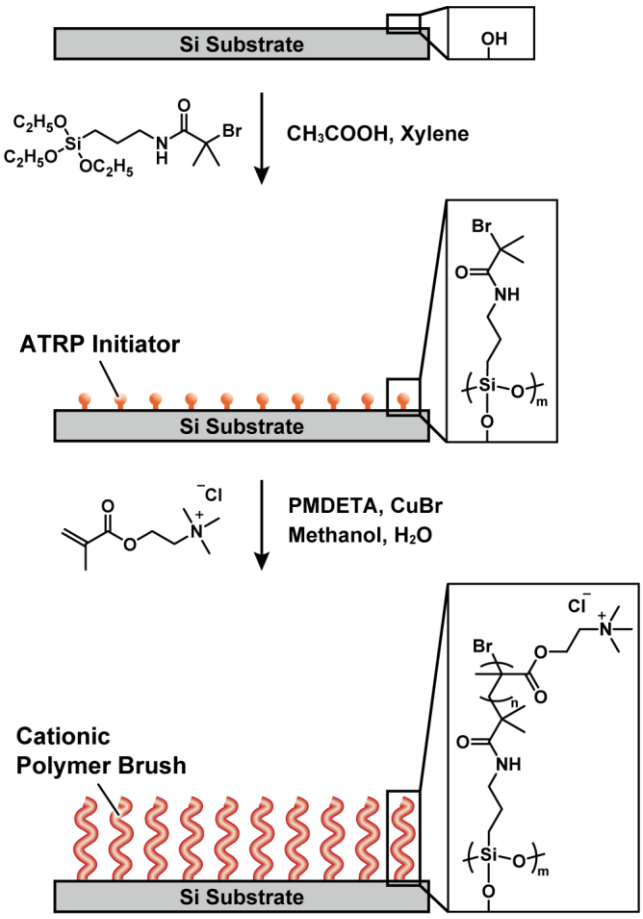

Fig. S1 Synthetic scheme of the poly[2-(methacryloyloxy)ethyltrimethylammonium chloride] (PMTAC) brush by surface-initiated ATRP.

2. Infrared spectroscopy

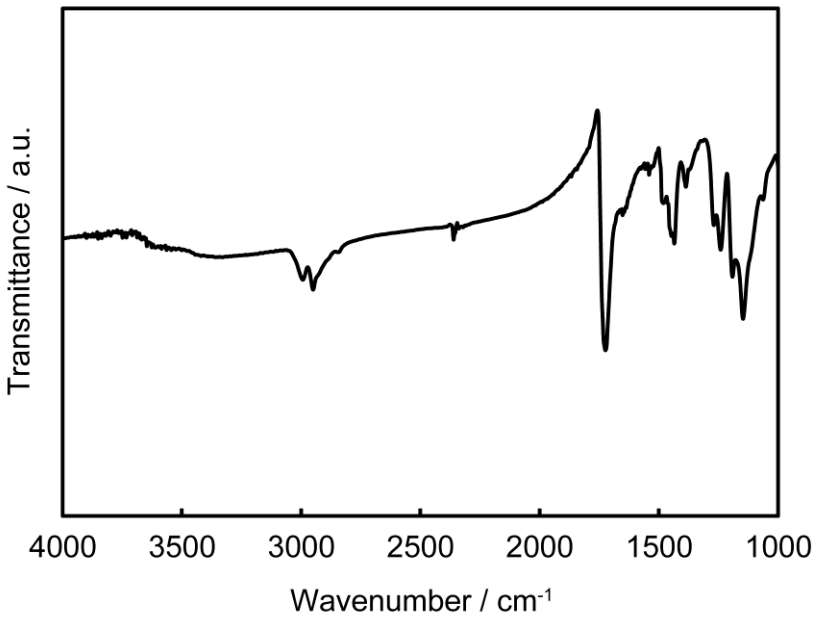

Fig. S2 FT-IR spectrum of the poly[2-(methacryloyloxy)ethyltrimethylammonium chloride] (PMTAC) brush in the range of 1000–4000 cm^{-1}.

3. Atomic force microscopy

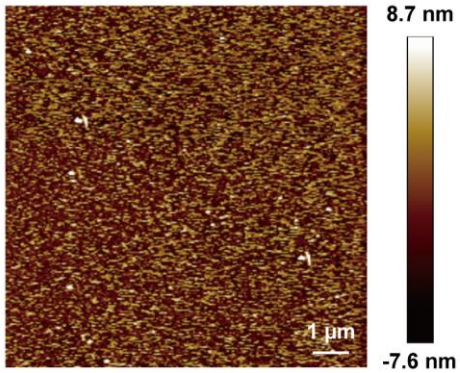

Fig. S3 AFM image of the surface modified with the ATRP initiator.

4. Statistical analysis

Table S1 Significance of the differences (*p* values) for adsorption and elution of viruses

p by paired t.test		AiV	Qβ	Phi6	MHV
Adsorption	**B**–**APTS**[a]	0.005	0.02	0.36	0.51
	B–**PMTAC**[a]	0.0002	0.0003	0.00001	0.005
	APTS–**PMTAC**[a]	0.00003	0.0001	0.0002	0.054
Elution	**B**–**APTS**[a]	0.7	0.001	0.4	0.003
	B–**PMTAC**[a]	0.000004	0.09	0.1	0.005
	APTS–**PMTAC**[a]	0.005	0.004	0.07	0.5

[a] **B**: bare substrates (n = 8); **APTS**: the 3-aminopropyltriethoxysilane (APTS)-functionalized substrates (n = 4); **PMTAC**: the poly[2-(methacryloyloxy)ethyltrimethylammonium chloride] (PMTAC)-grafted substrates (n = 10).