Asymmetric Free-Standing Film with Multifunctional Anti-Bacterial and Self-Cleaning Properties

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Supporting information

Table SI1. Element ratio of films at various deposition layers for PEI- $Ag^{+}(9.0)/PAA(3.2)$ system. The concentration of silver nitrate is 1.6 mM.

Element content	$PEI-Ag^{+}(9.0)/PAA(3.2)$			
	C _K	N _K	O _K	Ag _L
9 layers	54.59	17.07	28.08	0.26
10 layers	61.43	13.93	24.52	0.12
11 layers	61.75	13.64	24.19	0.42
12 layers	63.64	13.25	22.90	0.21



Figure SI1. SEM images for PEI/PAA (pH 9.0/2.85) film surface morphology with either PAA (A) or PEI (B) as the ending layer. Scale bar was 50 μ m.