## **Supplementary Information**

Fig. S1 Photograph of PP strips. Left: a naked PP strip. Right: a PP strip deposited

with a  $(PAH-D/PSS)*1-(Fe_3O_4@PAH-D/PSS)*10$  film.



Fig. S2 Photograph of PVC catheters. Left: a naked PVC catheter. Right: a PVC catheter deposited with a (PAH-D/PSS)\*1-(Fe<sub>3</sub>O<sub>4</sub>@PAH-D/PSS)\*10 film.

