

**Figure S1.** AgCl formation on top of the AgNP films (SEM images). AgCl formation occurred when the AgNP films were printed on paper coatings containing a sufficient concentration of Cl. a) HP10 reference, b) HP22 reference, c) HP22 reference (pretreated with 0.3 M KCl), d) HP10 active, e) HP22 active, and f) HP22 active (ethanol+EG ink) papers.