Supporting Information for:

Hydroxyl radical induced chemiluminescence of hyperbranched polyethyleneimine protected silver nanoclusters and its application in tea polyphenols detection

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Fig. S1 (a) FL spectra and (b) CL intensity of AgNCs capped by hPEI with different molecular weights (1-4: 0.6, 1.8, 10, and 25K) in the presence of 214 µM·OH solution.
Fig. S2 FL emission intensity of four AgNCs solution in the presence of (a) H$_2$O$_2$ (0, 1, 5 and 10 mM) and (b) NaCl (0, 0.003, 0.03 and 0.3M).
Fig. S3 Cyclic voltammograms recorded for hPEI (blue line) and hPEI-AgNCs (red line).
**Fig. S4** FL emission spectra (a), UV absorption spectra (b) and FT-IR spectra (c) of hPEI-AgNCs upon addition of different concentrations of -OH (1-4: 0, 0.104, 0.167, and 1.67 mM).
Fig. S5 FL spectra of hPEI-Ag NCs in the presence of a various of ROS (a: H₂O, b: H₂O₂, c: O₂−, d: ¹O₂, e: ClO−, f: ONOO−, and g: ·OH). The concentration of each ROS was 214 μM.
Fig. S6 Calculated molecular size of different ROSs using GaussView software.
**Fig. S7** CL intensity of hPEI-AgNCs upon adding 214 µM ·OH in the absence and in the presence of TPPs or thiourea.
**Fig. S8** CL intensity of hPEI-AgNCs upon adding ·OH with different concentrations in the absence (blue) and in the presence (orange) of TPPs.
Fig. S9 CL intensity of hPEI-AgNCs upon adding ·OH (214 µM) without and with Green tea infusion by different immersion times.